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~~Part 2 of 2~~

OREGON

ENVIRONMENTAL QUALITY

COMMISSION MEETING

MATERIALS 01/19/1990

State of Oregon
Department of Environmental Quality

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State of Oregon
Environmental Quality Commission

AGENDA

WORK SESSION -- January 18, 1990

Executive Building -- Room 4A
811 S. W. 6th Avenue
Portland, Oregon

2:00 p.m. - 1. Governor's Watershed Enhancement Board (GWEB): Brainstorming session for potential legislative concepts to present to GWEB staff.

2:30 p.m. - 2. Stage II Vapor Recovery: Continuation of 11-30-89 Work Session.

3:15 p.m. - 3. Pulp Mill Issues:

- Update on Dioxin and Total Chlorinated Organics;
- Scandinavian Pulp Mill Technology and Regulations: Site Survey Report by Pope and Talbot (pursuant to request at December 1, 1989 meeting);
- Status of Permit Modifications to Implement Individual Control Strategies (ICS's);
- Discussion of Policy Options and Potential Future Actions.

NOTE: The purpose of the work session is to provide an opportunity for informal discussion of the above items. The Commission will not be making decisions at the work session.

REGULAR MEETING -- January 19, 1990

Executive Building -- Room 4A
811 S. W. 6th Avenue
Portland, Oregon

Consent Items -- 8:30 a.m.

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

A. Minutes of the November 30-December 1, 1989, EQC work session and regular meeting.

B. Civil Penalties Settlements.

C. Approval of Tax Credit Applications.

D. Commission Member Reports:

- Pacific Northwest Hazardous Waste Advisory Council (Hutchison).
- Governor's Watershed Enhancement Board (Sage).

Public Forum

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

Action Items

E. Unified Sewerage Agency: Progress Report on Compliance with Tualatin River Water Quality Requirements.

F. North Albany Health Hazard Area: Approval of Alternative Plan for Alleviating Certified Health Hazard.

G. Principal Recyclable Materials List: Review of List and Recommendations for Update.

Rule Adoptions

NOTE: Hearings have already been held on these 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.

H. Asbestos Abatement Program: Rule Amendments.

I. Kraft Mill Regulations: Modifications to Correct Deficiencies, Add Opacity Standard for Recovery Boilers, Clarify Monitoring Requirements.

J. Waste Tires: Adoption of Rule Amendments Regarding Ocean Reefs, Beneficial Use Permits, Reimbursement for Demonstration Projects, Financial Assistance Criteria, and Other Housekeeping Amendments.

Hearing Authorizations

NOTE: Upon approval of these items, public rule making hearings will be held in each case to receive public comments. Following the hearings, the item will be returned to the Commission for consideration and final adoption of rules.

K. Water Quality Rules: Authorization for Hearing on Proposed Rule Amendments to Clarify Requirements for Designation and Management of Water Quality Limited Streams.

L. Infectious Waste: Authorization for Hearing on Proposed Rules to Implement 1989 Legislation Limiting Disposal and Requiring Incineration or Other Sterilization Before Disposal.

M. UST Rules: Authorization for Hearing on Proposed Adoption of Federal UST Technical Standards and Financial Responsibility Rules; and Local Program Delegation.

N. Oil Contaminated Soil Cleanup Contractors: Authorization for Hearing on Amendments to Registration and Licensing Requirements for UST Service Providers to Add Certification and Licensing for Soil Cleanup Contractors and Supervisors (HB 3456).

O. Permit Public Notice Procedures: Authorization for Hearing on Proposed Rule Amendments.

Because of the uncertain length of time needed, the Commission may deal with any item at any time in the meeting except those set for a specific time. Anyone wishing to be heard on any item not having a set time should arrive at 8:30 a.m. to avoid missing any item of interest.

The next Commission meeting will be Friday, March 2, 1990. There will be a short work session prior to this meeting on the afternoon of Thursday, March 1, 1990.

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

Nikkila

Approved ____
Approved with corrections ____
Corrections made ____

MINUTES ARE NOT FINAL UNTIL APPROVED BY THE EQC

ENVIRONMENTAL QUALITY COMMISSION

Minutes of the Two Hundredth Meeting,
November 30 - December 1, 1989

Work Session

Thursday, November 30, 1989

The Environmental Quality Commission Work Session was convened at 1:10 p.m. in Room 4A of the Department of Environmental Quality offices at 811 S. W. 6th Avenue in Portland, Oregon. Commission members present were: Chairman Bill Hutchison, Vice Chairman Emery Castle, and Commissioners Bill Wessinger, Genevieve Sage and Henry Lorenzen. Also present were Michael Huston of the Attorney General's Office, Director Fred Hansen of the Department of Environmental Quality and Department staff.

Item 1: Stage II Vapor Recovery: Portland Area

Nick Nikkila, Air Quality Division Administrator, presented some background information on the Stage II Vapor Recovery issue. There is ongoing concern on the continued ability to attain the ozone standard in Portland. There is currently no room for growth. Available control strategies have been looked at. This has resulted in a focus on Stage II. Two committees have been created: one external to the agency which is looking at whether Stage II should be pursued, and the best way to implement it; and a second one that is an internal DEQ committee looking at DEQ implementation issues. This work session focused on the external committee recommendations.

Bill Jasper, Air Quality Division, summarized potential benefits of Stage II vapor recovery. He indicated that gasoline marketing accounts for 9 percent of the Volatile Organic Compounds (VOC) in the Portland Area; that Stage II has the potential to capture 3000 tons of VOC; that capture of VOC via Stage II would also contribute to control of air toxics and energy conservation; and that control is cost effective compared to further controls on other sources of VOC.

Following the staff presentation, there was a panel presentation from the Technical Advisory Committee. **Al Elkins**, representing the Oregon Gasoline Dealers Association indicated that his group supports the concept as long as there is more time allowed for implementation. Further, work needs to be coordinated with the Underground Storage Tank (UST) work that is ongoing. Their greatest concern is the substantial financial impact on the dealers from the combination of programs.

Joe Weller, representing the Oregon Lung Association, supported the concept. He noted that the consensus reached in the committee was tenuous. He indicated that he wished there was a stronger proposal. He believes that this is an appropriate control strategy.

Jason Boe, representing the Oregon Petroleum Marketers and the Oil Heat Institute, spoke in reference to the financial hardship that this will impose on small businesses. His group is also under the gun of the UST efforts. He stated that implementation is premature, that costs will force many small stations out of business, that costs on small dealers is disproportionate, and that the positive impact of Stage I is still not known.

John Charles, Oregon Environmental Council (OEC), submitted a letter of strong opposition (from the OEC) with regard to the report submitted by DEQ staff.

The discussion on Stage II vapor recovery will be continued at the next EQC work session.

Item 2. Water Quality Rule Amendments: Discussion of Options

At the October 20, 1989, EQC meeting, the Commission directed the Department to return to the next Work Session with a discussion of alternatives for clarifying the existing water quality rule dealing with increased loads or new sources and water quality limited stream segments.

Chairman Hutchison opened the discussion by announcing that this was not to be a public hearing, and that news reports indicating it was were in error. A public hearing would be scheduled if the Commission elects to pursue any amendments to the rules.

Commissioner Castle made a statement regarding his position on the matter of discussing potential amendments to the water quality rules. He stated that he was in the minority on the WTD decision, and that he would not engage in discussion of rule amendments as a way of readdressing the WTD decision. He noted that rules are intended to help the Commission make good decisions on environmental protection. However, if the first experience in making a decision under a rule suggests the rule may be imperfect, the Commission should not be prevented from considering amendments to perfect the rule and do the correct thing with respect to Oregon's environment. Commissioner Castle strongly stated that if he thought that this discussion was going to lead to a process that would simply re-open the WTD issue, he would oppose engaging in such a discussion because it would damage the credibility of the Commission and might send wrong signals to those who would prefer we granted the permit to WTD. Chairman Hutchison and Commissioner Sage concurred in Commissioner Castle's statement.

Neil Mullane, of the Water Quality Division, reviewed the options that were detailed in a written report that was made available to the Commission at the meeting. In general, the options presented in four attachments would add rule language to clarify the process for designation and removal of water quality limited stream segments (current rules are silent on this matter), and clarify the conditions under which wasteload increases for new or existing sources could be approved. The Commission and staff discussed the options to better understand the intent and

effect of each.

Chairman Hutchison asked if the Commission could authorize a hearing on several options. **Michael Huston**, Assistant Attorney General, responded that it was possible to hold a hearing on several options, and then adopt a rule that would embrace any one of the options, or a combination of the options, or even decide not to adopt a rule at all.

As a result of the discussion, the Commission concluded that additional time was needed to understand the options presented. By consensus, the Commission agreed to have the matter on the agenda for the next meeting for further discussion and possible hearing authorization.

Item 3. Strategic Plan: Review of Revisions and Discussion of Next Steps

The Department provided two documents to the Commission for review prior to the work session discussion on the Strategic Plan: (1) The 11/20/89 draft of the Strategic Plan and Planning Process document which incorporates revisions suggested at the October Retreat for the Assumptions, Mission, and Goal Statements; and (2) The 11/22/89 draft of Discussion Topics which presents potential high priority issues that need to be discussed further.

Director Hansen noted that the second document identifies initial Division thoughts on things that are important to do over the next couple of years, as well as things that should be considered for reduction or elimination in order to free up resources for higher priority items. The intent was to provide a list of choices for focusing the next level of discussion.

Chairman Hutchison raised the issue of allowing people to appeal a broader range of issues to the Commission rather than to the Courts. Director Hansen reminded the Commission that current rules allow permit applicants to appeal the Department's permit decision to the Commission in a contested case. However, if a third party to the permit proceeding is dissatisfied with the Department decision, its option is to appeal to the circuit court. **Commissioner Wessinger** expressed opposition to granting third parties any right to an appeal. He noted that the Commission has discretion to look at any decision upon request of anyone, however, he was opposed to making that a guaranteed right.

Director Hansen indicated that more discussion was needed on the draft priorities within the Agency. With further discussion, the current draft may change somewhat. He proposed that the Department get back to the Commission at the February meeting with a draft that would be suitable for circulation for public input. The Commission agreed with that approach.

Regular Meeting

Friday, December 1, 1989

The Environmental Quality Commission meeting was convened at 8:40 a.m. in Room 4A of the Department of Environmental Quality offices at 811 S. W. 6th Avenue in Portland, Oregon. In attendance were Chairman Bill Hutchison, Vice Chairman Emery Castle, and Commissioners Bill Wessinger, Genevieve Sage and Henry Lorenzen. Also present were Michael Huston of the Attorney General's Office, Director Fred Hansen of the Department of Environmental Quality and Department staff.

NOTE: Staff reports presented at this meeting, which contain the Department's recommendations, are on file in the Office of the Director, Department of Environmental Quality, 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.

The meeting was called to order by Chairman Hutchison. People wishing to testify on any item were asked to fill out a witness registration sheet. The Commission then proceeded through the published agenda.

CONSENT ITEMS

Agenda Item A: Minutes of the October 18-20, 1989 EQC meeting

Commissioner Sage requested that the minutes be corrected as follows if appropriate based upon review of the meeting tapes:

The title for Item E should refer to a new "discharge" rather than a new "source".
(Note: no change was made because the title in the minutes is the same as the title displayed on the published meeting agenda.)

Page 11, first full paragraph, next to last sentence: add to the end of the sentence "if we apportion it ahead of time".
(Note: Based on review of the tape, the following was added to the end of the sentence: "in 1993 if WTD is holding a permit and discharging at that time.")

Add the following where appropriate: "Commissioner Sage asked legal counsel if it was correct that the rule had to be considered in it's entirety, and Michael Huston responded yes."
(Note: Based on review of the tape, the above wording was added as a new fourth paragraph on page 12.)

It was MOVED by Commissioner Wessinger that the minutes be approved with corrections as appropriate based on review of the tape. The motion was seconded by Commissioner Castle and passed unanimously.

Agenda Item B: Civil Penalties Settlements

The following proposed settlement agreements were presented for the Commission's consideration and approval:

a. Case No. OS-NWR-89-33, Verlin Blanchfield, dba/Blanchfield Septic Service.

b. Case Nos. HW-ER-89-18 and HW-ER-89-43, Chem-Security Systems, Inc.

Commissioner Wessinger asked about the seriousness of the Chem-Security violations. Director Hansen responded that the violations were not serious in terms of risk to the environment, but the Department considers any violations of process to be very important at a hazardous waste facility.

It was MOVED by Commissioner Wessinger that the Department's recommendation be approved. The motion was seconded by Commissioner Castle and passed unanimously.

Agenda Item C: Approval of Tax Credit Applications

The Department presented recommendations that 17 applications for tax credit be approved as follows:

T-2002 Willamette Industries, Inc.	Three baghouses, one modified baghouse, four modified scrubbers, two silos, blowers, conveyors.
T-2097 Whittier Wood Products Co.	Two Baghouses, fans, ductwork.
T-2147 Teledyne Ind., Inc.	Fugitive Emission Connecting, Sealing Devices.
T-2212 Road and Driveway Co.	Venturi scrubber, recirculation ponds, sound attenuation system, yard paving and haul roads.
T-2232 Roseburg Forest Products Co.	Burley Wet Scrubber.
T-2275 Teledyne Ind., Inc.	Venturi Scrubber System.
T-2286 Newood Products, Inc.	Cyclone/baghouse dust control system.
T-2407 Willamette Industries, Inc.	CFM EFB Electrostatic Precipitator, steel floor.
T-2409 Timber Products Co.	Primary Collector System.
T-2424 Timber Products Co.	Raw material storage building, bins, hopper and conveying system.
T-2515 Willamette Industries, Inc.	Pneumafil primary baghouse and auxiliary equipment.
T-2537 Teledyne Ind., Inc.	Demisters for Scrubber System.
T-2625 South Coast Lumber Co.	Scrubber and clarifier.
T-2668 Timber Products Co.	Two Pneu-Aire baghouses.
T-2815 Kenneth Roth	Straw Storage Shed.

T-2859 Looney Farms, Inc.	Straw Storage Shed.
T-3034 Knaupp Seed Farm, Inc.	Rears 30 Foot Propane Flamer.

Commissioner Wessinger stated that he would abstain from discussions or voting on applications T-2002, T-2407, and T-2515 filed by Willamette Industries, Inc.

Commissioner Sage asked about the difference in life span and cash flow of the straw storage sheds in applications T-2815 and T-2859. **Roberta Young**, from the Management Services Division of the Department indicated that different types of buildings would have different life spans, and that cash flow would depend on the nature of the straw sales arrangements.

It was MOVED by Commissioner Castle that applications T-2002, T-2047, and T-2515 be approved. The motion was seconded by Commissioner Lorenzen and approved with four yes votes and with Commissioner Wessinger abstaining.

It was MOVED by Commissioner Wessinger that the remainder of the applications be approved as recommended by the Department. The motion was seconded by Commissioner Castle, and unanimously approved.

Agenda Item D: Commission Member Reports

Chairman Hutchison reported on the Pacific Northwest Hazardous Waste Advisory Council. The Council met in September and approved some additional resolutions. The next meeting is scheduled in Coeur D'Alene, Idaho, next Friday to consider the future direction of the Council.

Commissioner Sage reported on the Governor's Watershed Enhancement Board (GWEB). The first annual Governor's Watershed Enhancement Conference will occur January 11-12, 1990. The conference will underscore the state's commitment to preventive environmental policies. Applications for the first round of watershed enhancement project funding for this biennium have been received and are being evaluated under comprehensive criteria which includes educational potential. GWEB has committed ten percent of its funds to education. GWEB has been urged by the Governor's office to encourage coordination of efforts between agencies, to encourage the establishment of priorities, and to coordinate legislative agendas between agencies. The Commission decided to schedule a brainstorming session for potential legislative concepts at the January EQC work session.

Commissioner Wessinger noted that Strategic Planning had been discussed the previous day during the work session.

PUBLIC FORUM

Lori Faha, representing the American Public Works Association, informed the Commission of their proposal for a statewide education program. The Oregon Section proposes to purchase dyes to

produce stencils that can be used to paint labels on catch basins urging the public to not dump toxic or hazardous materials down the drains. They hope to get volunteer groups to use the stencils in their communities. They would like DEQ to help defray some of the costs involved in this program to prevent stream pollution. **Lydia Taylor**, Administrator of the Water Quality Division, indicated the Department would look into the proposal. **Carolyn Young**, Public Affairs Manager for the Department, indicated the Fish and Wildlife Department was pursuing a similar proposal and that efforts should be coordinated.

John Bonine, representing the Western Natural Resources Law Clinic at the University of Oregon Law School and speaking on behalf of the Northwest Coalition for Alternatives to Pesticides, expressed appreciation for the caution that the Commission displayed during the work session discussion of the water quality rule amendment. He viewed the rule as only having the purpose of clearing the way for reversing the WTD decision made in October. He expressed concern about one of the proposed changes that would remove the broad protection of beneficial uses that is contained in the current rule. He recommended that the Commission not rush to modify the rules. He suggested the goal should be zero discharge of chlorinated compounds. He urged the Commission to set up a process to prepare a report on the issue of chlorinated toxic organic controls for Oregon. The process for producing a report should begin with a scoping session to solicit input on what should go into the report, followed by development of a draft report by DEQ staff, a public hearing, and then preparation of a final report. Chairman Hutchison stated that Mr. Bonine's proposal was consistent with the Commission's desire to get out in front of the issue.

Linda Williams, a Portland Attorney, urged the Commission to consider establishing a more formal petition and docketing procedure, including case numbers, for proceedings before the department that may need or warrant greater input from others outside the department. She also urged greater use of contested case procedures to assist in handling some applications. A docketing system together with a reading room would simplify opportunities for the concerned public to come in and read available information without disturbing staff. Chairman Hutchison noted the need to look at the public input issue, including the flow of information, how it comes in, information that Commission members receive that others do not see. **Commissioner Lorenzen** noted that the problem is to strike a suitable balance between the need for public access to the information the Commission uses as a basis for its decision, and the degree of formality of the decision process.

John Williams, representing the Steamfitters Local 290, expressed the view that the WTD proposal was not for installation of advanced technology, therefore, the application was broken rather than the existing rules that prohibited approval of the WTD proposal. He also noted that the Boise Cascade Pulp Mill in St. Helens received a tax credit for construction of an incinerator for non-condensible gases. During 1988, the incinerator violated its permit conditions 33 times. DEQ issued a notice of violation in December 1988. Additional violations occurred in 1989. He urged the Department to fine Boise Cascade for the violations, and urged the Commission to revoke the tax credit certification.

Quincy Sugarman, representing Oregon State Public Interest Research Group, noted that OSPIRG had looked at toxic air emissions reported by companies under the community right to know program. The third largest carcinogenic air emission in the state was chloroform, a by-product of

the bleaching process from pulp and paper mills. The new 1989 law requires evaluation and plans for reduction of the use of toxic chemicals.

Ms. Sugarman also expressed support for the recommendations presented to the Commission during the Thursday work session regarding Stage II gasoline vapor recovery. At a minimum, Stage II should be implemented in the Portland area with an exemption for extremely low volume stations. Stage II is a preventive strategy which OSPIRG strongly supports. The Commission should carefully consider extending Stage II to a statewide program.

Jeff Golden, Jackson County Commissioner, commented on agenda item S because he had to leave. He noted that the public thinks that industry and slash burning are bigger sources of air pollution than woodstoves. The staff recommendation on item S regarding reporting of compliance with air pollution requirements does not go far enough. He wanted a report to include the names of individual companies to show what they are doing that is good as well as identifying the minority who operate in violation. Chairman Hutchison expressed concern about recent events in Jackson County and support for actions taken by the City of Medford. He stated that it is time for Jackson County to take some action on woodstoves. Mr. Golden stated that they have a different perception than staff on what the issues are in Jackson County. He stressed his view that there is not a real industrial emission enforcement program in Jackson County; that violations do not have consequences. The county believes they can move forward when there is a public perception of a balanced approach.

Jerry Van Scoy, representing the Associated Floor Covering Contractors, urged the Commission to extend the variance order that is scheduled to expire at the end of the year regarding workers who disturb or remove asbestos in residential facilities. He requested a 4-6 month extension to allow time to work with new information regarding federal data and work practices that was recently made available to Oregon OSHA by Armstrong World Industries.

Chairman Hutchison closed the public forum and noted that Agenda Items F and J had been removed from the agenda. Item F was withdrawn by the City of Mt. Angel because they had found an alternative that does not require an exception to existing rules; therefore there is no need for the item. Item J regarding Kraft Pulp Mill Rules will be rescheduled for the January meeting.

ACTION ITEMS

Agenda Item E: Financial Assurance for Solid Waste Sites:Proposed Temporary Rule

Current Solid Waste Rules require the applicant for a regional solid waste facility permit to have a financial assurance plan approved by the Department at least three months prior to first receiving waste. The purpose of the rule was to provide adequate time for the Department to review the financial assurance plan. Oregon Waste Systems requested a variance from the rule so they can begin site operations sooner than three months after approval of their financial assurance plan. Rather than a variance, a temporary rule change is proposed which will allow a permittee to begin receiving wastes as soon as the Department approves the financial assurance plan and all other

prerequisites to commencing operation have been satisfied. The proposed rule amendments are supported by the Department's Solid Waste Advisory Committee.

The Department recommended that the Commission (1) adopt the proposed temporary rule as set forth in Attachment A of the staff report together with the findings of need in the staff report, and (2) the Department be authorized to conduct public hearings on the proposed rule with the intent of making the rule permanent.

It was MOVED by Commissioner Wessinger that the Department Recommendation be approved. The motion was seconded by Commissioner Sage, and unanimously approved.

Agenda Item F: City of Mt. Angel: Request for Waiver of Dilution Requirement [OAR 340-41-455(1)(f)]

This item was withdrawn from the agenda at the request of the City of Mt. Angel. They have developed an alternative for waste disposal that will not require a waiver of the rule requirement.

Agenda Item G: State Revolving Loan Fund: Proposed Adoption of Temporary Rules to Address 1989 Legislative Amendments and Problems Encountered in Initial Program Implementation

The 1989 Legislature modified enabling legislation for the State Revolving Loan Fund to (1) allow direct loans to be made to public agencies, (2) eliminate the need for a bond counsel opinion for every loan, and (3) allow the Department to waive its right to withhold revenue sharing funds otherwise due the public agency in the case of a default. The Department has proposed a temporary rule to incorporate the legislative changes. In addition, the proposed temporary rule would amend existing rules to allow the Department to accept loan security offered by a public agency that is different but substantially equivalent to the security required for other types of loans allowed by the rules, and to change the rule regarding loan reserves for revenue-secured loans.

The Department recommended adoption of temporary rules as presented in Attachment A of the Staff Report, together with the necessary findings as presented in Attachment D. The Department's bond counsel supports the amendment of the existing rules.

At the meeting, the Department presented an addendum containing a correction to the language in Attachment A based on the recommendation of bond counsel.

Commissioner Lorenzen asked if the proposal would have any impact on the Revolving Loan Fund's credit rating and increase the effective interest rate on certain funds sought for the Revolving Loan Fund. Director Hansen responded that the revolving loan fund is capitalized only by contributions from the Federal Government and state General Fund appropriations, therefore there should be impact.

It was MOVED by Commissioner Castle that the Department Recommendation be approved. The motion was seconded by Commissioner Lorenzen and unanimously approved.

Agenda Item H: Plastics Tax Credits: Adoption of Temporary Rules to Implement 1989 Legislative Changes, and Authorization for Hearing on Permanent Rule Amendments

Senate Bill 1083, passed by the 1989 Oregon Legislature, amended the statutes dealing with tax credits for reclaimed plastics to allow more types of investments to be eligible and to extend the sunset date for the program from December 31, 1989 to July 1, 1995. Existing Commission rules are now in conflict with the statute.

The Department recommended adoption of temporary rules and the supporting findings of need to extend the sunset date and make rules consistent with the new statute in order to encourage the recycling of plastics. The proposed temporary rules were presented in Attachment A of the staff report. The required findings of need were presented in Attachment B. The Department also recommended that a hearing be authorized for permanent adoption of the rules.

It was MOVED by Commissioner Castle that the Department recommendation be approved. The motion was seconded by Commissioner Lorenzen and unanimously approved.

Agenda Item I: City of Milwaukie: Appeal from Hearings Officer's Order

The City of Milwaukie has appealed the proposed order of the Commission's Hearings Officer dismissing the contested case arising from the City's request for a contested case hearing on the Department's order to the City which proposed to list property owned by the City on an inventory of facilities where a release of hazardous substances is confirmed.

The Commission heard oral arguments on this matter from Phillip Grillo, Attorney for Milwaukie, and Kurt Burkholder, Attorney for the Department. Michael Huston, Assistant Attorney General, was counsel for the Commission.

Director Hansen clarified for the record that this matter was not a joint appeal; rather the appeal was filed by the City of Milwaukie. Before proceeding with arguments, Commissioner Lorenzen asked for clarification of materials in the Commissioners' package, specifically the proposed order submitted by the Department that appeared to be different from the proposed order issued by the hearings officer. Michael Huston advised that the Department would have lived with the Hearings Officer's order, and thus did not appeal the matter to the Commission. However, since the City has brought the matter to the Commission, the Department believes there is a better way to craft the order, and therefore submitted their alternative proposed order. Mr. Huston further clarified that the Commission had three options before it: The Hearings Officer's proposed order that rejects the City's position, the Department's alternative proposed order which also rejects the City's position, and the City's request that the Commission proceed to the merits of the case.

Phillip Grillo, Attorney for the City of Milwaukie, advised that the City's appeal to the EQC of its hearings officer's order was a precaution based on uncertainty about the correct appeal route. The City filed appeals in the Circuit Court and in the Court of Appeals. It also filed a motion regarding jurisdiction seeking appellate direction to the correct forum. However, in Mr. Grillo's view, the EQC lacked jurisdiction to act while the matter was before the Court of Appeals. Accordingly, he asked that the EQC not issue an order until after the Court of Appeals acted.

Mr. Grillo stated that each appeal challenged the hearings officer's order finding that House Bill 3235 applied retroactively and that the City lacked a constitutionally protected right or other statutorily based right to a hearing independent of House Bill 3235.

Commissioner Lorenzen noted that if the EQC acted expediently but lacked jurisdiction, its act would be without effect, while if the Commission had jurisdiction, its act would assist the City in its duty to exhaust its administrative remedies.

Questioned, Michael Huston, Counsel to the EQC, stated that EQC action was one appropriate alternative.

Mr. Grillo identified the issue as how to find the responsible party. He submitted the City's motion to the Court of Appeals on jurisdiction for inclusion in the EQC's record on review. He stated his view that appeal of the hearings officer's order was properly before the Court of Appeals. **Kurt Burkholder**, Counsel to DEQ, objected to the submission. Commissioner Lorenzen noted that the Commission could take official notice of the motion. Chairman Hutchison stated that the motion should be rejected.

Mr. Grillo said that the rules were in place on November 30, 1988, when the Director issued his order. They required parties to submit hearing requests within 15 days and to provide written answers and affirmative allegations. Hearings were to be conducted. In his letter, the Director advised of the appeal procedures: The Administrative Procedures Act and Chapter 340 applied. The City acted in good faith in filing its appeal.

Chairman Hutchison stated that the bottom line is the City wants to hold on to its right to appeal the listing. If the City is on the new list it will not have an appeal right, but will have a way to participate in the new process. Chairman Hutchison asked Mr. Grillo to identify the City's support for its position by citing legal authority for a claim to a vested right in the old rules. Mr. Grillo responded that once the appeal was filed, there was a right to procedures in effect at the time.

Mr. Burkholder stated that the Legislature can repeal rights and the appeal would apply to pending cases. If this occurs, the right ceases to exist. There are problems if other protected interests are affected. Since DEQ's dismissal could have occurred independent of the 1989 Legislation, there is nothing to prejudice the City. Legal authority cited by the City is not on point, according to Mr. Burkholder, because it involved the vesting of jurisdiction between the Trial Court and the Court of Appeals, and the City has not been prejudiced by DEQ's order of withdrawal.

Commissioner Lorenzen distinguished two circumstances: In the first, if DEQ wished to proceed, Commissioner Lorenzen doubted whether the City would have a vested right in procedures contained in the old rules in determining whether the City belonged on the list. Second, if DEQ chose not to proceed, it would leave the City in the same position as if the listing process had not occurred. The City claims a vested right in whatever collateral estoppel-type effect they had as a result of the present proceeding in furtherance of using that determination as a shield against a new listing under the new statute. The City's real problem is with the review process in the new legislation. Because the statute is procedural, it does not vest a property right.

Mr. Grillo cited Parks v Waston, 716 F2d 646 (1983) as part of a judicial trend finding procedural protections can and do amount to protected property interests. If the City had an unequivocal promise of not being placed on the new list, it would not pursue the present appeal. Mr. Grillo stated the City is not in the same condition as it was a year previously, and stated why. Mr. Grillo noted that the City had a choice on discovery of contamination: it could have capped the well or it could have cleaned up the contamination. The purpose of the list is public information. Nominees now are known, and that purpose has been met.

Commissioner Lorenzen called on his experience as a condemnation lawyer knowledgeable in eminent domain to observe that governments engage in activities which cause economic impact to property values. However, courts have not acknowledged that real economic harms are property rights for which compensation must be paid.

Mr. Grillo identified significant costs incurred by the City for the purchase of water and address of the contamination.

Chairman Hutchison advised that the "red tape" of the old listing process had been eliminated under the new process, and he believed the City should now be putting its resources into cleanup.

Mr. Burkholder noted that impacts on the City were not due to the proposal that the City be listed; rather, it was due to groundwater contamination. The City of Milwaukie's purpose appeared to Mr. Burkholder to be to avoiding inclusion on the new list or to establish a right to recover costs from the state. In Mr. Burkholder's view, these were not relevant to the site inventory law and list and should not be used as leverage in the current proceedings. The new legislation eliminates pre-enforcement review.

According to Mr. Grillo, ORS 183.310 and ORS 468.110 are additional statutes which provide authority for appeal irrespective of House Bill 3235.

Mr. Burkholder stated that those statutes either do not apply, or House Bill 3235 provides a more specific procedure and controls disposition of the issue. Moreover, in the absence of a pending order there is no proceeding to give rise to a contested case process.
Asked to choose, Mr. Grillo considered the hearings officer's order preferable to the Department's proposed order.

Commissioner Lorenzen MOVED that the Commission adopt the proposed final order submitted

by the Department as contained on pages B-3 through B-7. The motion was seconded by Commissioner Castle.

Commissioner Lorenzen explain that having reviewed the record, he disagreed with the conclusion that the City had a property interest in the review procedures formerly contained in ORS 466.587.

Commissioner Sage inquired whether the EQC had authority to revise the hearings officer's order and adopt that submitted by DEQ. Michael Huston advised that once an appeal is taken to the EQC, the EQC may order as it wishes.

Chairman Hutchison asked for a roll call vote on the motion. The motion was unanimously approved.

RULE ADOPTIONS

Agenda Item J: Kraft Mill Regulations: Modifications to Correct Deficiencies, Add Opacity Standard for Recovery Boilers, Clarify Monitoring Requirements

This item was withdrawn from the agenda at the request of the Department. The matter will be rescheduled at a later meeting.

Agenda Item K: Storm Water Control: Proposed Adoption of Rules Requiring Permanent Water Quality Control Facilities for New Development in the Tualatin and Lake Oswego Subbasins (OAR 340-41-455 and 340-41-006)

The Commission adopted erosion control rules for new development in the Tualatin Basin in July 1989. At the same meeting, Northwest Environmental Defense Center and Tualatin River Keepers urged the Commission to also adopt interim rules for permanent stormwater control facilities and submitted language for proposed rules. The Commission directed the Department to review the proposal with a work group from the basin and authorized hearings on the proposal as it may be modified after the work group discussions. The work group met, and rules were taken to hearing in October 1989.

This agenda item recommended adoption of rules as presented in Attachment A of the staff report. The rules require jurisdictions in the Tualatin and Lake Oswego subbasins to require permanent stormwater quality control facilities on all new development beginning June 1, 1990. The rules would also allow collection of a fee in lieu of onsite facilities to fund permanent off-site facilities to serve the area. Finally, the rules would permit the use of sediment control devices other than settling ponds.

Neil Mullane of the Water Quality Division provided a brief summary of the issues outlined in the staff report. Chairman Hutchison asked if it would be an option to do nothing and let the local program plans take care of it. Neil Mullane said "yes." **Dick Nichols**, Water Quality Division,

added that the proposed rules would apply in the absence of a local plan or ordinance. The proposed rule would provide minimum standards which the local ordinance must at least achieve.

Chairman Hutchison asked about the in-lieu fees issue. Dick Nichols stated that there was no apparent disagreement about the need to allow exemptions through the use of in-lieu fees. However, some thought that before such exemptions were granted, the location of the off-site treatment facilities should be identified. The Department believed that the program plans would identify a time schedule for identifying off-site locations. The proposed rules would not allow exemptions if a jurisdiction were behind schedule in such identification.

Chairman Hutchison asked if the program plans should include ordinances in place when submitted. Neil Mullane responded that ordinances may have to be re-adopted if the Commission required any change in the plan in order to approve it. Thus it seemed reasonable to allow ordinances to be drafted and adopted to implement the plan as approved by the Commission. Dick Nichols added that until the local ordinances were adopted, the Commission rules would be applicable, thus assuring control.

Chairman Hutchison asked is an April 1, 1990 date for all jurisdictions except Washington County could be required? Dick Nichols indicated that the Department had considered this option, but thought that it complicated the issue and would not be fair to other jurisdictions.

Commissioner Sage stated that she was troubled because the rule provided a specific technical solution to an overall goal. Dick Nichols responded that the proposed rule requires implementation of a strategy as a minimum, but also requires a goal to be met.

Chairman Hutchison then asked those who had signed up to testify on this item to come forward as a group.

Darren Kipper, representing the Sunset Corridor Association, stated that he believed stormwater controls for new development should be addressed in the context of a comprehensive analysis of all potential components for reducing phosphorus loadings in urban runoff. This would allow a jurisdiction to implement those components that were most cost-effective. The Department's proposed rules presume that stormwater controls on new development were cost effective and that the cost effectiveness of such controls has not been demonstrated.

Chairman Hutchison responded by saying that he was concerned about the added costs for retrofitting controls and that constructing controls when new development occurs would be cheaper in the long run.

Mr. Kipper also stated that the erosion controls already adopted by the Commission were needed, but that the need for controls on new development had not been demonstrated.

Director Hansen stated that he was concerned that if new development were not addressed that the burden of reducing phosphorus levels to meet the total maximum daily load (TMDL) would fall to others.

Betty Atteberry of the Sunset Corridor Association, stated that the cleanup of the Tualatin River should be a comprehensive approach that evaluates the contributions of both point and nonpoint sources. The program plans would help provide this. She also pointed out that Unified Sewerage Agency (USA) was already in the process of adopting ordinances similar to those proposed by DEQ. If the Commission adopted the proposed rules, USA would be faced with a task of having to implement two separate stormwater rules simultaneously. This was not an efficient use of USA's resources.

Gary Krahmer, representing the Unified Sewerage Agency, said his agency had authority over stormwater in Washington County and that he had their draft program plan on his desk at that moment. He further added that he had met the day before with the Washington County Counsel to discuss Washington County's charter limitation as it relates to USA. (Washington County has a requirement in its charter that prohibits it from adopting any land use ordinances during the period of November 1 to March 1 of each year.) It is believed that USA is not subject to the charter requirements. Therefore, he believed that USA could have ordinances equivalent to the Department's proposed rules in effect earlier than was previously thought.

Lori Faha, representing the City of Portland, opposed the piecemeal approach that results from adopting stormwater rules at this time. She preferred the basin-wide approach that would be presented through the program plans. The Commission has set the goal by adopting the Tualatin rule; specific strategies for meeting the goal should be left to jurisdictions.

Bob Alexander, Executive Director of the Forest Grove Chamber of Commerce and representing the Forest Grove/Cornelius Economic Development Council, stated that he did not believe that Forest Grove or Cornelius had the assessed value to cover the costs for providing stormwater quality controls. Developers in his area had the same development costs as other places in the basin, but that the property values were less and so developers have less margin in which to absorb added costs.

Mary Tobias, Tualatin Valley Economic Development Corporation, noted that the program plan was drafted and would be submitted in final form in March 1990. The proposed rules would be in effect, if adopted by the Commission, on June 1, 1990. USA would have their stormwater plan for new development on line by July 1, 1990. If the proposed rules are adopted, then the jurisdictions are faced with duplicating efforts. She praised the process and efforts by the jurisdictions and felt that the proposed rules did not consider the good faith efforts made by the Tualatin Valley jurisdictions.

Chairman Hutchison stated that he was impressed with how much work had been done and particularly how far it had come since September, 1988, when the Tualatin TMDL had been adopted.

Rick Parrish, Northwest Environmental Defense Center (NEDC), urged immediate adoption of the proposed rules in order to alleviate a critical water quality problem. He did not think that the proposed rules would hamper the jurisdictions in reaching the overall goal for the Tualatin River.

He believed the rule should specifically state a preference to on-site controls for reducing contaminants in urban runoff. The one time in-lieu fee might not be enough incentive for on-site controls.

Neil Mullane responded that language could be added to the proposed rule that indicated a preference to on-site controls and prevention of contamination of urban runoff.

Commissioner Castle asked Mr. Parish if the main concern was timing. Mr. Parish responded by stating that this is the essential part and should not be delayed.

Darren Kipper stated that Mr. Parish's request presumes negligence on the part of the jurisdictions and there was no such negligence.

Mary Tobias noted the jurisdictions will be back in March with their program plans. The Commission would then be able to see if the proposed rules were necessary.

Commissioner Wessinger asked what harm there would be if the proposed rules were adopted, but sunsetted if the jurisdiction programs showed the proposed rules to be unnecessary?

Director Hansen stated that the issue was whether the Commission preferred to provide detailed direction by adopting the rules or to rely on the good faith demonstrated by the jurisdictions?

Commissioner Castle asked how the proposed rules would affect Department resources. Director Hansen responded that the effort fell mostly on the jurisdictions.

Commissioner Castle also asked about the perception of duplication. Neil Mullane stated that early direction needed to be provided. The rule could be repealed if it is not needed.

Chairman Hutchison suggested the proposed rules be treated as guidance and the progress of the jurisdictions be evaluated when the program plans were submitted in March, 1990. Neil Mullane agreed and urged the proposed rules should be adopted now. Commissioner Wessinger agreed.

Chairman Hutchison then closed the public comment period.

Commission Castle reminded all that the Tualatin TMDL was not based on an economic analysis. It was a policy choice to force cleanup of the Tualatin River. Costs are an inevitable consequence of policy, and those costs would not fall equally on all parts of the basin.

Commissioner Sage indicated the proposed rules may be as effective if held in abeyance and function as a guideline until March, 1990, when the Commission could judge progress of the jurisdictions. She also thought that the wording "on-site treatment" as stated in the proposed rules should be changed to "on-site minimization."

Commissioner Castle said it was a close call whether to adopt now or defer. He was pleased with current progress and appreciated local efforts. Chairman Hutchison agreed and noted that it

should not be viewed as a punitive action if the Commission decides to adopt the rule.

Commissioner Wessinger stated a preference to adopt the rules, but also to review the issue at the March meeting and reverse the decision if progress is sufficient.

Commission Castle MOVED that the Department recommendation be approved with the conceptual changes suggested by Commissioner Sage, and with the understanding that the action taken will be reconsidered at the March Meeting. The motion was seconded by Commissioner Wessinger. The motion was approved with four yes votes and Commissioner Sage voting no. The Department was instructed to return later in the meeting with proposed actual wording for the conceptual changes included in the motion.

The Commission then adjourned for lunch.

After reconvening, the Department presented new language to be inserted into the proposed rules in Agenda Item K. The proposed language would be inserted in OAR 340-41-455(3)(e) after the first sentence and would read: "Jurisdictions shall encourage and provide preference to techniques and methods that prevent and minimize pollutants from entering the storm and surface water systems." By consensus, the Commission approved this language.

Agenda Item L: Hazardous Waste Fee Rules: Revision of Compliance Fees for Generators and Treatment Storage Disposal Facilities (TSDFs)

In July, 1989, the Commission adopted a temporary rule to extend the 1988 fee schedule for the Hazardous Waste Program. The 1988 schedule imposed a one-time 25% surcharge to address an anticipated revenue shortfall in the program. Extension of the fee schedule was necessary to avoid a shortfall and stabilize funding for the 1989-91 biennium. In July, the Commission also authorized a rulemaking hearing to make the temporary rule permanent.

The Department recommended permanent adoption of rule amendments containing the revised fee schedule and housekeeping changes as presented in Attachment A of the staff report.

Director Hansen noted that the Department is now working with an advisory committee to develop a proposal for incorporating recycling incentives into the fee schedule and to establish a satisfactory long term fee schedule.

Tom Zelenka, representing Cascade Steel Rolling Mills, submitted written testimony and stated that his company felt that the fee issue, though difficult, must be resolved and cannot continue to be delayed. **Stephanie Hallock**, Administrator of the Hazardous and Solid Waste Division offered to amend the proposal by adding a sunset date of June 30, 1991 to the rule. This would assure resolution of the funding issues before the July 1991 billing.

It was MOVED by Commissioner Wessinger that the Department recommendation be approved with added wording that the fee schedule would sunset on June 30, 1991. The motion was

seconded by Commissioner Sage, and was unanimously approved.

Agenda Item M: Underground Storage Tank Program: Adoption of Annual Permit Fee

The 1989 Legislature amended the enabling legislation for the Underground Storage Tank Program to continue the $25 per tank annual fee after July 1, 1989. (Prior legislation reduced the fee to $20 as of July 1, 1989.) On July 21, 1989, the Commission adopted a temporary rule to continue the $25 fee in accordance with the statute, and authorized a hearing to make the rule permanent.

The Department proposed permanent adoption of the rule as presented in Attachment A of the staff report.

It was MOVED by Commissioner Sage that the Department recommendation be approved. Commissioner Castle seconded the motion and it was unanimously approved.

Agenda Item N: Assessment Deferral Loan Program: Adoption of Interest Rate for 1989-91 Biennium

On September 7, 1989, the Commission adopted a temporary rule to establish a fixed interest rate of five percent for safety net loans until changed by Commission action. Prior rules had established the interest rate only through June 30, 1989. The Commission also authorized a hearing for permanent adoption of the rule. A hearing was held on October 16, 1989. No written or oral testimony was received.

The Department now recommended that the Commission adopt the permanent rule as presented in Attachment A of the staff report.

It was MOVED by Commissioner Castle that the Department recommendation be approved. The motion was seconded by Commissioner Lorenzen and unanimously approved.

HEARING AUTHORIZATIONS

Agenda Item O: Pollution Control Tax Credits: Proposed Rule Amendments

The 1989 Legislature amended the tax credit statute to extend the sunset date for the statute from December 31, 1990 to December 31, 1995, and made a number of other changes including elimination of the requirement for preliminary certification, clarification that facilities must be in compliance with rules and statutes to qualify for certification, modification of the provision relating to the extent of eligibility of facilities partially funded with federal funds, expansion of the list of items not eligible for certification, and other clarifying amendments. The Department proposed rules to address the amendments as well as other changes to facilitate administration of the program, including such things as clarification of the terms "principal purpose" and "sole purpose",

ability to require documentation of gross annual income upon department request, ability to require additional fees to cover cost of processing applications, etc.

The Department recommended that the Commission authorize a rulemaking hearing on the proposed amendments presented in Attachment A of the staff report.

Roberta Young, of the Management Services Division, explained that the "principal purpose" and "sole purpose" terms were added to the statute in 1983. The proposed rule amendments would clarify that "principal purpose" applies to facilities installed to meet requirements imposed by DEQ or EPA. "Sole purpose" facilities can only function for pollution control. As an example, recycling facilities are considered eligible under the sole purpose definition because their function is to remove materials from the waste stream; however, any economic benefits derived would figure into the return on investment and could reduce the percent of cost allocable to pollution control. A shed for storing straw that is removed from the field prior to propane flaming would qualify under the sole purpose provision because the function is directly related to reduction of field burning. However, a tractor used to pull the propane flamer, and used for other purposed during the remainder of the year would not meet the sole purpose definition.

Commissioner Sage questioned how much principal purpose should be encouraged. Director Hansen noted that many desirable pollution prevention actions are not required by law or rule, and can therefore only qualify for tax credit if they meet the sole purpose test.

It was MOVED by Commissioner Wessinger that the Department recommendation be approved. The motion was seconded by Commissioner Lorenzen and unanimously approved.

Commissioner Castle commented that the action taken was consistent with legislative intent, however, he was uncomfortable with the leadership that the Commission is providing in the area of tax credits. He expressed concerns about the tax credit approach to environmental regulation; noting that tax credits may be counter-productive to environmental protection. He expressed the desire for the Commission to be in a position of leadership rather than a position of just reacting. Director Hansen noted that decisions in the last legislative session were influenced by the state spending lid, and the ability to give benefits by way of tax credits that could not be done under the spending limit.

Commissioner Castle suggested that this be a work session topic some time in the future.

Agenda Item P: Woodstove Certification Program: Proposed Rule Modifications to Conform to New Environmental Protection Agency (EPA) Requirements

At the September EQC work session, the Department requested policy direction on how Oregon's woodstove certification program should be amended to mesh with the new and similar federal program established by EPA. At that time, the Commission concurred that rules be prepared to (1) accept EPA's emission certification program as a means of streamlining government administrative requirements, (2) retaining current efficiency; certification and labeling program to

meet statutory requirements, and as a means of motivating purchase of lower emission technology, and (3) retaining Oregon's retail enforcement authority. The rule amendments proposed in Attachment A of the staff report are intended to implement this direction.

The Department recommended that the Commission authorize a rulemaking hearing on the proposed rule amendments in Attachment A of the staff report.

It was MOVED by Commissioner Castle that the Department recommendation be approved. The motion was seconded by Commissioner Sage and unanimously approved.

Commissioner Wessinger asked for a brief update on the progress toward developing a voluntary woodstove durability program in cooperation with the U.S. Environmental Protection Agency. **John Kowalczyk**, of the Air Quality Division, responded that the Department has contacted both the EPA and Wood Heating Alliance and that some progress has been made; it appears that a program will be developed in 6 to 12 months.

Agenda Item Q: Solid Waste Fees: Proposed Amendment of Fee Rules

The 1989 Legislature passed HB 3515 which, among other things, requires a new fee on Solid Waste. The Commission must, by rule, establish the fee at a level to raise sufficient revenue to carry out specified purposes of the law, but not more than 50 cents per ton of solid waste. Attachment A of the staff report contains proposed rules to implement the new statutory requirements.

The Department proposed that the Commission authorize a hearing on the rules proposed in Attachment A.

Director Fred Hansen explained that the Department had originally proposed a $2 per ton fee, but House Bill 3515 passed with a maximum 50 cents per ton.

Chairman Hutchison asked if the proposed fee would apply to out-of-state waste. DEQ Solid Waste Manager **Steve Greenwood** explained that this fee would not apply to out-of-state waste. Instead, House Bill 3515 directed the Commission to adopt a separate fee on out of state waste by January 1, 1991. Director Hansen added that there would be a period from July 1, 1990 until the out-of-state fee was adopted, when in-state sources of waste would be paying a fee and out-of-state sources of waste would not.

It was MOVED by Commissioner Wessinger that the Department recommendation be approved. The motion was seconded by Commissioner Sage and approved unanimously.

Agenda Item R: Enforcement Rules: Proposed Amendments to Clarify Rules

At the Commission work session on October 19, 1989, the Department reported on implementation

of the new enforcement rules adopted at the March 3, 1989, meeting. The Department informed the Commission of a number of rule changes that experience to date suggested were desireable including clarifying some areas of confusion such as including field burning violations within the rules, classifying new violations in the areas of oil transport and oil spills, and making other housekeeping changes. This staff report presented the proposed amendments in Attachment A.

The Department recommended that the Commission authorize a rulemaking hearing on the proposed rules in Attachment A.

Commissioner Sage asked for clarification of the basis for settlement incorporated in the rule; was it adjustment of the basis for calculation under the rules or was it different? Director Hansen explained that adjustment occurs only if new facts are presented, and the settlement decision is similar in effect to withdrawing the old penalty and assessing a new penalty based upon the new facts. **Yone McNalley**, of the Regional Operations Division, noted that the proposed rules outline the criteria and restrict the latitude of settlement.

Commissioner Sage also expressed concern that the economic condition factor tends in practice to be neutral for lack of information. Director Hansen noted that information on economic condition is usually only available if introduced as a potential mitigating factor. An example of an aggravating factor would be the avoidance of costs by failing to obtain a permit.

It was MOVED by Commissioner Castle that the Department recommendation be approved. The motion was seconded by Commissioner Lorenzen and unanimously approved.

INFORMATIONAL ITEMS

Agenda Item S: Periodic Report on Compliance with Air Pollution Control Requirements

At the September 7, 1989 EQC meeting, Jackson County Commissioner Jeff Golden recommended the Department prepare a periodic industry report card to identify those sources doing well in meeting pollution control requirements and those which weren't. The Commission directed the Department to report back at a future meeting on the feasibility of this type of reporting.

In responding to this reporting concept, the Department believed it would be more appropriate to address not only industrial sources but also the other major pollution sources in the Medford area. Thus, the Department recommended approval of a proposal to develop an air quality compliance report for the Medford area on a quarterly basis during 1990 as a one-year pilot program.

Commissioner Sage asked about the pros and cons of providing more details on industrial sources as recommended by Jackson County Commissioner Jeff Golden. **Merlyn Hough**, of the Air Quality Division, responded that individual source information is available to anyone requesting it, however, the Department believes a broader view is more appropriate for a quarterly report.

By consensus, the Commission concurred with the Department recommendation.

Agenda Item T: Pulp and Paper Mill Regulatory Issues

Director Hansen called the Commission's attention to a memorandum report from Peter Wong dated December 1, 1989, which provides an update on the status of Individual Control Strategies (ICS's) for the Pope & Talbot, James River, and Boise Cascade Mills in Oregon as well as latest information available to the Department on dioxin.

The Department is proposing to modify the permits of the pulp mills to incorporate ICSs. A hearing will be held and written comments will be received on the proposed modified permits. The Department intends to evaluate all comments and finalize the permit modifications and forward them to EPA by February 6, 1990. The modifications will not come before the Commission unless the permittees appeal the Department decision or a waste load increase is requested. The proposed permit modifications require the water quality standard of 0.013 parts per quadrillion TCDD to be met in the stream at the boundary of the effluent mixing zone by June 4, 1992. The permit modifications include a re-opener clause.

Commissioner Lorenzen asked how compliance would be measured. **Peter Wong**, of the Water Quality Division staff, responded that compliance would be determined based on measurements in the bleach plant effluent and calculations of further treatment removal and dilution and dispersion. In addition, the Department will require monitoring for Adsorbable Organic Halides (AOX) with the desired result of developing a correlation between TCDD and AOX levels in order to simplify future monitoring.

Commissioner Lorenzen asked if the focus was on the correct parameter and whether sediment or toxic hot spots should be of concern. Department staff acknowledged that additional information would be desirable on sediments, particularly regarding the impact of past practices. Toxic hot spots are possible in areas where organic sediments would accumulate and could require remedial action upon their location. Sediments in the Columbia tend to be inorganic rather than organic in nature.

Lydia Taylor advised that the Department and the State of Washington are pursuing establishment of a Scientific Advisory Committee to assist in defining what kind of information needs to be gathered for management of the Columbia River. Director Hansen noted that added information will not answer all of the questions, but will aid in setting future policy.

The Commission discussed the potential for further discussions on the issue, including the potential for a scientific/technical forum.

The Chairman then called on people who had signed up to testify.

Thane Tienson, representing Salmon for All, expressed concern for water quality effects on fish and particularly the sturgeon which are bottom dwellers, opposed any softening of water quality

standards, and was encouraged by efforts to initiate a water quality study.

Roger Sherwood, representing Pope & Talbot, advised the Commission that they are pursuing implementation of their ICS, they are looking more broadly at the fate of their mill effluent in the environment, and advised that they would be willing to report to the Commission on the results of a field survey their engineers are currently undertaking in Scandinavia.

John Williams, representing the Steamfitters Local 290, expressed concern that there was no AOX number in permits, and suggested the need for continuous bioassay of pulp mill effluents.

No further actions were taken, and the matters will be discussed further at the next meeting.

Agenda Item U: Status of Interstate Estuary Study for the Columbia River

Chairman Hutchison indicated that he would like the Commission to endorse an interstate study on the Columbia. He expressed concern about the chances for success of individual studies. Director Hansen reviewed the background on the Governor's decision on the proposed Columbia River Estuary designation. Lydia Taylor advised that negotiations were nearing final language on an agreement between Oregon and Washington on Data Collection on the Columbia. The next steps will be to select the Scientific Advisory Committee to design the study and to secure the state's share of funding for the study.

There was no further business and the meeting was adjourned at 3:50 p.m.

GWEB STRATEGIC PLAN

ATTACHMENT #1

GWEB TASKS:

1. ADMINISTRATION:

Task Identification

By December 1989, complete task identification.

Project Maintenance

By June 30, 1990, develop and adopt a policy and procedure that addresses requirements for grantee operation and maintenance of GWEB projects.

Funding Target - EAC

By October 1989:

- .develop a funding target for EAC - EAC to give recommendation after August EAC meeting.
- .define method of funding educational projects

Strategic Plan

By June 30, 1990:

- .update Strategic Plan on biennial basis

EAC Role

By December 31, 1989:

- .define the make up of the EAC, number of people
- .decide whether to combine with TAC or have occasional or regular joint meetings
- .decide whether the EAC should participate in Board meetings

Other Funding

By December 31, 1989, develop lists of other funding sources for project applicants.

2. EDUCATION

EAC Tasks

By December 1989:

- .develop a 2 - or multi-year plan outlining EAC tasks
- .target completion dates including time-line for Board review to ensure continuity of EAC accomplishments
- .develop a process for review of educational proposals - same as TAC review used last year
- .develop a plan for evaluating the educational potential of applications

Programs

By April 15, 1990, develop a plan for cooperative education programs.

By December 31, 1989, develop a program/schedule to publicize the GWEB concept, including:

- .getting on the agendas of regional and national meetings
- → .having EAC/TAC design an Info. Base concept and begin to implement development of Info. Base
- .holding Conferences and developing a concept and sponsoring regional conferences.
- .discuss with Oregon State University Extension the potential for a master training program on watershed enhancement to determine if the Board should implement such a program.
- .By spring (April) 1990, contact Home Extension units encouraging them to choose enhancement for one of their next yearly studies.

Economics

By June 30, 1995, to keep the watershed enhancement concept going, develop a program aimed at private enterprise doing all watershed enhancement work, educating toward the time when no more state dollars are available.

By June 30, 1991, develop a procedure and sponsor economic evaluation of enterprises doing a good job on watershed enhancement and management.

3. SOCIOLOGICAL

Volunteers

By June 30, 1990, develop and maintain a viable volunteer group contact base as a source for sponsor assistance in project installation.

By June 30, 1990, develop a plan to target key volunteer groups in communities and seek to get them involved.

By March 31, 1990, evaluate and, if feasible, develop programs with awards of recognition of volunteers who have provided service to GWEB or GWEB-sponsored projects; and to persons or organizations who have made special contributions to watershed enhancement.

By November 1, 1989, develop and include in project evaluation a process for determining CRMP utilization; and to keep CRMP Executive Group appraised of applications not involving CRM concepts so that the CRMP

Group can provide contact and appropriate assistance and/or training to sponsoring groups.

4. GOVERNMENT

Landowner Incentives:

By June 30, 1991, address the public policy issues about what to do with "new water" created by GWEB projects.

Spread the Word

By December 31, 1990, examine the relationship between GWEB and other agencies involved in watershed management especially the new wetlands bill.

*Highways
*Parks
*State Lands

By June 30, 1991, develop a plan to create a dialogue about the watershed enhancement program and watershed policies with state Boards and Commissions including SWMG and 15 federal and 5 regional agencies involved with water.

By June 30, 1991, look at other funds to funnel through GWEB: 319, grants, etc.; and evaluate alternatives to ensure effective relations with agencies, i.e. BPA, who can offset project costs through their financial assistance programs.

Additional Agency Involvement

March 31, 1990, evaluate potential roles of other land managing and educational agencies not on GWEB committees; develop procedures to involve more agencies.

.TAC Task: Borrow staff from other agencies to help out, staff rotations.

5. TECHNICAL

Information Dissemination

By December 31, 1990, formalize a network/procedure to disseminate appropriate technical information on watershed and riparian technology. (Info Base design step, see #2 Education)

Projects

By September 30, 1989, develop a procedure to include in project selection the goals of the Clean Water Act/states Non-point source assessment and management plan.

By September 30, 1990, develop a plan to implement strategies in the OR Water Management Program. 0788s

NEIL GOLDSCHMIDT
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WORK SESSION
REQUEST FOR EQC DISCUSSION

Meeting Date: January 18, 1990
Agenda Item: 2
Division: Air Quality
Section: Technical Services

SUBJECT:

Stage II Vapor Recovery: Continuation of 11/30/89 Work Session.

PURPOSE:

This report presents the findings of a Department of Environmental Quality (Department, DEQ) in-house work group which was assigned the task of determining implementation costs associated with operating a Stage II Vapor Recovery Program in Oregon.

ACTION REQUESTED:

_X_ Work Session Discussion
___ General Program Background
_X_ Potential Strategy, Policy, or Rules
___ Agenda Item ___ for Current Meeting
___ Other: (specify)

BACKGROUND:

At the November 30, 1989 Work Session the Environmental Quality Commission (Commission, EQC) discussed a report produced by the Technical Advisory Committee on Stage I/II Vapor Recovery. Among the recommendations of the Technical Advisory Committee were:

* "The underground piping for Stage II Vapor Recovery be required to be constructed and set in place at the time of Underground Storage Tank (UST) compliance or sooner, as determined through the rule making process - but not less than 24 months, at all gasoline refueling stations with an average monthly throughput of greater than

10,000 gallons of gasoline located within the county boundaries of Multnomah, Washington, and Clackamas counties."

* "That the requirement for implementation of the above ground components of the Stage II Vapor Recovery system and full operation of the system not be adopted until re-authorization of the Clean Air Act and base year considerations have been completed."

The Department concurred with the recommendations of the committee.

During October and early November a separate, in-house, task force met to determine the costs that would be incurred by the Department if Stage II Vapor Recovery were implemented in Oregon. This work group was also assigned the task of recommending an approach(es) to implement a Stage II Vapor Recovery program in the most cost effective manner and to fund the associated costs. The complete report of the in-house Stage II Funding Task Force is attached (Attachment A). The task force provided cost estimates for operating a program in the Portland Inspection and Maintenance (I/M) area and statewide. Because the Technical Advisory Committee has recommended that Stage II Vapor Recovery be implemented only within the boundaries of Multnomah, Washington, and Clackamas counties at this time, only the findings of the Stage II Funding Task Force relevant to the Portland I/M boundary area are included in the following list of findings:

* Costs to the Department would fall into five categories:

  Registration of Equipment to be regulated.
  Review and/or inspection of installation.
  Education of the regulated community.
  Periodic inspection and/or performance testing.
  Enforcement and follow up inspections.

* A stand alone Stage II Vapor Recovery program operated independently by the Air Quality Division in the Portland metro area would require 2 full time equivalents (FTE) and an annual budget of $125,000.

* Substantial cost savings are possible (as much as 50 percent) if a cooperative approach is taken. This approach would make use of existing programs in the Department of Agriculture's Weights & Measures Division

(which already inspects metering systems on all retail gasoline pumps), DEQ Underground Storage Tank Program (which already regulates and inspects some underground gasoline tank installations), and DEQ Regional Operations (which already does inspections and enforcement on many pollution sources). It is expected that the incremental costs associated with an increased work load on these programs would be substantially less than the cost of creating a new program from scratch.

* Start-up costs could be minimized by phasing in the program over a few years. A program could be started almost immediately by requiring that underground Stage II equipment be installed whenever new tanks are installed (administered by the UST program). Installation of above ground equipment would be required a year or more later and would have to be done by certified installers. Routine inspection of Stage II equipment would not have to begin for several months after installation.

ALTERNATIVES CONSIDERED BY THE DEPARTMENT:

Several potential funding mechanisms were considered. The options considered most promising by the Air Quality Division are listed below. Where possible, the estimated fee or fee increase that would be required to fund the entire program from one source is given. It should be recognized that the program could be funded by a combination of funding mechanisms.

1. Annual Operating Fee. This option would require that each pump at each retail (or card lock) gas station be assessed an annual operating permit fee of sufficient size so that the Department would receive $25.00 per pump. It may be possible to tie into the existing Weights and Measures fee collection system.

2. Vehicle Registration Fee Increase. This would require an increase in the current vehicle registration fee (assessed every other year) of sufficient size that the Department would receive $0.36 per vehicle.

3. Inspection and Maintenance Fee Increase. Based on the same assumptions as with the vehicle registration fees above, this would require an increase of $0.36 in the existing I/M fee collected every other year.

4. Underground Storage Tank Program Fees. It may be possible to use some UST fees to cover the underground aspects of a Stage II Vapor Recovery program.

5. Base Grant Increase. An increase in the Air Quality Base Grant provided by the Environmental Protection Agency (EPA) could be requested to pay for one FTE in the Air Quality Division to administer the program. Additional money to cover inspections and expenses of other Departments/Divisions would need to be raised in other ways.

6. Seed Money. It may be possible to obtain "seed" money for developmental/start-up costs. Potential sources include Department of Energy oil overcharge settlement funds and EPA waste minimization demonstration project funds. Current information indicates that these funds are already committed for the next year but they may be available in the next funding cycle.

DEPARTMENT RECOMMENDATION:

The Department recommends that a Stage II Vapor Recovery Program be implemented using a phased-in, cooperative approach to minimize costs. Because Stage II Vapor Recovery will affect a community that is already regulated by other programs (DEQ UST program and the Dept. of Agriculture Weights & Measures Division), it appears most cost effective and least confusing to the regulated community to tie Stage II into those existing programs rather than create a new program from scratch. This approach only requires adding an incremental cost to those existing programs. The Underground Storage Tank program should require that below ground Stage II equipment be installed whenever tanks are replaced in the Tri-County area. Adoption of a program to require installation, operation and inspection of above ground components of Stage II equipment should be adopted soon after reauthorization of the Clean Air Act.

Start-up resources should be generated by rearranging priorities within the Air Quality Division and by applying for seed money grants next year. The Department should request additional funding from the 1991 legislature to permanently support the program. This funding should be in the form of an annual operating permit fee applied to each gasoline pump.

In summary, the combined recommendation of the Technical Advisory Committee and the in-house Task Force on Stage II Vapor Recovery results in the implementation of a Stage II Vapor Recovery Program as follows:

Winter 1990: Issue press release and request gasoline retail association to alert all gasoline dispensers statewide, with average monthly throughput greater than 10,000 gallons, that it would be prudent to install underground piping for Stage II Vapor Recovery at the time of UST compliance.

Spring 1990: Request authorization for hearing on rules to require the installation of the underground piping for Stage II Vapor Recovery at all gasoline dispensing facilities with an average monthly throughput of greater than 10,000 gallons of gasoline located within Multnomah, Washington and Clackamas counties. The installations would be required to occur at the time of UST compliance or within 24-36 months (time frame to be finalized through rulemaking process) following the rule adoption, whichever occurs first.

Spring 1990: Request authorization for hearing on rules to require Stage I Vapor Recovery to be fully implemented within the above mentioned time frame for all gasoline refueling stations within Multnomah, Washington and Clackamas counties.

Spring 1990: Hold hearings.

Summer 1990: Recommend rulemaking for EQC adoption.

Fall 1990: Request authorization for hearing on rules to require the installation of the above ground Stage II Vapor Recovery components and operation of the Stage II system at all gasoline dispensing facilities in the counties of Multnomah, Washington and Clackamas with an average monthly throughput of greater than 10,000 gallons.

Fall 1990: Request authorization to asses an annual permit fee on a per nozzle basis for each gasoline dispensing facility subject to the

Stage II Vapor Recovery requirements. Effective date of the fee would be established so that the first annual fee would be required 12 months before Stage II Vapor Recovery is required to be fully operational. Approval of the E-Board or full Legislature would be sought before the fee could be implemented.

Approved:

Section: _____

Division: _____

Director: _____

Report Prepared By: D. Mitchell Wolgamott

Phone: 229-5713

Date Prepared: January 3, 1990

DMW:a
TS\AH325 (1/90)

ATTACHMENT A

STATE OF OREGON
DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE MEMORANDUM

DATE: November 6, 1989

TO: Nick Nikkila, AQD Administrator

CC: WPJasper, Stage I/II Technical Advisory Committee Staff

FROM: Stage II Funding Task Force

SUBJECT: Stage II Program Costs and Funding Options

Recommendation

The Stage II Funding Task Force recommends that Stage II vapor recovery be implemented now using a phased in, cooperative approach to minimize costs. This approach allows the use of existing programs only adding an incremental cost. This could be done by beginning to work immediately with the Underground Storage Tank Program to require that Stage II plumbing be installed whenever a tank is replaced statewide. In Portland below ground Stage II plumbing could be required in the next couple of years. Above ground stage II equipment should be phased in beginning in Portland and expanding statewide in three to five years. Start-up resources should be generated by rearranging priorities within the Air Quality Division and by applying for seed money grants next year. The Department should request additional funding from the 1991 legislature to permanently support the statewide program. This funding should be in the form of a vehicle registration fee increase or an annual operating permit fee applied to each gasoline pump.

Findings

As requested, we have researched the costs that the Department would incur, and options that would be available for funding, if a decision is made to pursue a Stage II Vapor Recovery Program in Oregon.

In order to accomplish our mission, we conducted a telephone survey of several states which currently have or are contemplating stage II vapor recovery programs. The purpose of the survey was to find out how other states approach the administrative and enforcement aspects of stage II and how they pay for it. A brief summary of the results of that survey is attached.

We have determined the costs to the Department would fall into five categories:

Registration of equipment to be regulated
Review and/or inspection of installation
Regulated community education
Periodic inspection and/or performance testing
Enforcement and follow up inspections

The actual cost associated with each category would depend on the level of effort dedicated to each activity once a program is designed. It should be emphasized that the costs listed below are estimates only. They are based largely on the information gathered from our survey. As requested, we have developed a cost matrix which includes an estimate for a statewide program and a program which operates only within the Portland Air Quality Maintenance Area (AQMA). For each of these options we have determined a high and low end cost estimate.

The high end estimate is for an optimal program that would include registration of all retail pumps, review of plans and physical inspection of below ground equipment before it is covered, development of educational materials and/or seminars to let the regulated community know what their responsibilities are, two inspections of above ground equipment, including performance testing, each year at each facility. Equipment that is found to be out of compliance would be tagged out of service and would have to be re-inspected before it could be operated again. The low end estimates would require compromises such as using a check list rather than physical inspection of below ground equipment, smaller educational effort, fewer than two inspections per year and less performance testing. The costs discussed in this memo assume 630 retail refueling stations, with a total of about 5400 nozzles in the Portland I/M area. Statewide there are about 2500 stations averaging about nine nozzles per station. The costs assume 700,000 registered vehicles in the Portland I/M area and 1.3 million registered vehicles state wide. These figures were provided by DEQ I/M Program.

Stage II FTE Requirements

	PDX I/M	Statewide
Optimum	2	8
Minimum	1.5	5

Stage II Dollar Requirements

	PDX I/M	Statewide
Optimum	$125,000	$500,000
Minimum	$ 94,000	$250,000

The task force came up with the following list of potential funding mechanisms (details follow):

- Annual operating fee on each nozzle (possibly collected by Weights & Measures in conjunction with their existing permits on gas pumps).
- Vehicle registration fee increase
- I/M fee increase
- Toxic air pollutant fee
- UST Program fee increases
- Base grant increase
- Seed money for start-up costs (from EPA, DOE, or?)
- Absorb costs in existing budget by rearranging priorities within the Air Quality Division

Costs could come from a combination of more than one of the above mechanisms.

Conversations that the task force had with Pete Dalke and John Loewy indicate that funding a Stage II program with fees will be problematic (at least in the short run). The EQC can no longer impose new fees without prior approval from the legislature. Nor can the EQC increase existing fees unless approved, in advance, by the E-board or legislature. Also, excess funds collected by fees in one program cannot be transferred to another program. Since Stage II is not likely to be viewed as an emergency, an increase in fees to support it would not be possible until a convincing argument can be presented to the legislature (which doesn't meet again until 1991). If Stage II is to be implemented in the near future it would appear that the most likely scenario would require starting the program using seed money raised from outside the Department and/or trading resources within the division and contracting some work with other programs (an approach which this task force endorses). The Department would then still have the option of approaching the legislature for additional, continuing funding. Because Stage II will affect a community which is already regulated by other programs (DEQ UST program and Dept. of Ag. Weights & Measures) it appears most cost effective and least confusing to the regulated community to tie Stage II into those existing programs rather than create a new program from scratch.

Listed below are the estimated fee or fee increases that would be required to fund the entire program from single funding sources.

Annual Operating Fee on Each Nozzle:

This option would require that each pump at each retail refueling station be assessed an annual operating permit fee. The costs might be reduced by tying into Weights & Measures existing fee collection system. They are already permitting the metering system on each retail pump. They also are currently doing inspections of retail pumps that require actually pumping gas from each nozzle. Therefore it would likely be less expensive for them

to add an incremental cost to cover performance testing than to fund a separate set of inspectors. Currently the Weights & Measures inspectors can cover about 36 nozzles per day. It is not clear how much time would be added to include Stage II performance testing. Blaine Rhodes of the St. Louis program estimates that inspectors are spending about five minutes per nozzle (not counting performance testing) on average.

Annual Operating Fee/Nozzle Required

	PDX I/M	Statewide
Optimum	$25.00	$25.00
Minimum	$18.00	$12.00

Vehicle Registration Fee Increase:

The dollars indicated reflect the increase in the current vehicle registration fee (assessed every other year) that would be required to pay for the entire program.

Registration Fee Increase Required

	PDX I/M	Statewide
Optimum	$0.36	$0.77
Minimum	$0.27	$0.39

Inspection and Maintenance Fee Increase:

Based on the same assumptions as with vehicle registration fees above.

I/M Fee Increase Required

	PDX I/M	Statewide
Optimum	$0.36	N/A
Minimum	$0.27	N/A

Toxic Air Pollutant Fee:

Authority currently exists to asses a fee on sources of non-criteria air pollutants. Currently the fee schedule authorizes a flat $300 annual compliance determination fee. In order to use this funding mechanism for Stage II the fee schedule would need to be reworked to allow a smaller fee for gas stations (probably on a prorated scale based on gasoline throughput).

UST Program:

It may be possible to increase UST fees to cover the cost of the below ground aspects of Stage II.

Base Grant Increase:

A base grant increase could be requested for the full amount of the program. A more likely scenario would be to request a base grant increase to cover one FTE in AQD to administer the program. Additional money to cover inspections and expenses of other Departments or Divisions would need to be raised in other ways.

Seed Money:

Seed money would be used only for developmental/start-up costs. Potential sources include Department of Energy (energy conservation angle), EPA waste minimization demonstration project, DOE oil settlement funds. Our information indicates that none of these sources could provide money in the next year. However, they may be able to help out in the next funding cycle (1991).

Existing Resource Tradeoffs:

This option would require moving existing resources within AQD. For example, if it is believed that Stage II provides the more cost effective VOC control then it may be appropriate to move currently existing resources that are being used for other VOC controls to a stage II program. Or, by revising the currently vacant SIP coordinator position to shift the clerical aspects of that position to the clerical staff, some portion of that FTE could be used for stage II. Or, it is expected that the EPA wood stove program will reduce work loads in the DEQ program. It may be possible to reallocate some of those resources. This option obviously could not fund the entire stage II program. But it may provide some resources to get the program started quickly.

Conclusions

The Stage II Funding Task Force recommends that Stage II Vapor Recovery be phased in now by working together with the Underground Storage Tank program to require that stage II plumbing be installed whenever an underground tank is replaced anywhere in the state. An inter-program agreement should be written to insure that the UST rules, checklists and inspections include stage II. This needs to happen very quickly to insure that stage II requirements are included in the UST rulemaking that will come before the EQC probably in January. We would need to begin working with the UST program immediately to meet EQC deadlines. It is not believed that this would greatly increase the costs of the UST program. AQD may need to provide some minimal funds to UST to accomplish this.

Above ground Stage II equipment installation should be phased in beginning with the Portland area next year. Initial administrative costs should be covered by trading off resources within AQD and attempting to acquire seed money from outside sources next year. Routine inspection of above ground equipment does not need to occur until equipment is installed one to two years down the road. The most cost effective way to provide two inspections per year would involve contracting with Dept. of Ag. Weights and Measures to provide one inspection per year (including performance testing) and have DEQ regional staff conduct a second inspection (without performance testing). Obviously resources would have to be provided to Weights & Measures and Regional Operations to pay for the increased work load.

The Department should request additional funding from the 1991 legislature to provide continued funding and to expand stage II statewide. Least impact funding option would be a vehicle registration increase. Oregon currently has one of the smallest vehicle registration fees in the country. The small increase that would be required for this program (less than $1.00 per registration) would not create a burden. It is recognized, however, that past efforts to increase vehicle registration fees have been unsuccessful. The next best option would be an annual operating permit on each nozzle collected through the existing Weights and Measures pump licensing program.

The following tables show the savings in resources that are possible if a coordinated approach is taken (using weights and measures, UST program, and DEQ Regional Operations) rather than a stand alone AQD program. It can be seen that the FTE requirements for an optimal program are reduced by about 50 percent with the coordinated approach.

Start up costs can be kept to a minimum by phasing in the program over four or five years. A program could be started almost immediately for less than $15,000 by requiring underground aspects of stage II to be installed whenever new tanks are installed. By 1994 a fully implemented program could be operating including two inspections per year of all stations statewide with a program costing about $270,000 per year.

STAGE II COST (FTE)

Stand Alone

TASKS	PORTLAND Optimum	PORTLAND Minimum	STATEWIDE Optimum	STATEWIDE Minimum
1. Registration	0.2	0.2	0.8	0.8
2. Plan Review/Inspection	0.2	0.1	1.0	0.4
3. Regulated Community Ed.	0.1	---	0.2	---
4. Inspect/Performance Test	1.2	0.7	5.0	3.0
5. Enforcement/Follow-up	0.3	0.2	1.0	0.6
TOTAL	**2.0**	**1.2**	**8.0**	**4.8**

Coordinated

TASKS	PORTLAND Optimum	PORTLAND Minimum	STATEWIDE Optimum	STATEWIDE Minimum
1. Registration	0.1	0.1	0.2	0.2
2. Plan Review/Inspection	0.1	0.1	0.2	0.2
3. Regulated Community Ed.	---	---	---	---
4. Inspect/Performance Test				
Dept. of Ag (W&M)	0.2	0.2	0.6	0.6
DEQ	0.7	---	2.5	---
5. Enforcement/Follow-up	0.4	0.2	1.0	0.6
TOTAL	**1.5**	**0.6**	**4.5**	**1.6**

NOTES: Coordinated approach is our estimate and has not been discussed with UST or W&M. Assumes Tasks #1, 2 and 3 are done as part of the Underground Storage Tank Program. Task #4 (Optimum) is split between Weights & Measures and DEQ, each does 1 inspection/year. Task #4 (Minimum) is only the single Weights & Measures inspection.

COORDINATED OPTIMUM STAGE II
PHASED FUNDING

The Diagram on the next page shows how the Program evolves over time based on the following assumptions:

Underground Storage Tank Program adopts rules beginning 1990 which include requirement to register and install Stage II equipment as part of any new tank installation.

Air Program adopts rules for Stage II in early 1990:

1) required in Portland AQMA beginning in 1991 and complete by end of 1992.

2) required for all new tank installations Statewide beginning in 1991.

3) required for rest of State beginning in 1993 and complete by end of 1995.

1990 - Registration, Plan Review, and Installation Inspection are done as part of Underground Storage Tank Program. This requires small additional time which is reimbursed from AQ budget.

1991 - EPA Pollution Prevention Grant to assist with influx of Stage II related permits, develop procedures and begin station inspections, develop understanding with Dept. of Agriculture - Weights and Measures. During Legislative session get authority for new permits or fees.

1992 - With new revenue begin active station inspection and enforcement. Installation Registrations in Portland slow and Statewide Registrations increase. Level of effort for W&M is above Portland-only estimate because installations are Statewide.

1993 - Majority of Installation Registrations are now outside Portland. Inspection and enforcement by DEQ in Portland is at maximum. Statewide level of effort by W&M is at maximum.

1994 - Program is now entering maintenance level. Registration, Plan Review and Installation Inspection are now limited. DEQ inspection and enforcement is now Statewide.

COORDINATED OPTIMUM STAGE II
PHASED FUNDING

TASKS	FTE		FUNDING OPTIONS
		1990	
1	0.1		
2	0.1		
3	---		AQD Transfer to ECD
4	---		($12,500)
5	---		
		1991	
1	0.1		
2	0.1		EPA Pollution Prevention
3	---		Grant ($32,000)
4	0.3		
5	---		
		1992	
1	0.1		($106,000)
2	0.1		DEQ Transfer to W&M
3	---		Permits (W&M, DEQ)
4	0.6(DEQ)/0.4(W&M)		Vehicle Reg. Fee
5	0.5		I/M Fee
		1993	
1	0.1		($169,000)
2	0.1		
3	---		
4	1.4(DEQ)/0.6(W&M)		
5	0.5		
		1994	
1	0.1		($269,000)
2	0.1		
3	---		
4	2.5(DEQ)/0.6(W&M)		
5	1.0		
		1995	
1	0.1		($269,000)
2	0.1		
3	---		
4	2.5(DEQ)/0.6(W&M)		
5	1.0		

NOTE: Assumes 1 performance test/yr by W&M and 1 inspection/yr by DEQ on each station. We think a 50% DEQ inspection rate would be adequate, which would reduce DEQ's Task 4 cost to 1.2 FTE and the Total Stage II Program cost to $188,000.

PLAN\AH345

SCANDINAVIAN BLEACH PLANT TECHNOLOGY

ENVIRONMENTAL IMPACTS

PRESENTATION TO

ENVIRONMENTAL QUALITY COMMISSION

JANUARY 18, 1990

ROGER O. CAMPBELL, Ph.D.
TECHNICAL MANGER
POPE & TALBOT, INC.

POPE & TALBOT, INC.

SCANDINAVIAN TRIP

NOVEMBER-DECEMBER, 1989

1. REVIEW BLEACH PLANT TECHNOLOGY

2. UNDERSTAND EQUIPMENT DESIGN AND RELIABILITY

3. UNDERSTAND PROCESS DESIGN REQUIREMENTS AND CAPABILITIES

4. EVALUATE THE ENVIRONMENTAL CONDITIONS AND IMPACTS

SCANDINAVIAN TEAM

DAN WILLIAMSON (TRIP ORGANIZER)	PRESIDENT, WILLIAMSON INTERNATIONAL
SCOT ANDERSON	MANAGER MAINT. & ENGINEERING
WAYNE HENNECK	MANAGER CAPITAL PROJECTS
ART VOSBURG	PRODUCTION MANAGER
DAVID ANDERSON	BLEACHING SUPERINTENDENT
ROGER CAMPBELL	TECHNICAL MANAGER

List of Mills Visited or Discussed

1.	Kaukus Mill Kymmene Corp.	11-28-89 Loppeenranta, Finland
2.	Kaukapaa Mill Enso-Gutzeit	11-29-89 Kaukapaa, Finland
3.	Tainionkoski Mill Enso-Gutzeit	11-29-89 Kaukapaa, Finland
4.	Aanakoski Mill Metsa-Botnia	11-30-89 Aanakoski, Finland
5.	Morrum-Bruk Sodra SkogsaGarna AB	12-04-89 Morrum, Sweden
6.	Korsnas Mill Discussion Only with Sunds Defibrator.	12-05-89

FINLAND MILL VISIT INFORMATION
SOFTWOOD KRAFT

	Kymnene Kaukas	Enso Gutzeit Kaukopaa	Enso Gutzeit Tainionkoski	Metsa-Botmia Aane Koski
Tons/day	500	800	300	800
Species	Pine	Pine	Pine	Pine
Kappa	30	32	30+	28
Extended Delig Process	None	None	None	None
Bleach Sequence	$D_CE_OD_ED$	$D_CE_OD_ED$	$D_CE_{OP}DE_PD$	$D_CE_OD_ED$ (some P)
% Substitution	50 %	50 %	50 %	15 %
Brightness	89+	88-89	88+	88+
BOD/T	11 lbs/ton	22 lbs/ton	-	21.3 lbs/ton
TSS/day		11.5 lbs/ton	-	20.2 lbs/ton
AOX [2]	2.5 kg/ton	2.5 kg/ton	-	2.9 kg/ton
Secondary Treatment	3 day ASB	None	None	8 Hr Act. Sludge
Water Usage	30,000 g/ton	30,000 g/ton	-	21,000 g/ton
Dioxin Limit [1]	None	None	None	None
Color Limit	None	None	Common Treatment system with Kaukopaa Mill	None

[1] Still under study, but current feeling is that AOX limit will be only necessary control.

[2] Industry limits will be 1.4 kg/ton mill average by 1995. Agreement by Baltic countries October, 1989. Sweden, USSR, Finland, Denmark, Poland

SWEDEN MILL VISIT INFORMATION
SOFTWOOD KRAFT

	Korsnus	Morrums-Bruk
Tons/day	685 @ (50%) 275 @ (100%)	385
Kappa	30	33
Extended Delignification	Kaymr MCC/O_2	MC O_2
- Kappa	18	19
Bleach Sequence	OD/CE_oDED	OD/CE_oDED
% Substitution	50%*	30%
Brightness ISO	86 - 90	88 - 90
BOD/T	-	40 lbs/TON
TOCl (AOX)	1.5 (2.1)	3.0 (4.0)
Secondary Treatment	Yes	None
Water Usage	21,000 g/ton	
Dioxin	None	None
Color	None	None
% Softwood	60% @ (50%) 25% @ (100%)	40%

* 100% substitution on 25% of softwood for diaper pulp (86 ISO brightness) CLO_2 bleach liquor = 90% ClO_2 + 10% Cl_2

CPPA NATIONAL MILL DIOXIN CHARACTERIZATION SURVEY

A. B.C. Interior Mills

	Kg AOX/ADt
Cariboo	3.2
Celgar	4.2
Crestbrook	0.8
Mackenzie	2.7
Northwood	3.1
Kamloops	3.0

SIMONS

CPPA NATIONAL MILL DIOXIN CHARACTERIZATION SURVEY

B. B.C. Coastal Mills

	Kg AOX/ADt
Crofton	7.1
Elk Falls	8.0
Port Mellon	5.3
Harmac	7.1
Port Alberni	8.8
Powell River	14.9
Skeena	3.1
Wood Fibre	3.7

SIMONS

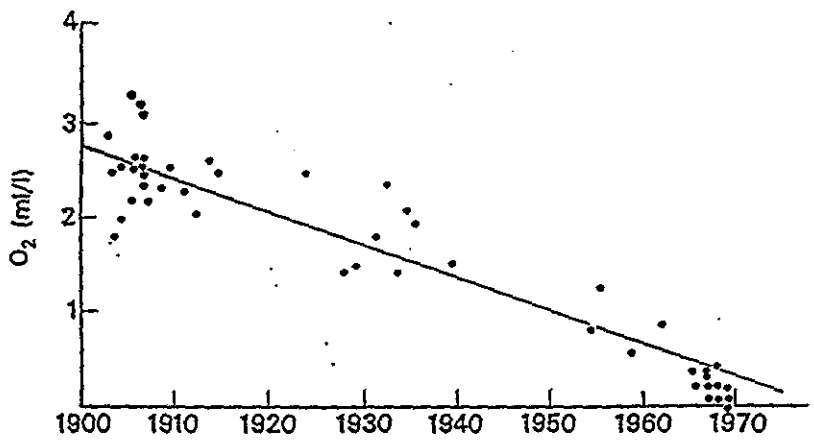
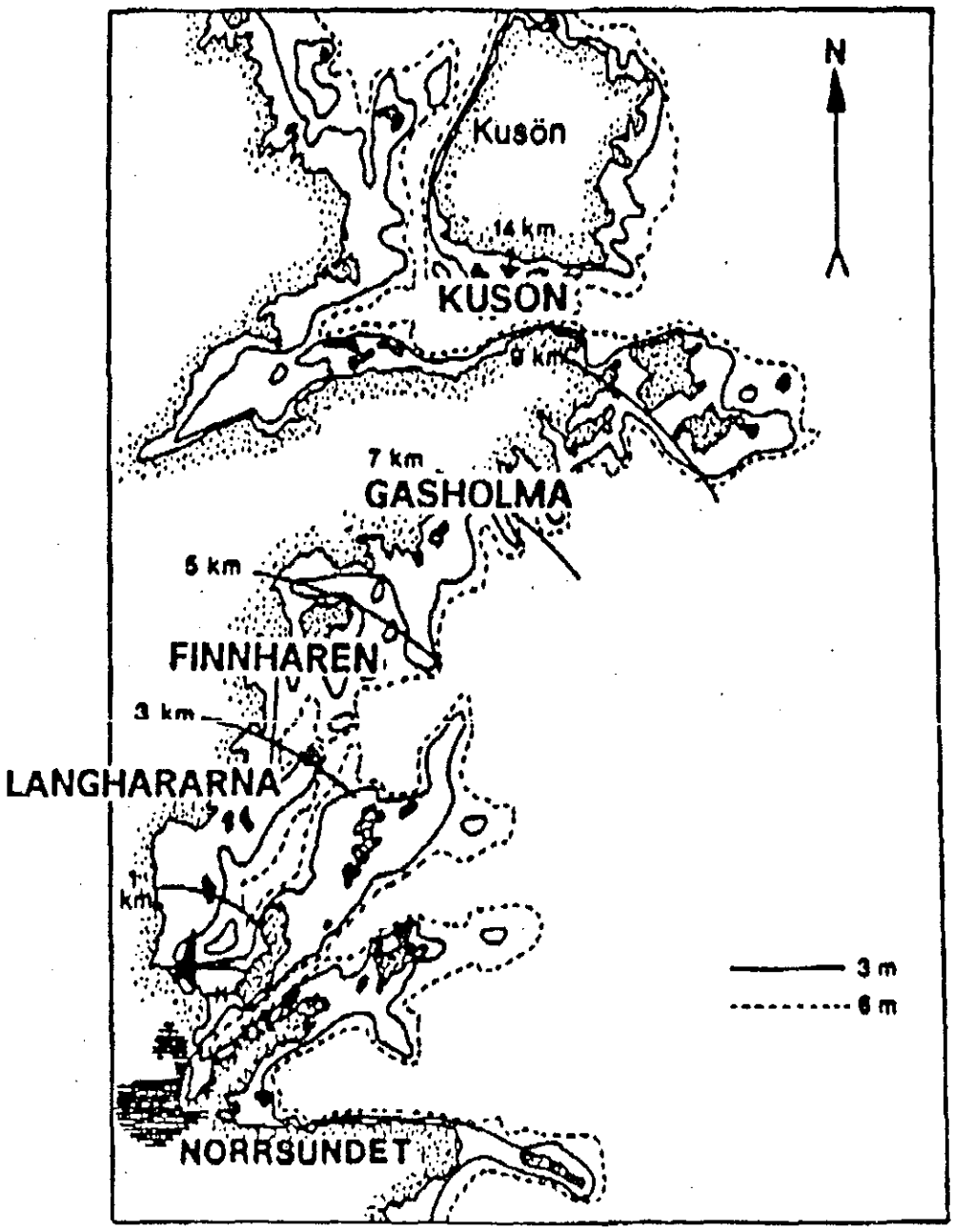


Figure 16.1 Oxygen content of the Baltic Sea (in milliliters per liter), Station F 74 (depth of approximately 150 meters).

Source: Compiled from data from: (a) Conseil Permanent International pour l'Exploration de la Mer (ICES), *Bulletin des Résultats acquis pendant les Courses Périodiques*, Copenhagen (up to 1959); (b) *ICES Oceanographic Data Lists*, Copenhagen (1959–62); and (c) *Hydrographical Data*, Harsfiskelaboratorret, Göteborg (1963–69). For the actual figures from which this graph was drawn, see Appendix, table 16.8.

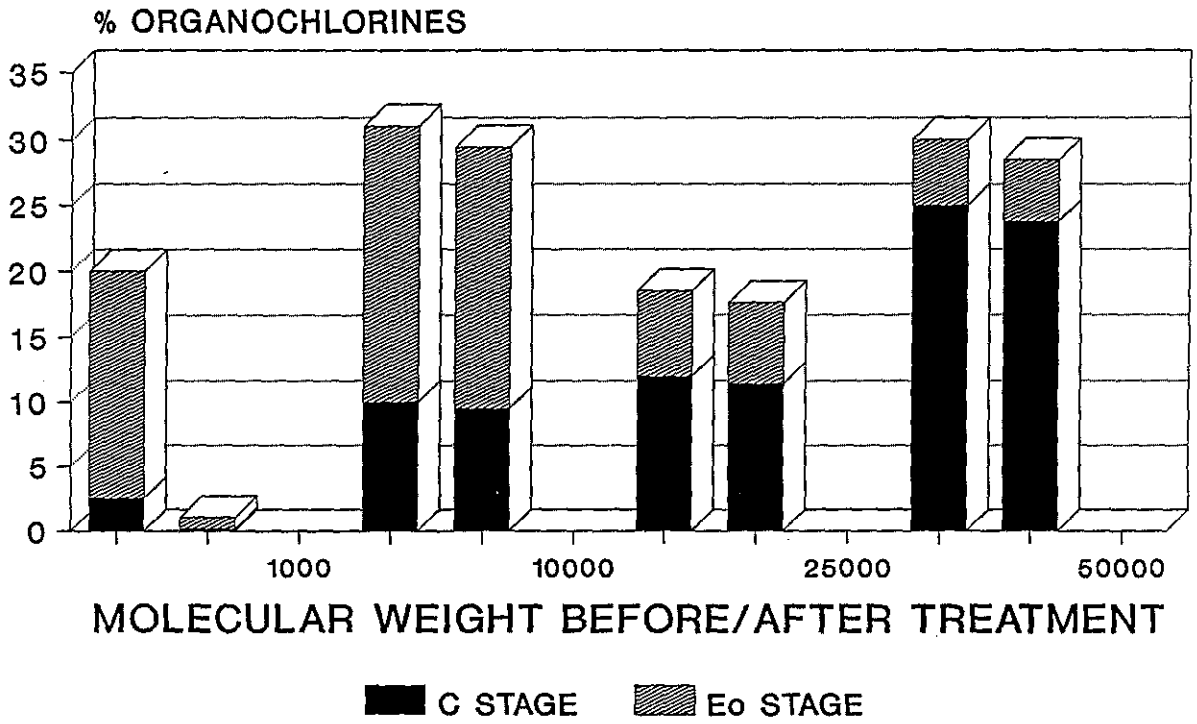


INVESTIGATION AREA AT NORRSUNDET, WTIH DISTANCES FROM DISCHARGE

SOURCE: Sandstrom et al., 1988.

FIGURE 2

MOLECULAR WEIGHT DISTRIBUTION
C+Eo STAGES

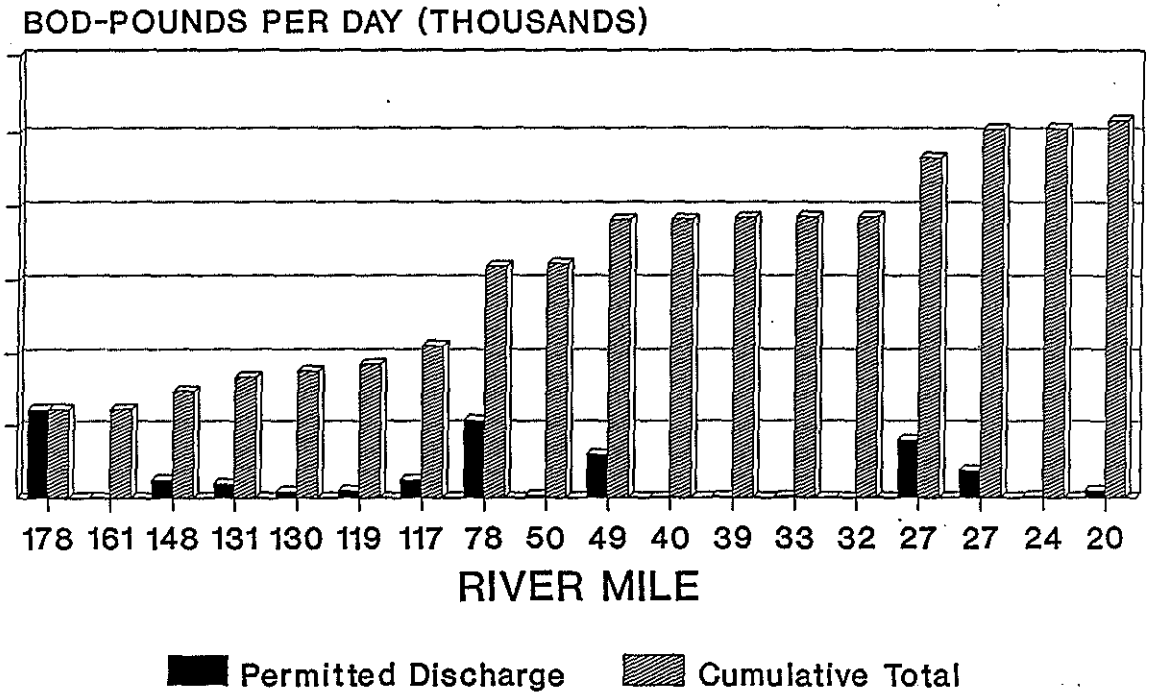


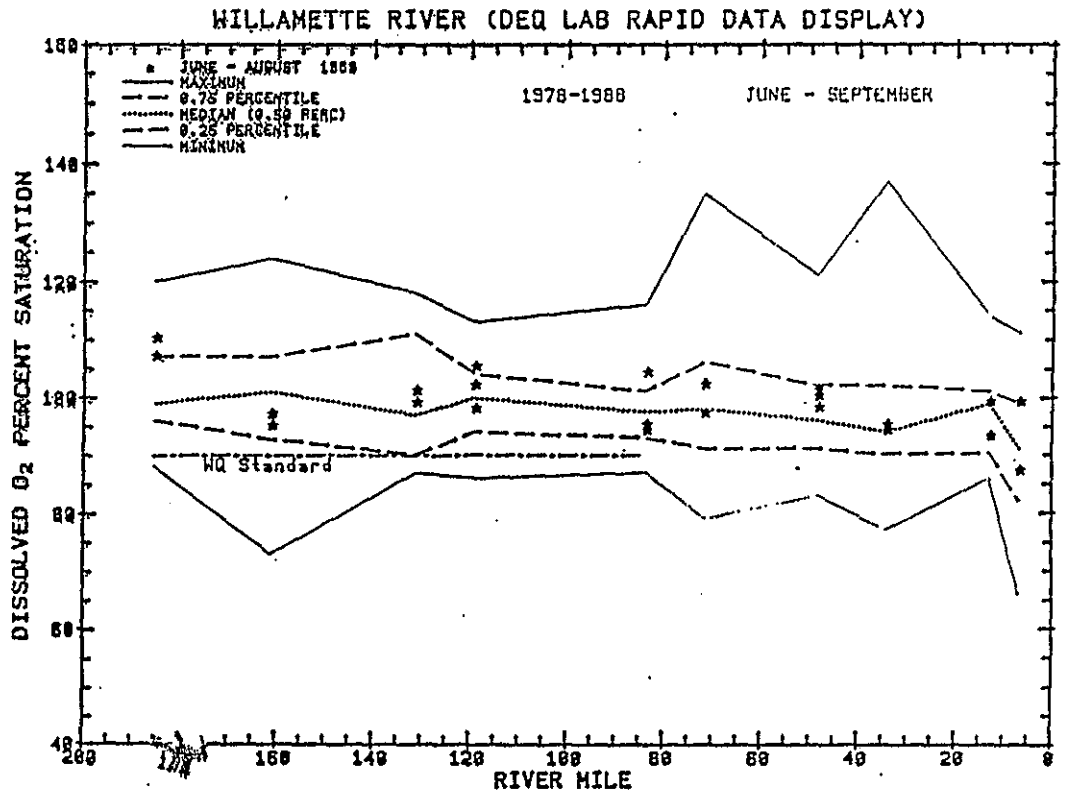
AVERAGE BOD DISCHARGE

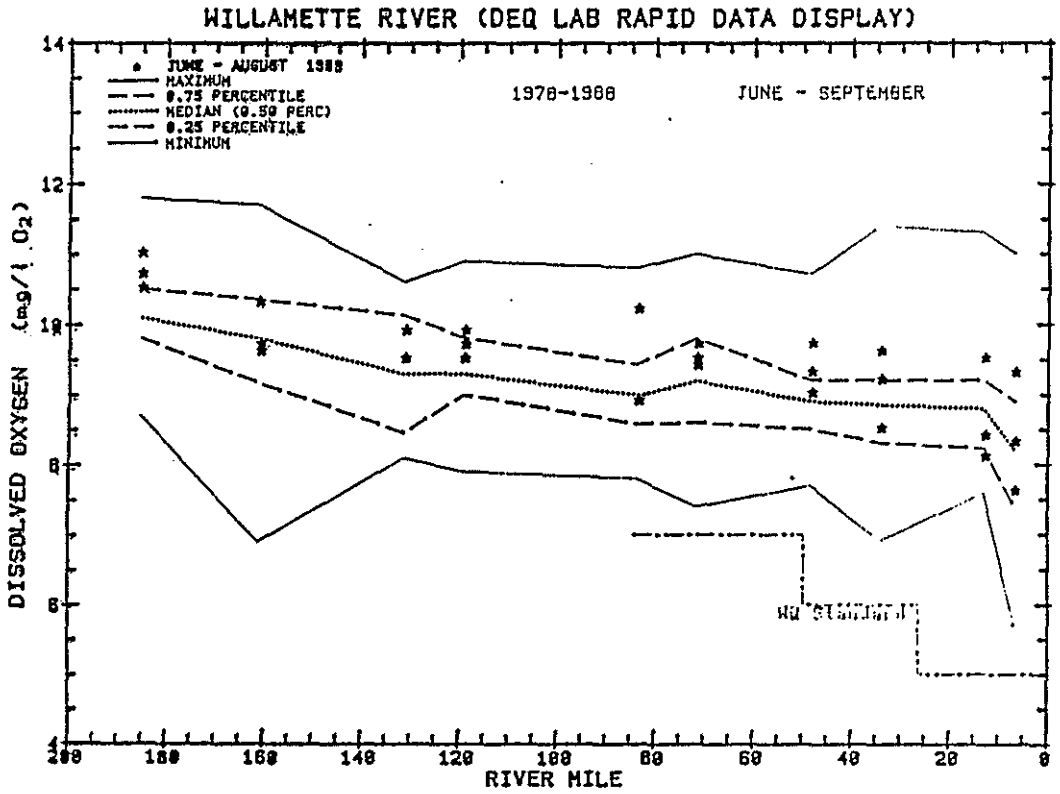
	PERMIT	ACTUAL	TOXICITY
Halsey Mill	5.0 lbs/Ton	3.0 lbs/Ton	1
Canada [1]	36.4 lbs/Ton	35.6 lbs/Ton	12
Sweden [1] current		48.1 lbs/Ton	16
Finland [1] current		60.1 lbs/Ton	20

[1] N Bonsor - MISA Report - April, 1989

WILLAMETTE RIVER
POINT SOURCE DISCHARGE LIMITS




WILLAMETTE RIVER (DEQ LAB RAPID DATA DISPLAY)
JUNE - AUGUST 1988
MAXIMUM
0.75 PERCENTILE
MEDIAN (0.50 PERC)
0.25 PERCENTILE
MINIMUM
1978-1988
JUNE - SEPTEMBER
WQ Standard
DISSOLVED O2 PERCENT SATURATION
RIVER MILE
160
140
120
100
80
60
40
20
0


WILLAMETTE RIVER (DEQ LAB RAPID DATA DISPLAY)
JUNE - AUGUST 1988
MAXIMUM
0.75 PERCENTILE
MEDIAN (0.50 PERC)
0.25 PERCENTILE
MINIMUM
1978-1988
JUNE - SEPTEMBER
DISSOLVED OXYGEN (mg/l O2)
RIVER MILE
14
12
10
8
6
4
200
180
160
140
120
100
80
60
40
20
0

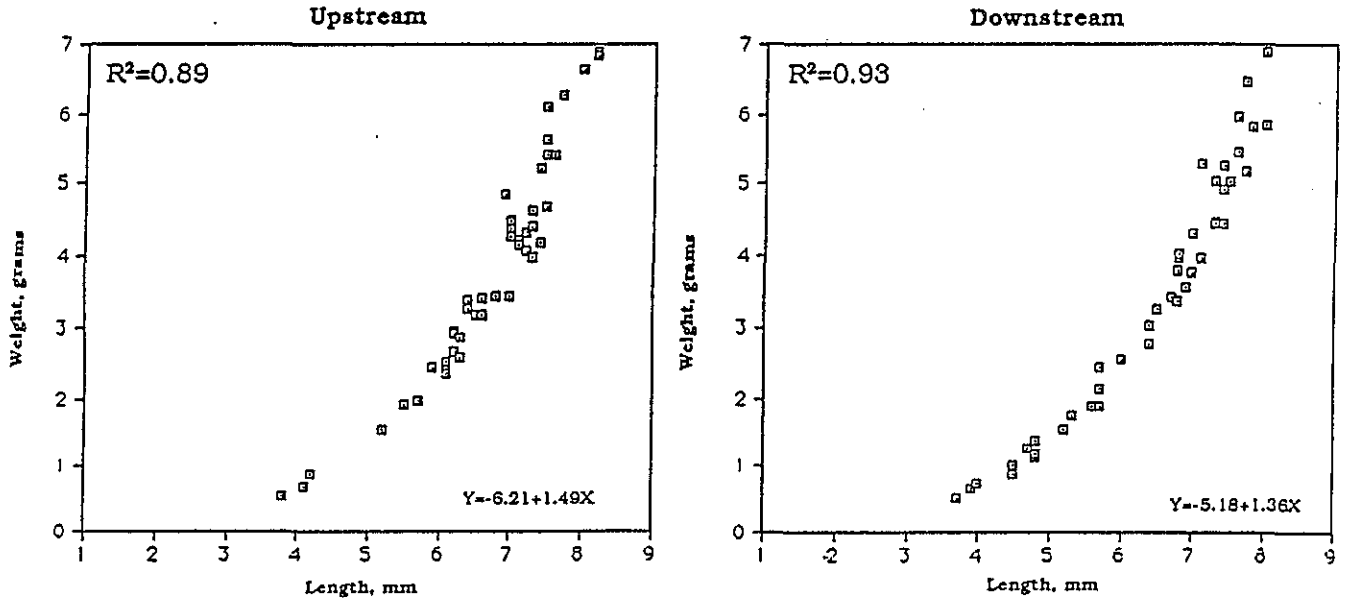


Figure 2. Weight and length plot of 46 fish— reticulate sculpin, *Cottus perplexus*— collected above and below the Pope & Talbot waste discharge on the Willametter River near Halsey, Oregon, August 1989.

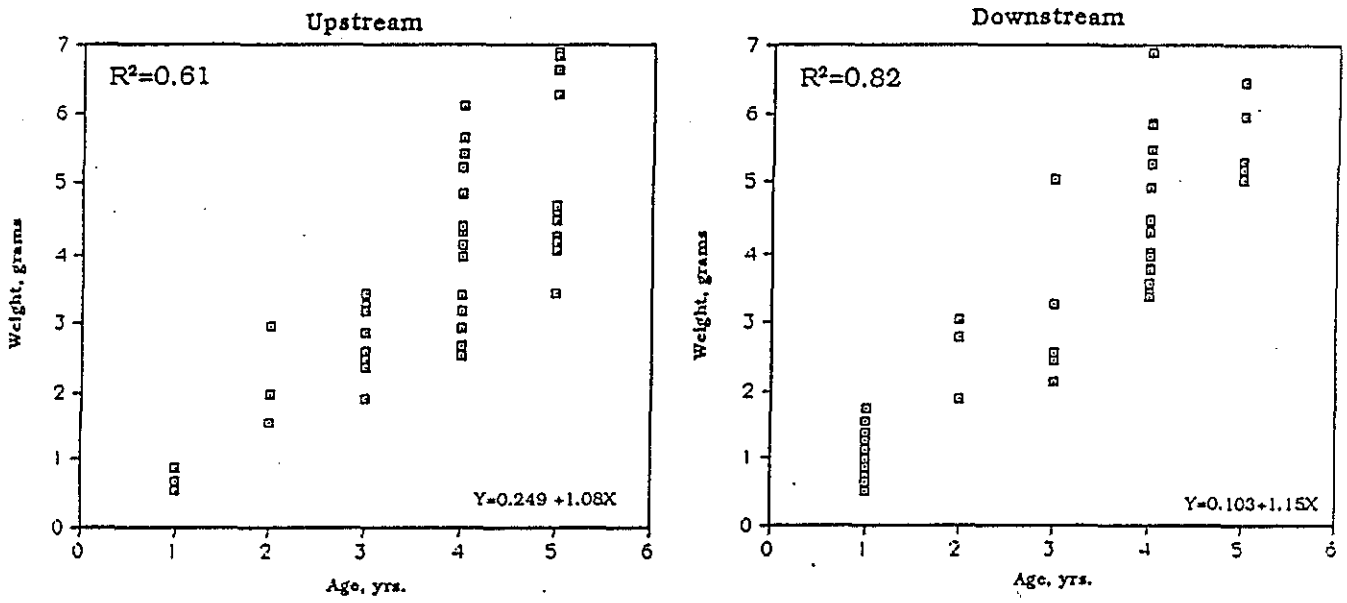


Figure 1. Age and weight plot of 46 fish—reticulate sculpin, *Cottus perplexus*—collected above and below the Pope and Talbot waste discharge on the Willamette River near Halsey, Oregon August 1989

SCHEDULE TO REDUCE TOCl DISCHARGE

National Swedish Environmental Protection Board

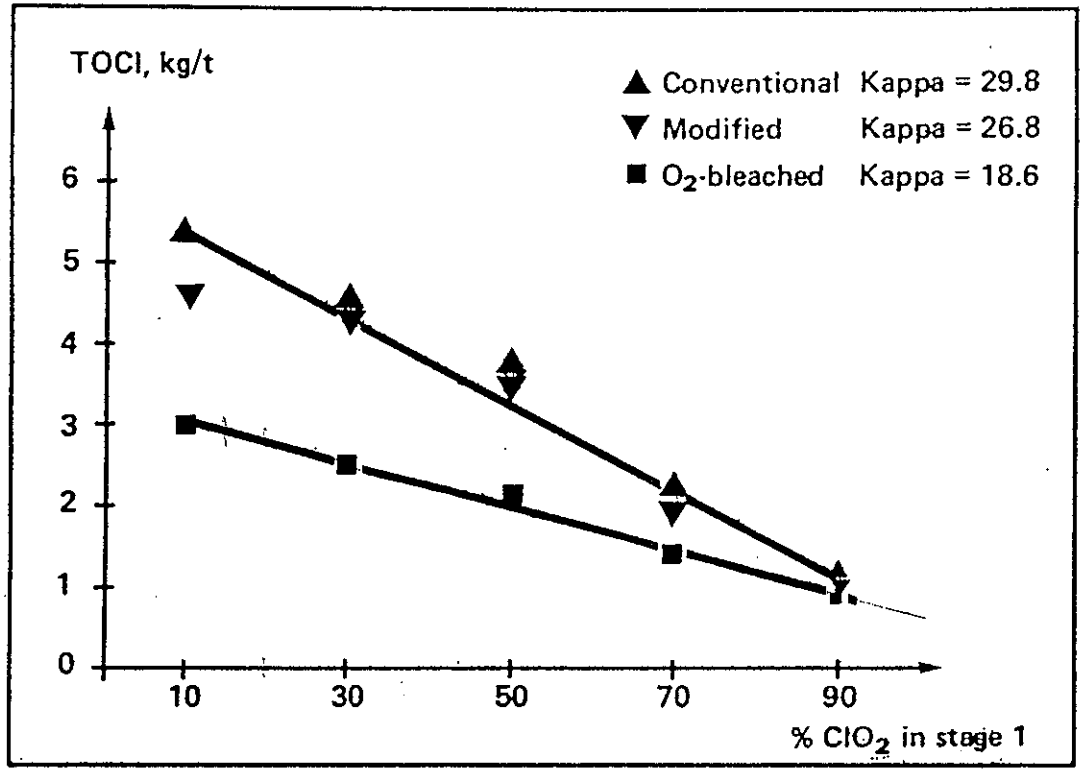
YEAR	TOCl, Kg/Ton Pulp	AOX, Kg/Ton
1975	5-6	6.3-7.5
1984	3.5	4.5
1988	1.5-3.5	2.1-4.5
ca 1992	1.5	2.1
ca 2005	0.4-0.5	0.6-0.8
ca 2010	.01	0.2

FINLAND

	AOX, Kg/Ton
1995	1.4*

* Industry Average - Limits will be set for each mill based on process.

Figure 15 The Effect of Chlorine Dioxide Substitution on the Discharge of Total Organic Chlorine (TOCl) (3)



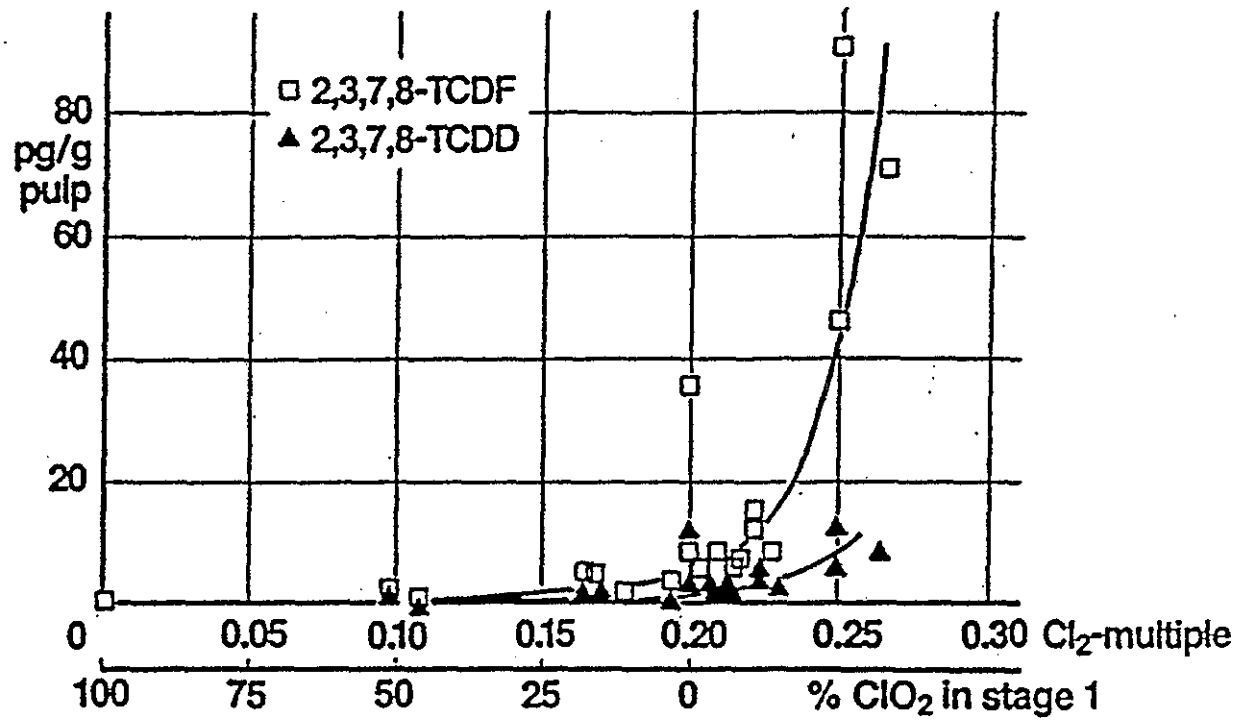
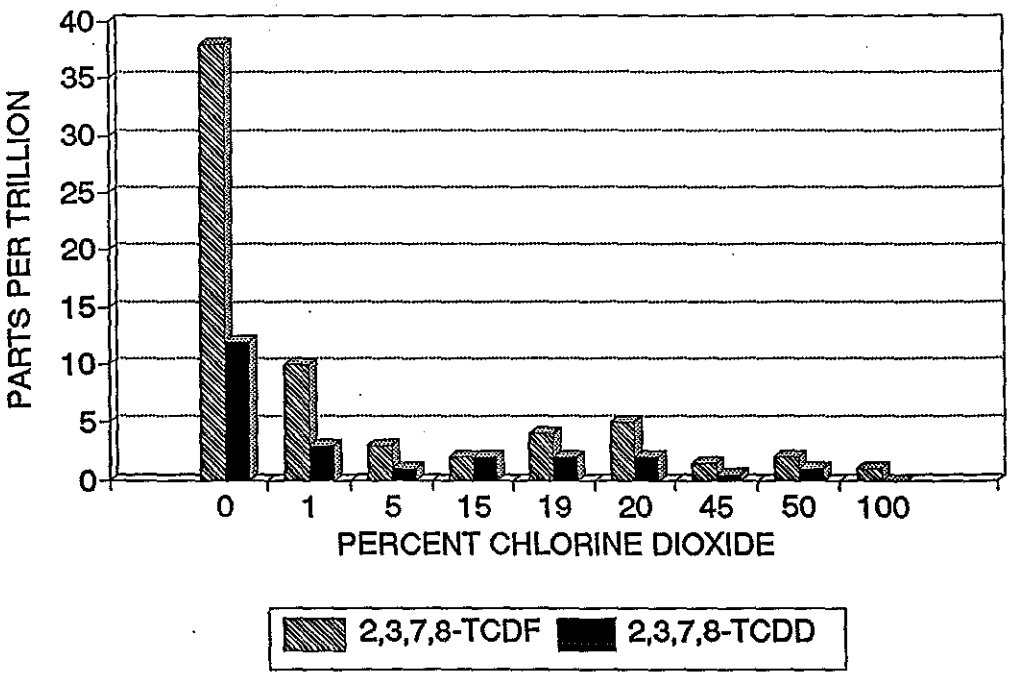


Figure 6. 2378-TCDF/TCDD in bleached pulp versus Cl_2-multiple. Lower x-axis, see Fig. 4

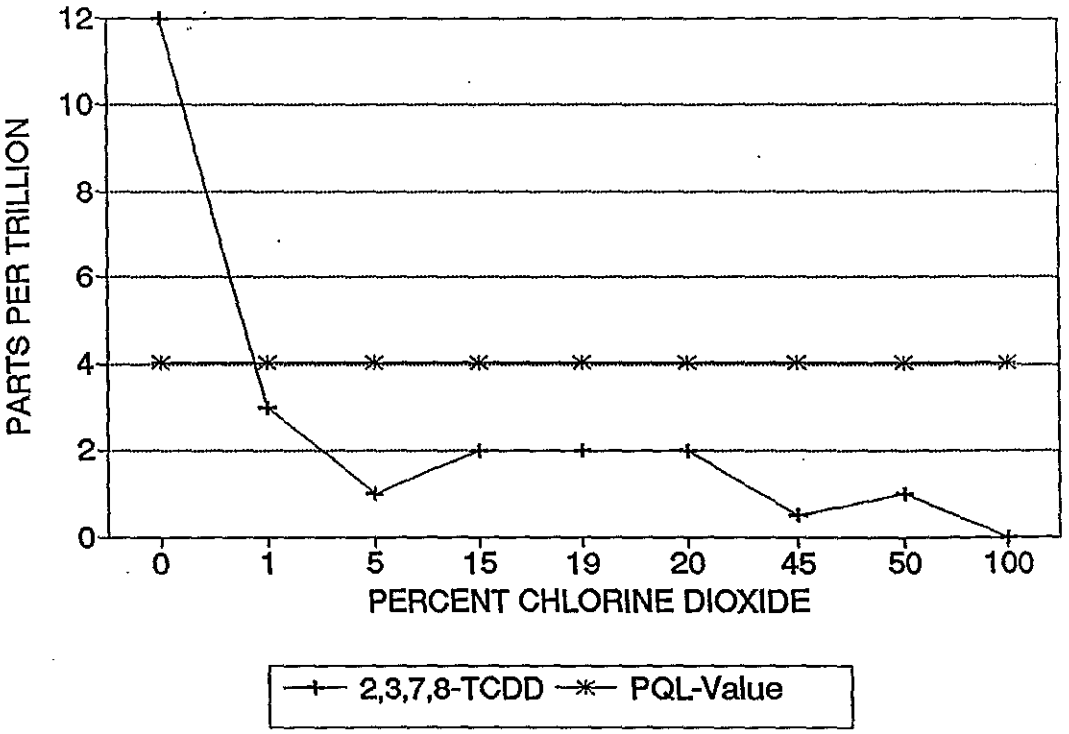
CHLORINE DIOXIDE SUBSTITUTION

DIOXIN/FURAN ON PULP



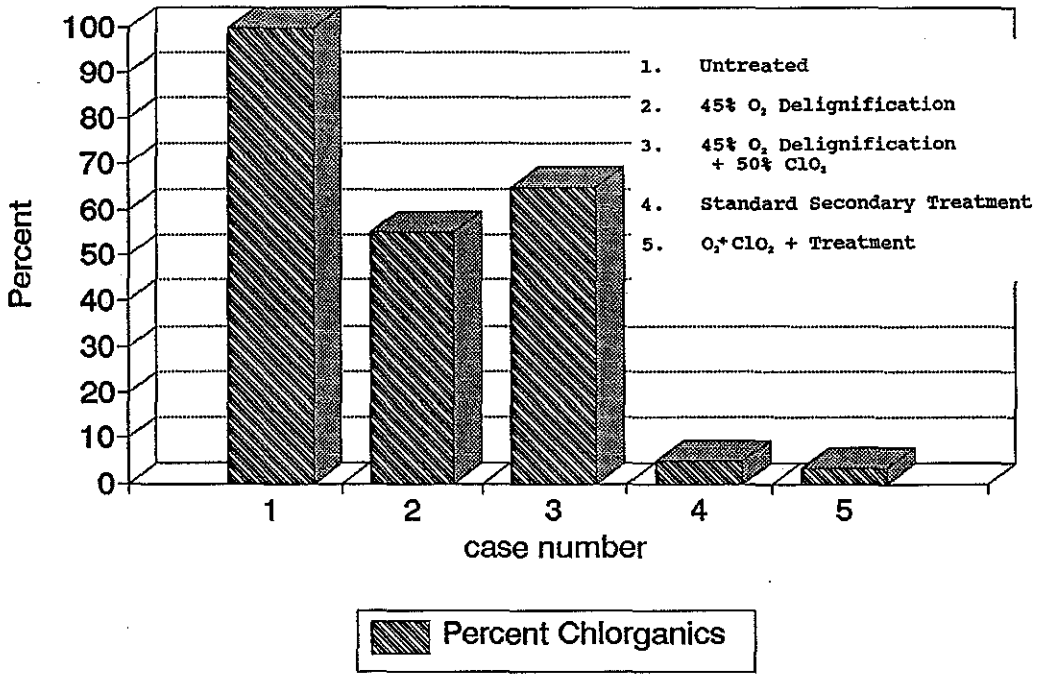
CHLORINE DIOXIDE SUBSTITUTION

DIOXIN ON PULP



Low Molecular Weight Chlorganics

<1000 MW



CONCLUSIONS

1. Environmental problems of the Baltic Sea are not necessarily related to chlororganic compounds but low molecular weight compounds which are biologically active (BOD).

2. Proper secondary treatment will render these mill effluents non-toxic.

3. O_2 Delignification will reduce formation of organics in bleach plant effluents.

4. O_2 Delignification will not affect the formation of dioxins.

5. ClO_2 substitution will reduce formation of chlororganic compounds.

6. ClO_2 substitution may not have an affect on dioxin formation.

7. With proper secondary treatment adding this technology will only reduce the biologically active compound loads to the river by 2-3%.

8. The best mill found with standard processes could only achieve 2.1 Kg/Ton AOX.

9. Implementation of this technology should be a business decision and not regulatory because of the minimal improvement to the environment over current U.S. practices.

10. With the Halsey expansion this technology is proper because of product mix and quality reason. Environmental impacts will be reduced along with its installation.

SCANDINAVIAN BLEACH PLANT TECHNOLOGY

ENVIRONMENTAL IMPACTS

JANUARY 18, 1990

ROGER O. CAMPBELL, Ph.D.
TECHNICAL MANGER
POPE & TALBOT, INC.

INDEX

BACKGROUND

In December of 1989, a group of mill personnel from Pope & Talbot, Halsey Mill, completed a trip to Scandinavia for the purpose of evaluating bleach plant and environmental technology.

The organizer of the trip was Dan Williamson, President of Williamson International, consulting firm contracted by Pope & Talbot, Inc.

Other members included: Scot Anderson, Manager of Maintenance and Engineering; Wayne Henneck, Manager of Engineering and Capital Projects; Art Vosburg, Pulp Mill Production Manager; Dave Anderson, Bleaching Supervisor; and Roger Campbell, Technical Manager.

The broad background and experiences of the group was planned in order to take a comprehensive view of the bleach plant technologies and equipment and processes available to the mill and be able to evaluate it on four major areas:

1. We wanted to be able to understand the production and operating capability of the technology. By that I mean the ability to produce quality product and to operate and control the equipment.

2. Understand the ability and requirements of maintenance on the types of equipment and its reliability.

3. Understand the process design requirements and capability of the process in terms of the ability to meet critical quality production and environmental needs currently facing the mill.

4. Evaluate the environmental restraints and conditions under which these processes are currently operating and with the opportunity to understand the mills future environmental requirements.

It is this fourth area that I wish to expand upon in this report.

MILL VISITS

In Table 1 the mill visited or discussed are outlined. These mill visits were arranged by Ahlstrom (Finland) and Sunds Defibraton (Sweden). A typical visit consisted of one to two hours background discussion and a mill tour to observe process operation and/or specific equipment. One general observation is that the mills are very clean and well maintained.

The drive to implement the bleach plant technologies of oxygen delignification and substitution for chlorine varied between Sweden and Finland mills. In Finland very few mills have started to use the oxygen stage. However, most of these mills have installed capacity for chlorine substitution. In Sweden the industry is moving toward the use of both technologies.

TABLE 1

List of Mills Visited or Discussed

1.	Kaukus Mill Kymmene Corp.	Loppeenranta, Finland	11-28-89
2.	Kaukapaa Mill Enso-Gutzeit	Kaukapaa, Finland	11-29-89
3.	Tainionkoski Mill Enso-Gutzeit	Kaukapaa, Finland	11-29-89
4.	Aanakoski Mill Metsa-Botnia	Aanakoski, Finland	11-30-89
5.	Morrum-Bruk Sodra SkogsaGarna AB	Morrum, Sweden	12-04-89
6.	Korsnas Mill Discussion Only with Sunds Defibrator.		12-05-89

Chlorine dioxide is generated at the mill site. The chemical process used to generate ClO_2 results in a water solution the make up of which does contain some elemental chlorine. We found the chlorine content in the chlorine dioxide solutions ranged from 10% to 35%. This point is important when we hear that a mill is using 100% substitution. We found in all the mills visited that under these conditions **no** bleaching sequence was 100% chlorine free. (There are some mills elsewhere making specialty grade with peroxide but this is a very minor percent of the consumer products market.)

The level of substitution for chlorine ranged from the low amount of 15-50% for softwood to a high of 65 to 100% (actual high is 90%) on hardwoods. It is well known that hardwoods are easier to bleach and demand less chlorine. This then results in less chlororganics being generated. For hardwoods, which is typically birch, the TOCl value of 1.0 Kg/Ton can be reached. That is at the 90% substitution levels. By contrast the mills visited were only able to achieve TOCl levels in the range of 2.0 to 2.5 Kg/Ton for softwood. One mill making a specialty product and substituting 90% on softwood was able to achieve 1.5 Kg/Ton. This information is summarized in Table 2 and 3.

All mills in Scandinavia use some hardwood, this ranges from 15% as a low to 60% as a high. The ability of these mills to achieve lower TOCl limits for the mills is because they can average the use of hardwood and softwood in reporting TOCl or AOX. It is

FINLAND MILL VISIT INFORMATION
SOFTWOOD KRAFT

TABLE 2

	Kymnene Kaukas	Enso Gutzeit Kaukopaa	Enso Gutzeit Tainionkoski	Metsa-Botmia Aane Koski
Tons/day	500	800	300	800
Species	Pine	Pine	Pine	Pine
Kappa	30	32	30+	28
Extended Delig Process	None	None	None	None
Bleach Sequence	$D_CE_OD_ED$	$D_CE_OD_ED$	$D_CE_{OP}DE_PD$	$D_CE_OD_ED$ (some P)
% Substitution	50 %	50 %	50 %	15 %
Brightness	89+	88-89	88+	88+
BOD/T	11 lbs/ton	22 lbs/ton	-	21.3 lbs/ton
TSS/day		11.5 lbs/ton	-	20.2 lbs/ton
AOX [2]	2.5 kg/ton	2.5 kg/ton	-	2.9 kg/ton
Secondary Treatment	3 day ASB	None	None	8 Hr Act. Sludge
Water Usage	30,000 g/ton	30,000 g/ton	-	21,000 g/ton
Dioxin Limit [1]	None	None	None	None
Color Limit	None	None	Common Treatment system with Kaukopaa Mill	None

[1] Still under study, but current feeling is that AOX limit will be only necessary control.

[2] Industry limits will be 1.4 kg/ton mill average by 1995. Agreement by Baltic countries October, 1989. Sweden, USSR, Finland, Denmark, Poland

SWEDEN MILL VISIT INFORMATION
SOFTWOOD KRAFT

TABLE 3

	Korsnus	Morrums-Bruk
Tons/day	685 @ (50%) 275 @ (100%)	385
Kappa	30	33
Extended Delignification	Kaymr MCC/O_2	MC O_2
- Kappa	18	19
Bleach Sequence	OD/CE_ODED	OD/CE_ODED
% Substitution	50%*	30%
Brightness ISO	86 - 90	88 - 90
BOD/T	-	40 lbs/TON
TOCl (AOX)	1.5 (2.1)	3.0 (4.0)
Secondary Treatment	Yes	None
Water Usage	21,000 g/ton	
Dioxin	None	None
Color	None	None
% Softwood	60% @ (50%) 25% @ (100%)	40%

* 100% substitution on 25% of softwood for diaper pulp (86 ISO brightness) CLO_2 bleach liquor = 90% ClO_2 + 10% Cl_2

generally recognized that to meet future limits below 1.5 Kg/Ton that all mills will need to use some form of secondary treatment and more substitution. None of the mill personnel we met knew how the latter was going to be achieved without some shifts in product quality and customer acceptance. Right now only about 20% of the pulp produced in Sweden is marketed as chlorine free (remember 100% ClO_2 substitution still has at least 10% chlorine). The remainder is 90 ISO brightness market pulp.

The concern over dioxins may be a part of the discussion in Scandinavia but it is not the driving force. Scandinavian and European countries had tended to use higher allowable daily dose levels than the U.S. EPA, thus no discharge limits have been developed for dioxins in Sweden or Finland. That is because concentrations are low compared to calculated limits. The driving concern is the environmental impacts of mill effluents on biological communities near the receiving water of the mills. No clear relationship has been established between chlororganic compounds and impacts. Because organic chlorine compounds are not naturally occurring they can be easily identified. However, chlororganics represent only 2 to 3% of the dissolved organic compounds discharged. A better relationship is found for all low molecular weight compounds and its impact on dissolved oxygen in the receiving water. (See figure 16.1 on Baltic Sea). The Scandinavian ills have not practiced secondary biological treatment to remove these toxic compounds (in the U.S. this is a standard practice). With the introduction of oxygen delignification these

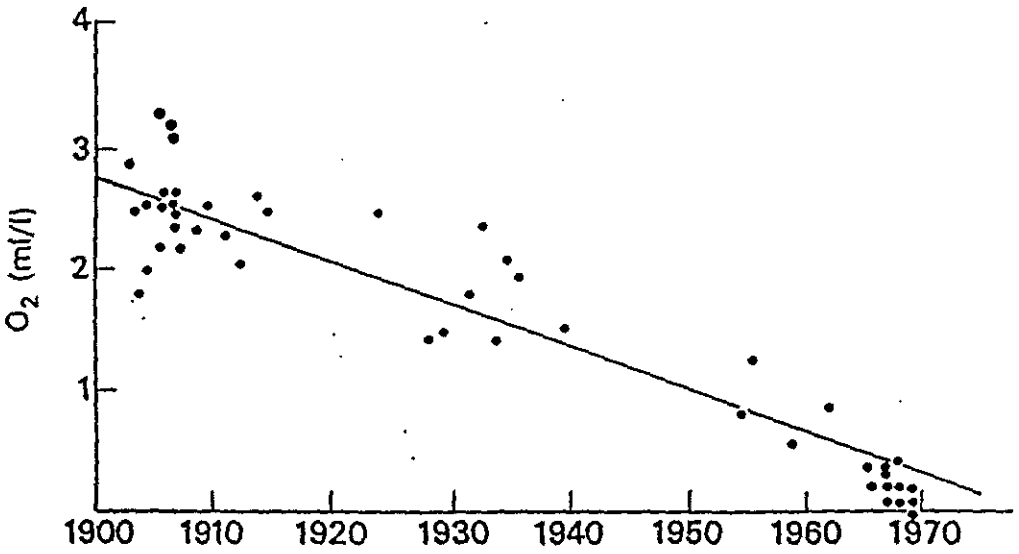


Figure 16.1 Oxygen content of the Baltic Sea (in milliliters per liter), Station F 74 (depth of approximately 150 meters).

Source: Compiled from data from: (a) Conseil Permanent International pour l'Exploration de la Mer (ICES), *Bulletin des Résultats acquis pendant les Courses Périodiques*, Copenhagen (up to 1959); (b) *ICES Oceanographic Data Lists*, Copenhagen (1959–62); and (c) *Hydrographical Data*, Harsfiskelaboratorret, Göteborg (1963–69). For the actual figures from which this graph was drawn, see Appendix, table 16.8.

compounds are reduced by 40-50% but that still resulted in an effluent 10-15 times more toxic than the current Halsey Mill. (See Table 4)

One final point, the Baltic Area is a cold(er) water region as compared to the U.S. This is illustrated by the brackish brown color of their river and lake water. The colder temperatures are reducing the ability of the biological environment to breakdown the high molecular weight Tannin and Humic acid material. Therefore, the assimilation capacity is much lower than typical water in the U.S. This is best illustrated with the chart on permitted discharges to the Willamette River and the corresponding DEQ figures showing that dissolved oxygen levels meet or exceed state standards. These have not shown major deterioration over the past decade. (See Figures 1, 2, and 3)

ENVIRONMENTAL TREATMENT DEVELOPMENTS

Plant technology really started to show a growth after World War II. Originally the bleach kraft mills were based primarily on chlorine bleaching. The effluent capability of those mills was originally no treatment at all until the late 40's and early 50's at which time the mills started to understand the impact on the receiving water because of continual growth. Primary treatment in the form of a primary clarifier was the first technology to be applied. This showed some success in reducing the unwanted solid load to streams and waters, however, the toxic impacts were not affected with primary treatment. [1]

FIGURE 1:

WILLAMETTE RIVER
POINT SOURCE DISCHARGE LIMITS

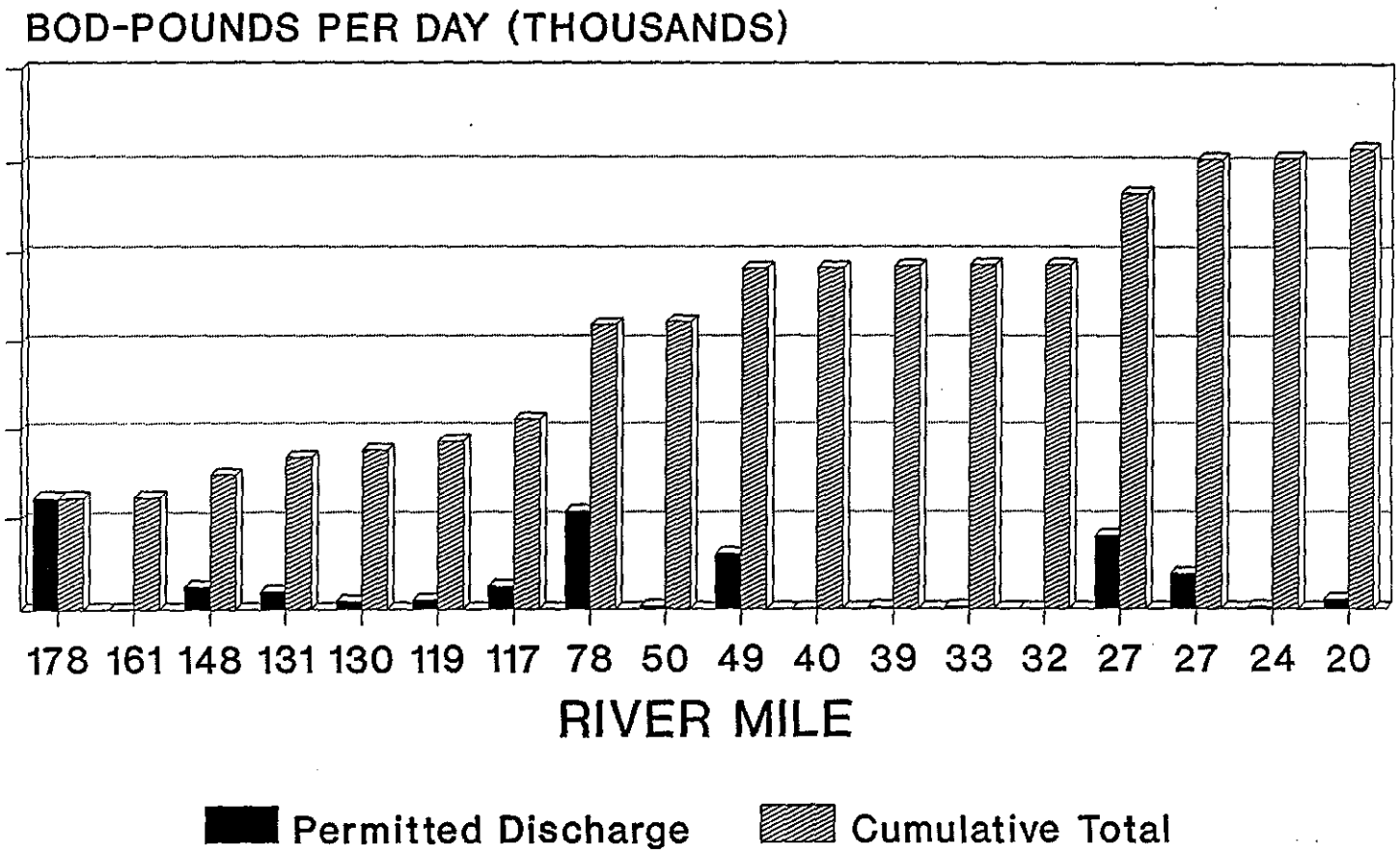


FIGURE 2:

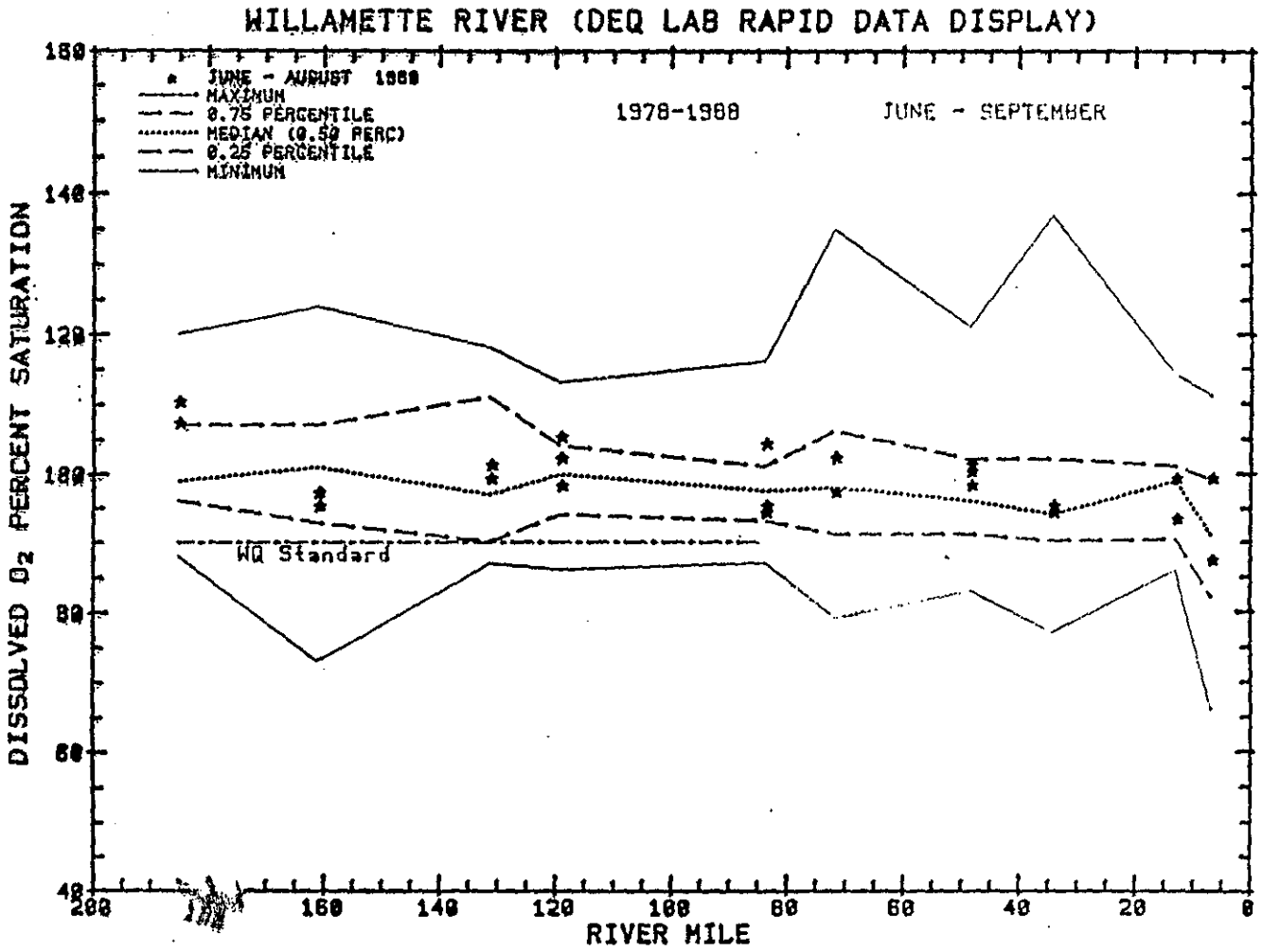
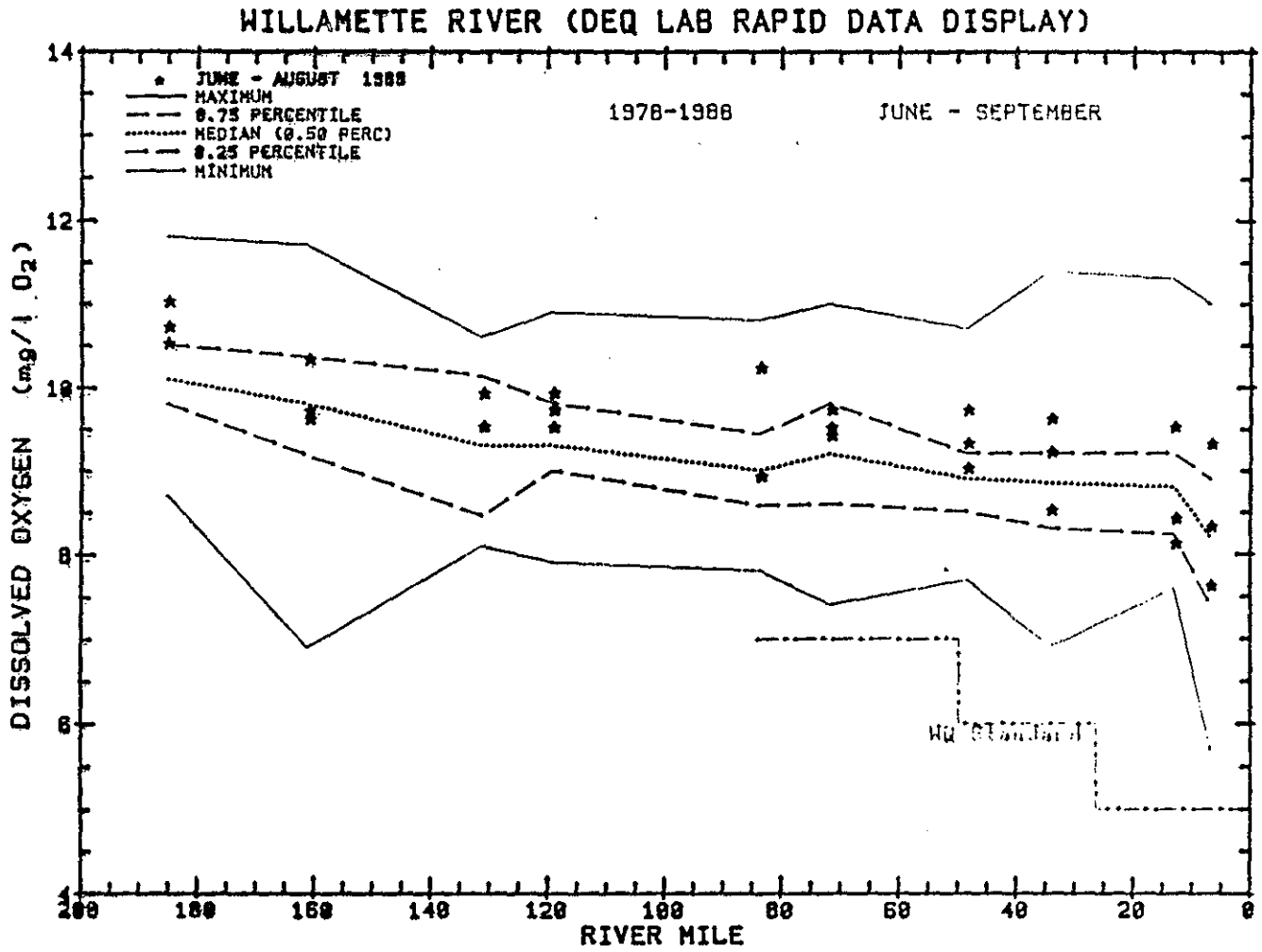

WILLAMETTE RIVER (DEQ LAB RAPID DATA DISPLAY)
JUNE - AUGUST 1988
MAXIMUM
0.75 PERCENTILE
MEDIAN (0.50 PERC)
0.25 PERCENTILE
MINIMUM
1978-1988
JUNE - SEPTEMBER
WQ Standard
DISSOLVED O2 PERCENT SATURATION
RIVER MILE
160
140
120
100
80
60
40
20
0

FIGURE 3:


WILLAMETTE RIVER (DEQ LAB RAPID DATA DISPLAY)
JUNE - AUGUST 1988
MAXIMUM
0.75 PERCENTILE
MEDIAN (0.50 PERC)
0.25 PERCENTILE
MINIMUM
1978-1988
JUNE - SEPTEMBER
DISSOLVED OXYGEN (mg/l O2)
RIVER MILE
14
12
10
8
6
4
200
180
160
140
120
100
80
60
40
20
0

It was in the early 50's that it was recognized that some additional treatment of pulp mill effluents was required to remove the toxicity effects of their effluent on receiving streams. The technology of treating effluent with biological material and oxygenation was first developed and implemented in the industry in the early 60's. It was recognized to be an effective way of reducing bleach plant toxicity, however, there were some limitations to this technology. The sensitivity to temperature, amount of aeration, and concentration of the effluent all played a role.

So in the early 60's pulp mills in the United States started to implement and install secondary treatment systems to deal with the toxicity issue of effluent and they were found to be very effective. It was found that over 90% of the toxic organic chemicals could be broken down and removed from effluents leaving only the higher molecular weight material which studies have shown have no observable toxic effects on streams and stream biology.

Mills in other parts of the world also recognize a need to deal with the pulp mill effluent toxicity issue but the Baltic States quickly recognized that secondary aeration basins were not an effective means of treating effluents primarily because of the climatic conditions. The colder temperatures greatly reduced the efficiencies of these systems. This same influence would have an effect on mills in Canada because of the similar climatic conditions.

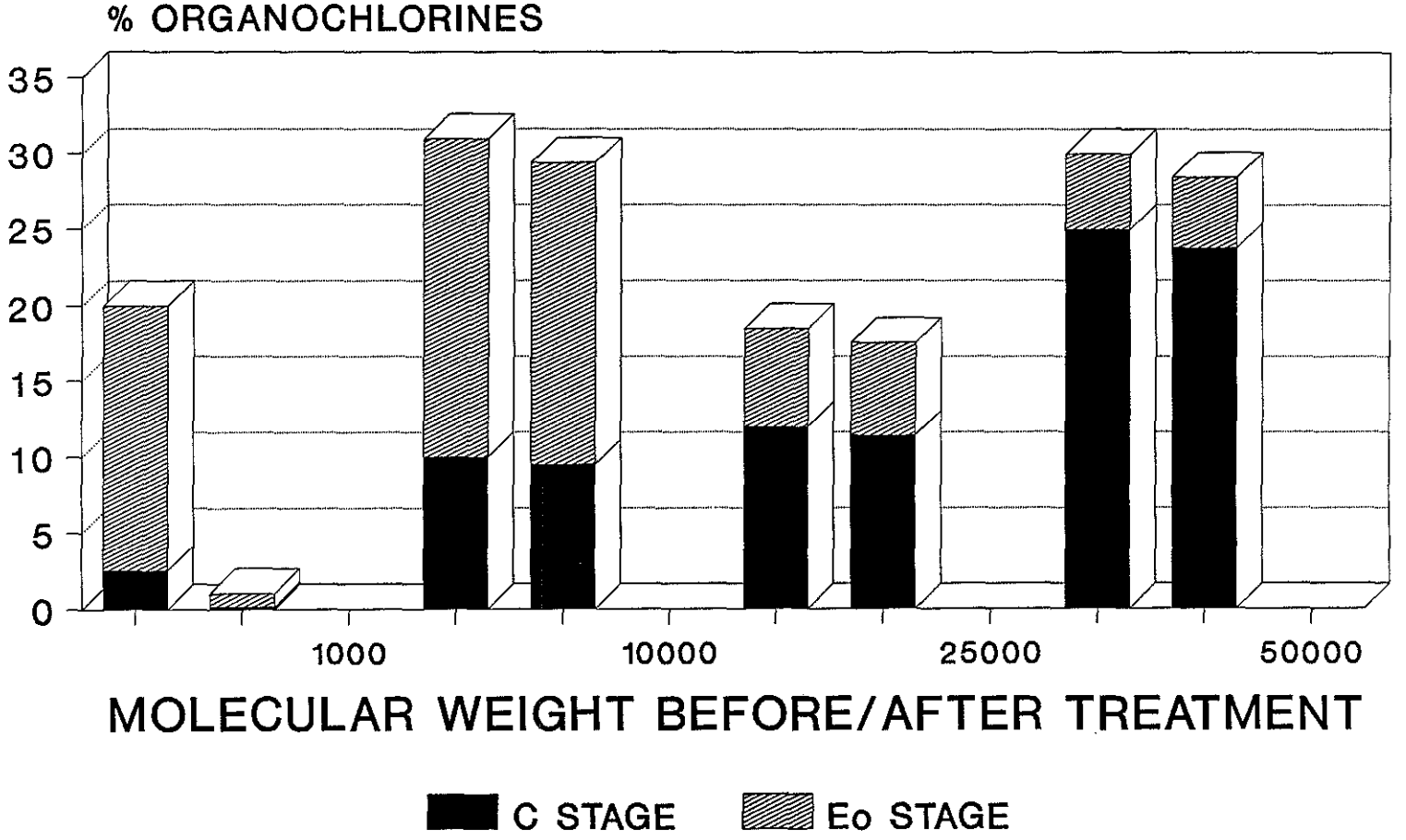
Therefore, back in the late 50's and early 60's the Scandinavian countries primarily Sweden, started to explore other ways of treating the pulp mill effluent toxicity and ways of reducing it. They quickly recognized that with proper closure of the mill where you restricted water use in bleach plants and minimized the carryover of pulp chemicals into the bleach plant would help. Mills in the U.S. and throughout the world have used this as a standard of design for many decades. Secondly they recognized that the greatest influence on toxicity came from the effluents in the bleach plant. Therefore, the Scandinavian research groups started to explore ways of changing the bleach plant technology to continue to bleach pulp but using alternative chemicals and processes to positively impact the effluent toxicities. From this was born the technology of oxygen delignification.

BLEACH PLANT TOXICITY

The issue of toxicity of bleach plant effluents is related to the molecular weight and composition of the compounds released into the environment. This is proportional and thought of as being related to the amount of BOD discharged. It has been noted that the 75-80% of the organic material in bleach plant effluent are high in molecular weight (greater than 1000) which have been shown to be biologically inactive. [3-10] Of the 20-25% that is biologically active proper secondary treatment removes this from the bleach plant effluent thus rendering it safe for the environment. This can be illustrated by thinking of polyvinylchloride pipe which we use to transport water safely. This is the high molecular weight fraction. Whereas its precursor, vinyl chloride in the manufacturing of polyvinylchloride is highly toxic and carcinogenic. The real problem in treating and evaluating bleach plant effluent whether here or in Scandinavia is our ability to treat and render the low molecular weight fraction inactive. The technology most in use in the United States is secondary treatment. In the Scandinavian countries this secondary treatment is not a primary mode of toxicity removal. These countries still continue to suffer from toxic effluent effects on the surrounding environment. Coupled with the fact that the climatic condition which effect the ability to treat the effluent also render the surrounding ecosystem very sensitive and reduces its assimilative capacity for toxic materials. This is best illustrated in Figure 4 showing the secondary treatment reduction of the toxic fractions. [2]

FIGURE 4:

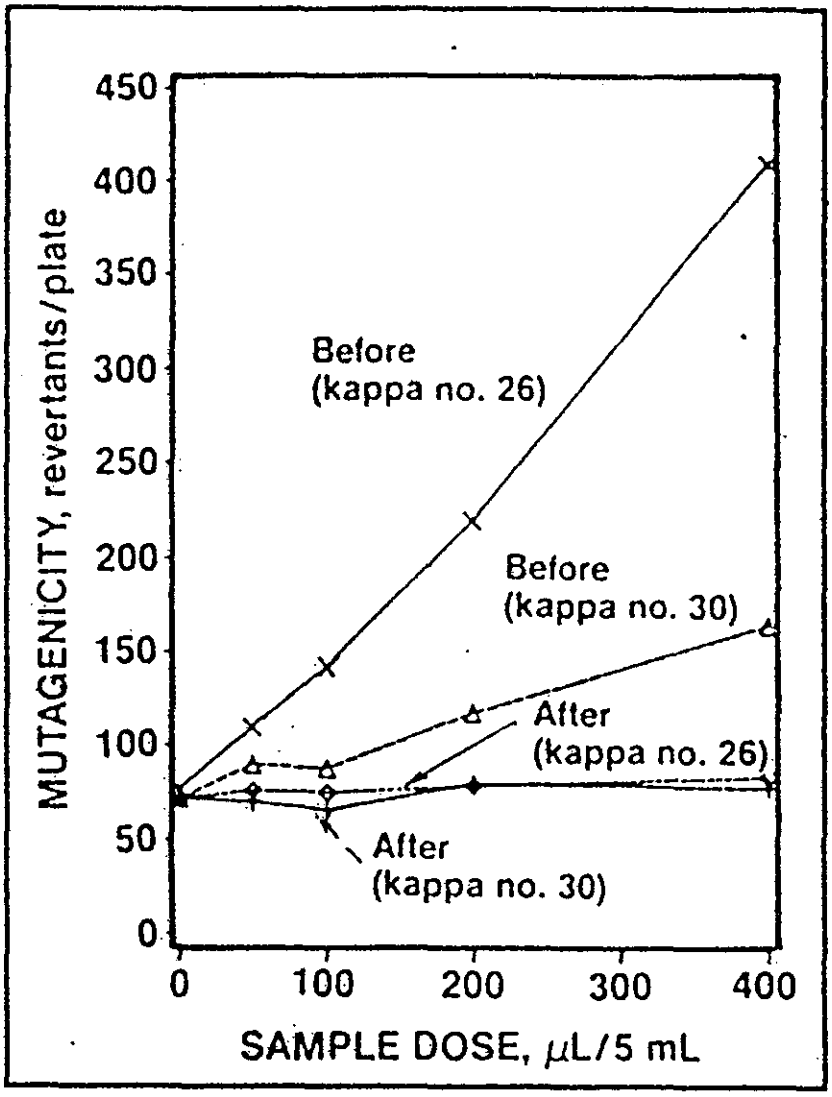
MOLECULAR WEIGHT DISTRIBUTION
C+Eo STAGES



DATA FROM : MISA REPORT

Another illustration of this point is the observations in the Scandinavian studies of the bleach plant effluent discharges into the Bay of Bothnia showing that biological effects are found in the first five kilometers from the mill discharge pipe. However, AOX materials can be observed 15 and 30 kilometers away from the discharge pipe without showing any biological effects. [3] This again illustrates that there are two fractions within the AOX material being discharged from the bleach kraft mills. One fraction is biologically active and causes the problems that have been observed in the Scandinavian water close to the discharge. The other is biologically inactive and in fact does not appear to be having any adverse impact on the fish community. This very same thing was observed many decades ago when it was recognized that some form of toxicity removal was necessary in pulp mill effluent before they were safe to discharge into adjacent receiving waters. In the United States it was determined that the most effective means of toxicity removal was some form of secondary treatment. The most accepted technology of that time was aeration lagoons. These lagoons properly designed and operated can be quite effective in removing BOD and toxicity. The illustration by A. Kangas shows that the Ames test on treated bleach plant effluents are no greater than background. Untreated effluents show high mutagencicity levels. [5] (See Figure 9) In fact the lagoon at Halsey removes 90-95% of all of the toxic chemicals. The low molecular weight fraction from the bleach plant effluent rending it safe for discharge into the receiving waters. This by nature is no different than the process used by municipal waste treatment

FIGURE 9: AMES TEST ON MILL EFFLUENTS



REFERENCE (4)

facilities who do the same thing. And in fact, chlorine is used as a means of disinfection and chlororganics are generated in the process.

DIOXINS AND AOX

The whole issue around AOX, dioxin and bleach plant effluent toxicities boils down to not whether chlorine is used or not but how much of the low molecular weight fraction of organic compounds remain after treatment. At current levels of discharge toxicity concentration and BOD are 15 times greater in Sweden than at the Halsey mill. Its this low molecular weight material that can be absorbed and bioaccumulate within biological systems and can create the toxicity problems. Chlororganics are considered the problem here because they are recognized as not naturally occurring. However, many natural occurring compounds can be bioaccumulating toxics and not recognized. A lot more work is necessary in this area to prove conclusively that chlororganics are the only problem. The high molecular weight fraction is not biologically active as pointed out by "Reeves" and therefore is of no environmental impact. [3] This fraction, however, over time will breakdown just like the wood breaks down in old growth forests. However that breakdown process is so slow, many magnitudes slower than the ability of the receiving water and the environment to assimilate it. In the rivers or forests that no environmental impact is observed. This by contrast is quite different to the waters in the northern latitude countries because of the much colder temperatures

and a much lower assimilative capacity. So those systems can be essentially flooded or over used by the discharges from industrial and municipal systems. This is quite well illustrated by the figure showing decreases in dissolved oxygen over time. [17] (See Figure 16.1)

When you observe the average BOD discharge this toxicity problem is related to the overall biological oxygen demand of the effluent being discharged into the receiving waters and whether the receiving water are water quality limited for dissolved oxygen. This is not the case observed for the Willamette River and the Halsey mill where the summertime dissolved oxygen content of the river does meet the water quality standards and the BOD content of the mill and other dischargers to the river are quite aggressively controlled. However, when you contrast that to the BOD effluents from the Scandinavian and Canadian countries you find that their discharges are many times greater than those from the Halsey mill. [2] This untreated effluent is having a significant impact to their ecosystems. (See Table 4)

This is why it is unrealistic to make generalization about ecological problems in Scandinavia or other countries and translate those to impacts of the mills in Oregon. [6, 7] Further, it is not realistic nor does it meet with the information available to us to say that AOX is having an adverse effect on the environment. It's not AOX itself, its the low molecular weight fraction of the effluent that are of ecological significance. Because the mills

TABLE 4

AVERAGE BOD DISCHARGE

	PERMIT	ACTUAL	TOXICITY
Halsey Mill	5.0 lbs/Ton	3.0 lbs/Ton	1
Canada [1]	36.4 lbs/Ton	35.6 lbs/Ton	12
Sweden [1] current		48.1 lbs/Ton	16
Finland [1] current		601 lbs/Ton	20

[1] N Bonsor - MISA Report - April, 1989

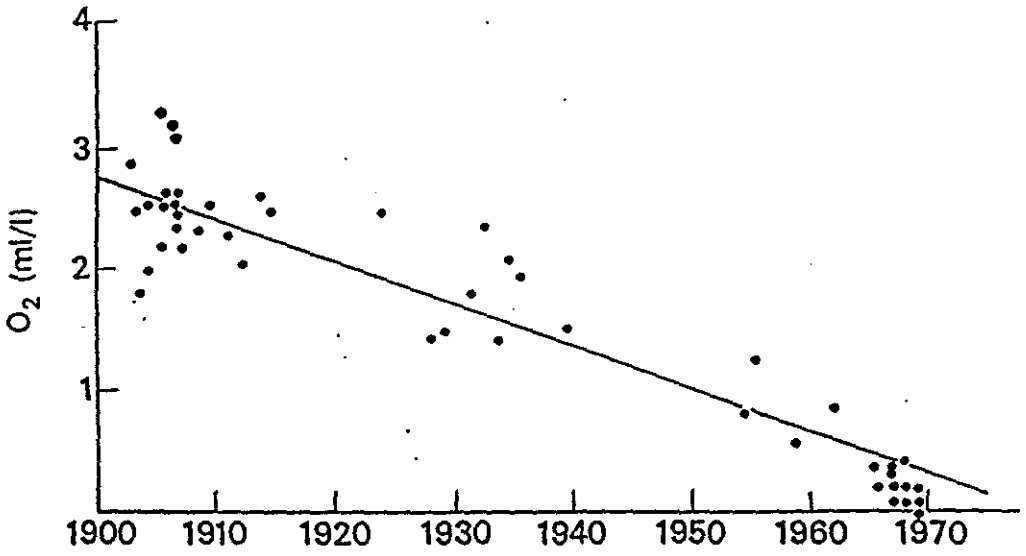


Figure 16.1 Oxygen content of the Baltic Sea (in milliliters per liter), Station F 74 (depth of approximately 150 meters).

Source: Compiled from data from: (a) Conseil Permanent International pour l'Exploration de la Mer (ICES), *Bulletin des Résultats acquis pendant les Courses Périodiques*, Copenhagen (up to 1959); (b) *ICES Oceanographic Data Lists*, Copenhagen (1959–62); and (c) *Hydrographical Data*, Harsfiskelaboratorret, Göteborg (1963–69). For the actual figures from which this graph was drawn, see Appendix, table 16.8.

in Oregon and particularly the Halsey mill have aggressive programs for treatment of the bleach plant effluent to remove this lower molecular weight fraction, we find that the bleach plant effluent is non-toxic to the environment and therefore quite safe to discharge into the receiving waters. This is illustrated by the fact that chronic bioassay testing shows virtually 100% survival with 100% concentrated effluent in 1989. The stream studies shows that there are no impacts to fish size or diversity above and below the discharge of the Halsey mill on the Willamette River. This is illustrated in Figures 1 & 2.

Based on all this information, I have to conclude that the whole issue around bleach plant toxicity and AOX control is rendered mute as long as the mill properly treats its bleach plant effluent to remove the lower molecular weight fractions.

Until the mills in Scandinavia and Canada recognize this fact and reduce the amount of BOD discharge, they will continue to have ecological impacts to their receiving waters. The point that needs to be strongly emphasized here is that even though this problem is observed in those countries the conclusion cannot be drawn that the same thing is happening with the Oregon mills, in particular the Halsey mill and the Willamette River.

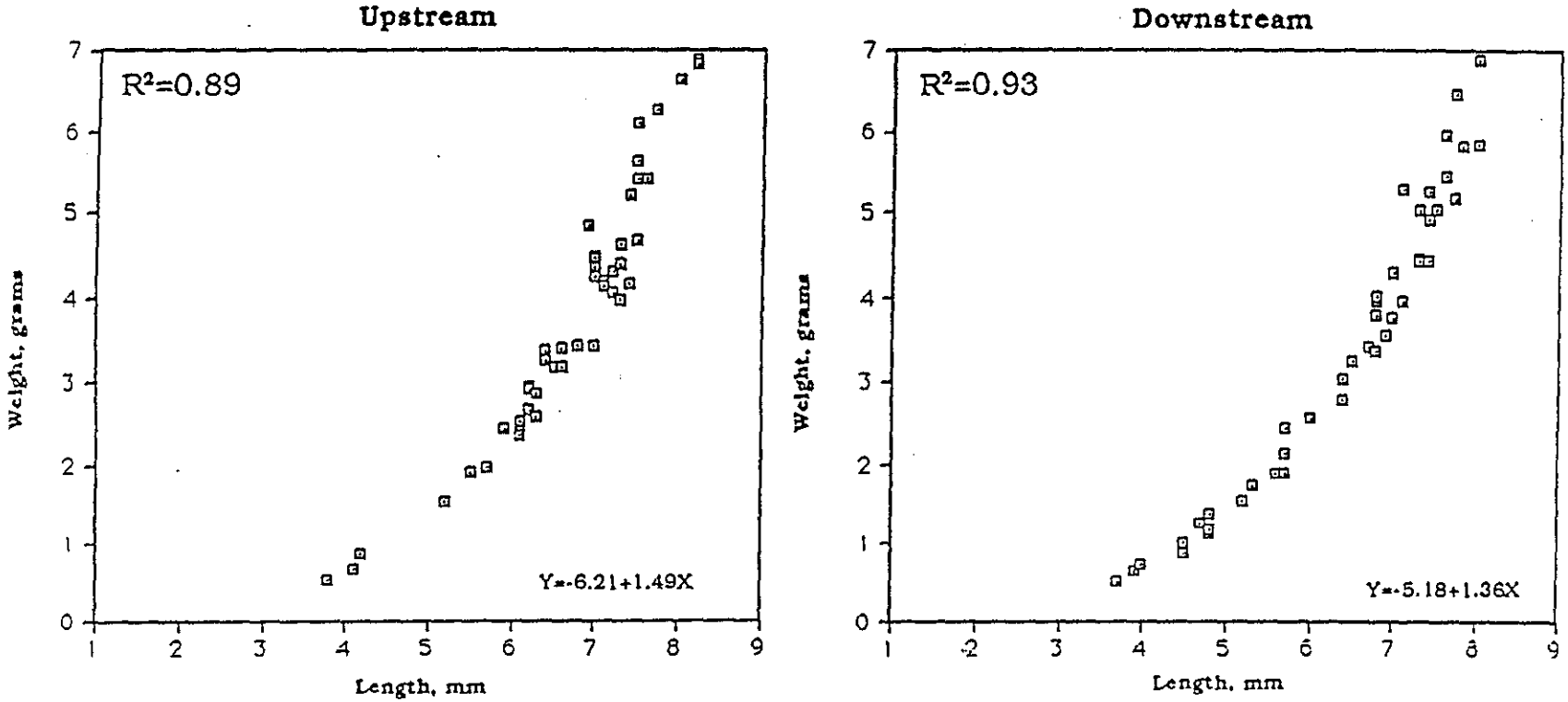


FIGURE 5: Weight and length plot of 46 fish—reticulate sculpin, *Cottus perplexus*—collected above and below the Pope & Talbot waste discharge on the Willametter River near Halsey, Oregon, August 1989.

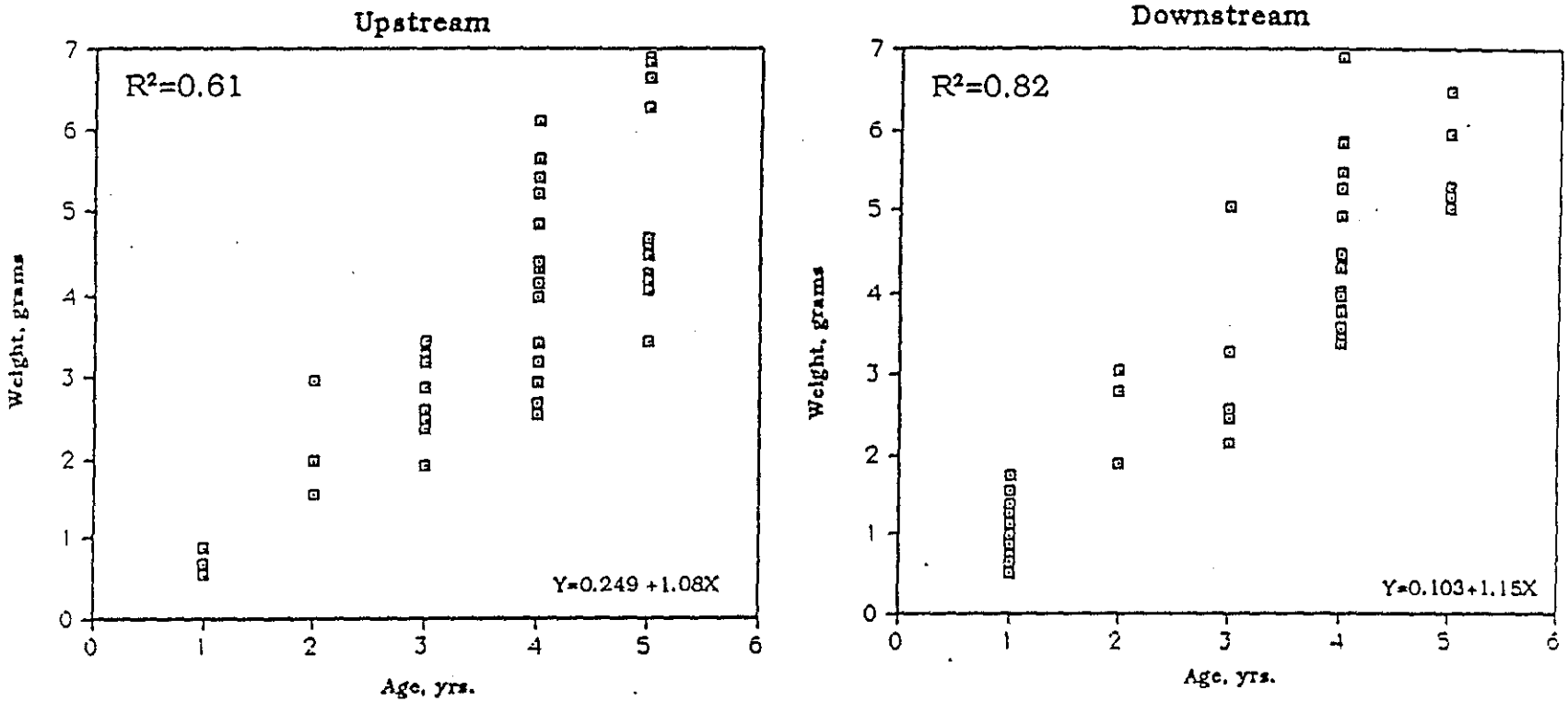


FIGURE 6: Age and weight plot of 46 fish—reticulate sculpin, *Cottus perplexus*—collected above and below the Pope and Talbot waste discharge on the Willamette River near Halsey, Oregon August 1989

DIOXIN CONTROL TECHNOLOGY

CHLORINE DIOXIDE

Installing oxygen delignification and chlorine dioxide substitution will significantly impact bleach plant effluent quality if no treatment has been practiced previously. Based on the evidence available in the literature we can see that with proper control and mixing of the chlorine as it is applied to pulp will control to a practical extent all dioxin generation. [14, 15] This is illustrated in Figure 7 and 8 in which is plotted data reported by Paul Axegard from STFI, and then calculated the "Practical Quantitative Limits" for the data between 0 and 100% chlorine dioxide substitution. The only conclusion you can draw from this is that within experimental error of the dioxin test itself there is no improvement in dioxin reduction by substituting for chlorine above 1%. Backing up from that then implies that if proper mixing and elimination of high concentration pockets of chlorine on pulp can be achieved in an operating sense then the best practical control of dixoin generation will be achieved and chlorine dioxide substitution is not necessary. One final point, a very important conclusion to be drawn from this information is that the best way to reduce dioxins content in pulp is to control the use of chlorine. A reduction of chlorine multiple to approximately 0.15 decreases dioxin levels close to the detection limit on pulp. [12]

FIGURE 7:

CHLORINE DIOXIDE SUBSTITUTION

DIOXIN/FURAN ON PULP

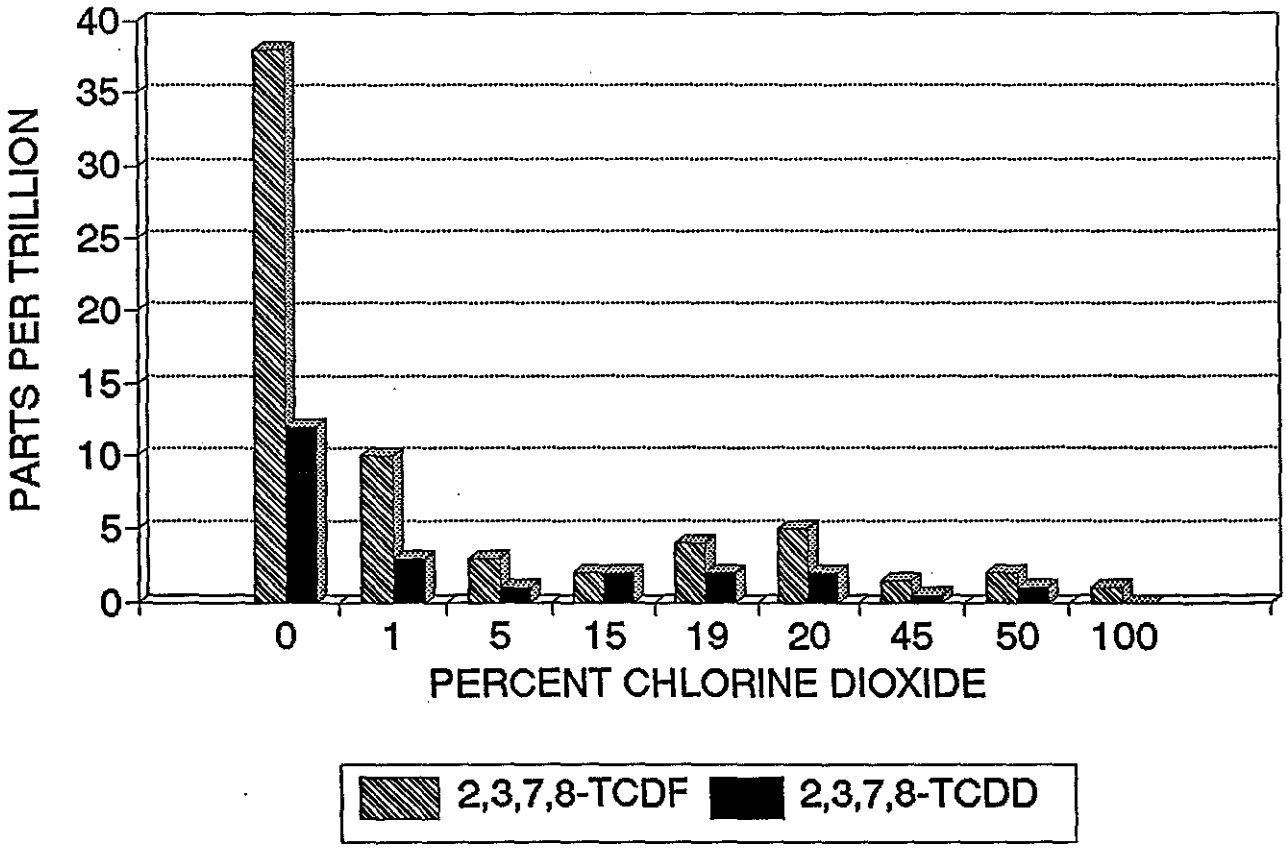
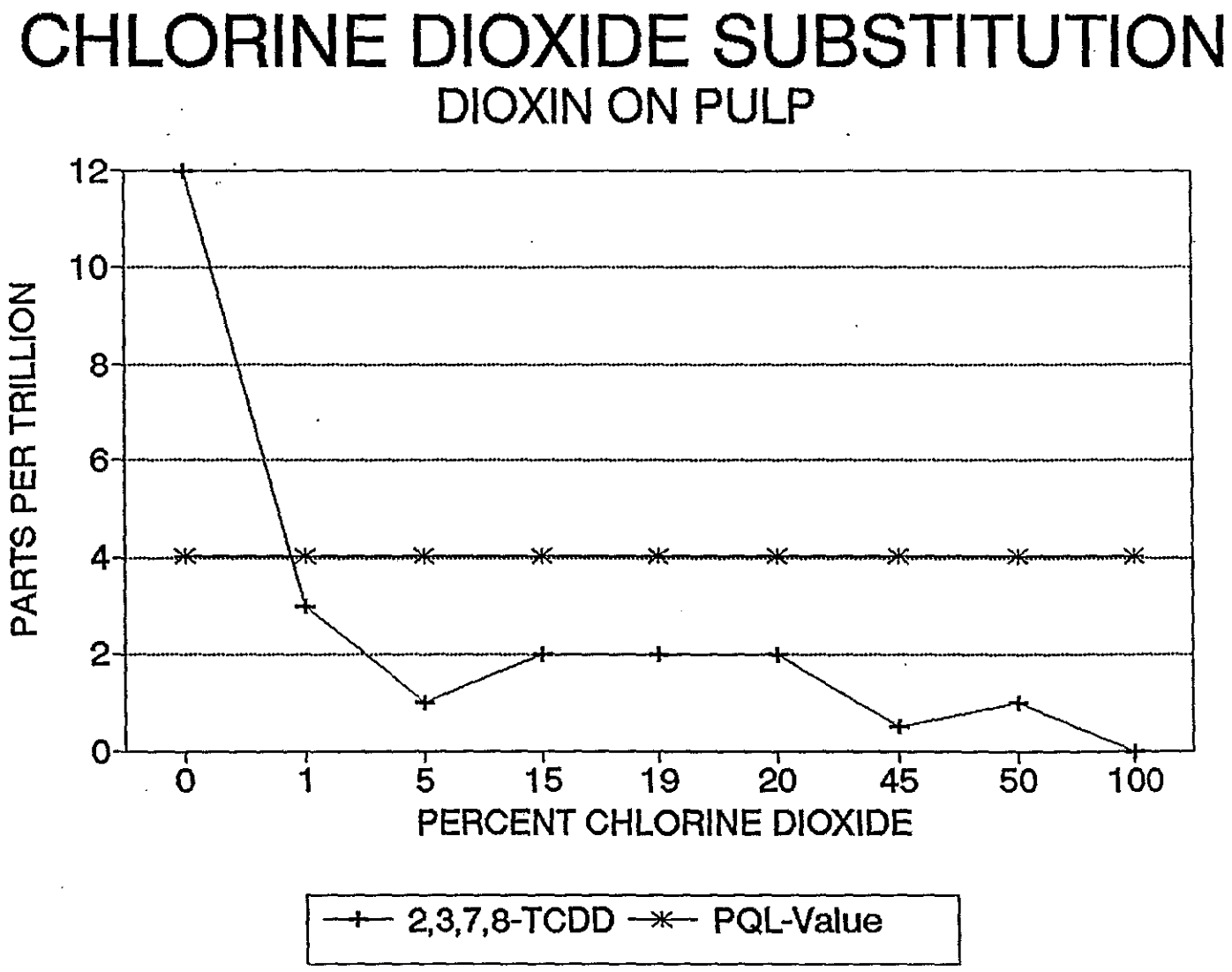


FIGURE 8:


CHLORINE DIOXIDE SUBSTITUTION
DIOXIN ON PULP
PARTS PER TRILLION
12
10
8
6
4
2
0
0
1
5
15
19
20
45
50
100
PERCENT CHLORINE DIOXIDE
2,3,7,8-TCDD
PQL-Value

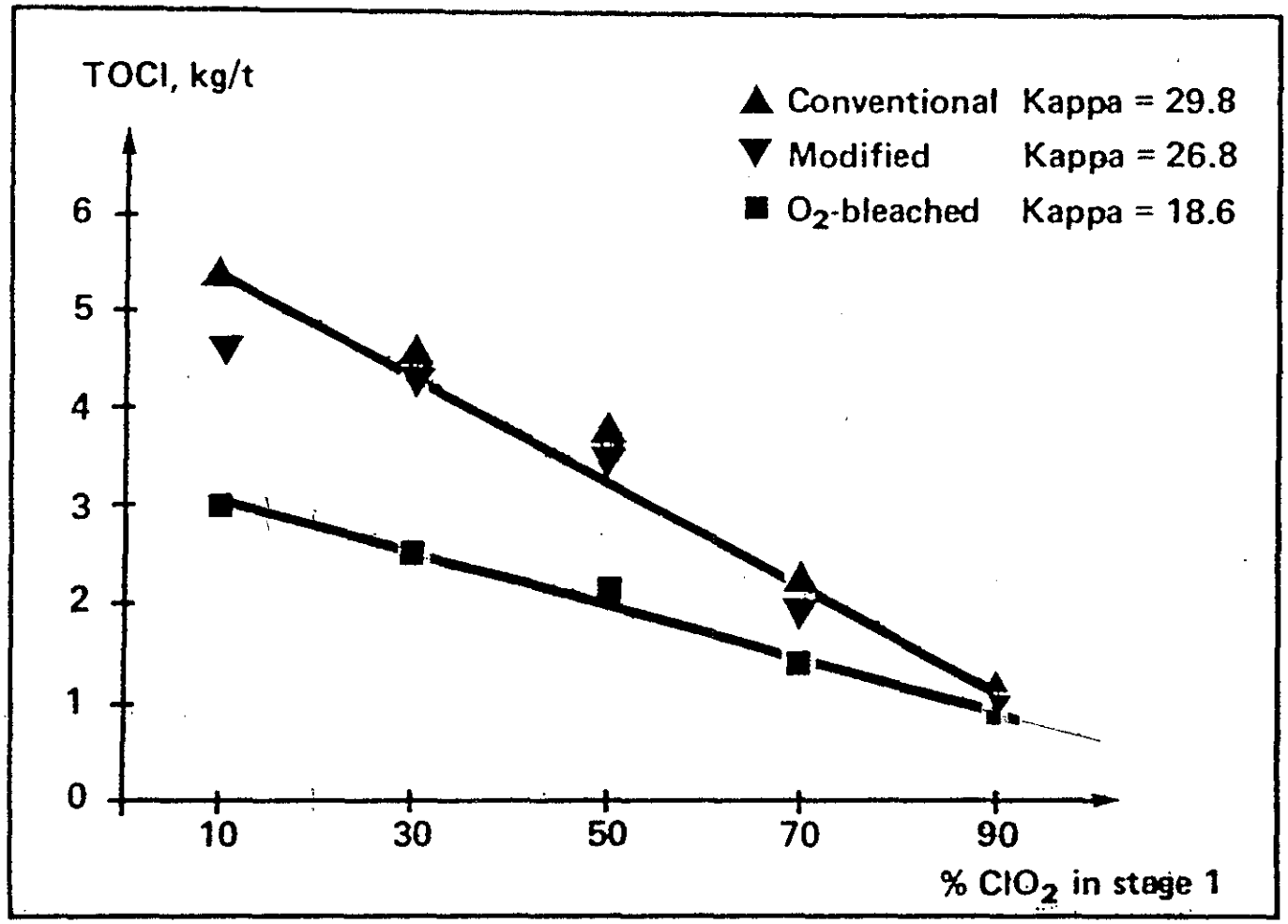
OXYGEN DELIGNIFICATION

The influence of oxygen delignification on the formation of dioxin has been investigated and found to have no pronounced effect on reduction of dioxin formation as was pointed out in Axegard's paper. Oxygen delignification however is affective in reducing certain chlororganic compounds. (See Figure 15) Again, these compounds if properly treated in a secondary system can be removed and render the effluent environmentally friendly without having to resort to chlorine dioxide substitution. A softwood kraft bleach plant with oxygen delignification and ClO_2 to form no more than 1.5 kg/Ton TOCl is extremely environmentally more than 1.5 kg/Ton TOCl is extremely environmentally friendly in that it produced no detectable amounts of highly chlorinated dioxins. [4] TOCl at 1.5 kg/Ton is related to approximately 2 kg/Ton AOX.

CONCLUSION

In conclusion, we can look at this problem from a chemical engineering sense and say that by reducing chlorine, it is possible to reduce the amount of AOX. From a biological sense it is necessary to remove the low molecular weight fraction which represents 20-25% of the AOX and this is done quite effectively with proper secondary treatment systems. A technology which has not been highly used in Scandinavia or in Canada to this point. Until these countries recognize the importance of secondary treatment and practice it, they will continue to see environmentally unfriendly impacts from their bleach plants

Figure 15 The Effect of Chlorine Dioxide Substitution on the Discharge of Total Organic Chlorine (TOCl) (3)



regardless of the technology.

The problem we are dealing with here is one of being required to meet perceived solutions to a problem that has not clearly been defined. In particular as it relates to the Willamette River since adverse impact has not been observed. The true definition of environmental impacts has to center around the amount of BOD being discharged into the environment and whether that environment has the assimilative capacity to deal with those discharges. The technology that is being proposed by the state in essence will do nothing to improve the environmental quality of bleach plant effluents and that capital can be better used to improve and tighten the control around secondary treatment systems and controls within the bleach plant itself. Technology such as oxygen delignification and chlorine dioxide substitution should only be applied if there is economic and quality justification. This is clearly not the case in this instance. The companies in the pulp and paper industry in the Scandinavian countries will suffer from continued requirement until they recognize this point.

With the expansion as proposed at Halsey there is the justification to make this kind of investment. Without the expansion, the cost of implementing the technology will improve environmental quality by only 2-3% at the cost of rendering the mill less competitive and less productive. The magnitude of this is estimated at $7.5 million/yr reduced income and 9,000 tons/yr lower production. [16]

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3. D. Reeves and P. Earl, Pulp and Paper Canada 90:4, page T-128, 1989.

4. A. Kangas, et al. TAPPI Journal, page 175, December 1988.

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7. NCASI Bulletin No. 573, October 1989.

8. J. F. Byrd, et al. TAPPI Journal, Volume 69, No. 6, June 1986.

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10. Toxicity of Pulp Mill Effluent: A Literature Review, U.S. Department of Commerce, Publication PB-294287, February, 1979.

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12. Environmentally Friendly Process of the Future, Paul Axguard, Tappi 1989 Bleach Plant Operation Seminar, page 195.

13. Survey on Current Environmental Regulations in Scandinavia and Canada, Report No. 02100, January 10, 1990.

14. 1989 Study of the Willamette River near Halsey, OR., Taxon Inc., R. Miller.

15. H. Rhise, TAPPI Journal, December 1989.

16. Private Communication from D. Williamson, January 1990.

17. The Resourceful Earth, Herman Kahn, Blackwell Publishers Ltd, 1984.

NEIL GOLDSCHMIDT
GOVERNOR

Environmental Quality Commission

811 SW SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

TO: Environmental Quality Commission

FROM: Director

SUBJECT: Agenda Item B, January 19, 1990, EQC Meeting

Proposed Civil Penalty Settlement Agreement

Background

Oregon Revised Statute 468.130(3) provides that any civil penalty may be remitted or mitigated upon such terms and conditions as the Environmental Quality Commission (Commission) considers proper and consistent with the public health and safety. The statute further provides that the Commission may by rule delegate to the Department of Environmental Quality (Department), upon such conditions as deemed necessary, all or part of the authority to remit or mitigate civil penalties. Oregon Administrative Rule 340-12-047 authorizes the Director of the Department to seek to compromise or settle any unpaid civil penalty which the Director deems appropriate. Any compromise or settlement executed by the Director shall not be final until approved by the Commission.

The following proposed settlement agreements are attached for the Commission's consideration and approval:

Fred Hansen

H:\GB8231M

NEIL GOLDSCHMIDT
GOVERNOR

Environmental Quality Commission

811 SW SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM January 19, 1990

To: Environmental Quality Commission

From: Fred Hansen, Director

Subject: Proposed Settlement Agreement
DEQ v. Bohemia, Inc.
Case No. WQ-WVR-89-105

On August 8, 1989, DEQ assessed an $8000 civil penalty against Bohemia for intentionally discharging wastewater from a recirculation pond into public waters. The discharge caused a major fish kill.

On August 25, 1989, Bohemia filed a request for hearing and an Answer. Bohemia contended that they did not intentionally cause the violation, but that it resulted due to their negligence. The Department's choice to plead the violation as "intentional" affected the amount of the penalty (+6 determination points) and was one of two factors pled to claim exemption from the statutory 5-day warning requirement. Proving intent can be difficult. Bohemia has tentatively agreed to settle the case as a negligent violation (+2 determination points) which would result in a $2000 reduction of the penalty to $6000.

Bohemia lacks adequate facilities to control surface and storm water runoff. Since the penalty was assessed, Bohemia and the Department have had several discussions and meetings, and have reached agreement on a compliance schedule to construct surface water control facilities by November 15, 1990.

The enclosed Stipulation and Final Order proposes to settle the contested case by reducing the civil penalty to $6000 as outlined above, and by incorporating the compliance schedule negotiated between the Department and Bohemia.

The civil penalty notice, answer, and settlement correspondence are attached for your review. The proposed settlement agreement is protective of public health and the environment, and I recommend Commission approval. If you agree, please sign and date the Stipulation and Final Order.

Fred Hansen

Attachment
Larry M. Schurr
229-6932
December 12, 1989

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY, OF THE STATE OF OREGON, Department, v. BOHEMIA INC., an Oregon corporation, Respondent.	)	STIPULATION AND FINAL ORDER No. WQ-WVR-89-105 LANE COUNTY

WHEREAS:

1. On August 8, 1989, the Department of Environmental Quality (Department) filed with the Environmental Quality Commission (Commission) a Notice of Assessment of Civil Penalty in Case No. WQ-WVR-89-105, against Bohemia Inc., an Oregon corporation (Respondent), assessing a $8,000 civil penalty upon Respondent.

2. On August 25, 1989, the Respondent filed a request for hearing and answer to the Notice referred to in Paragraph 1 above.

3. The parties wish to compromise and settle the civil penalty referred to in Paragraph 1 above on the following terms.

NOW THEREFORE, in consideration of the mutual covenants and agreements of the parties hereto, it is stipulated and agreed that:

I

Respondent hereby waives any and all objections it may have: to the form, content, manner of service and timeliness of the Notice referred to in Paragraph 1 above; to a contested case hearing thereon and judicial review, thereof; and to service of a copy of this stipulated final order, which order shall be effective upon signing by or on behalf of the Commission.

II

Respondent admits each and every fact and violation alleged in the Notice referred to in Paragraph 1 above, except that the parties agree that the discharge resulted from Respondent's negligence rather than from an intentional act.

III

Subject to approval by the Commission, and pursuant to the civil penalty determination procedure set forth in OAR 340-12-045, the parties agree to a mitigation of the $8,000 civil penalty to $6,000.

IV

The Department hereby waives its claim to interest on the penalty from the date of Notice referred to in Paragraph 1 above through the date which the order is signed below.

V

The Commission shall enter a final order:

A. Finding that each and every fact and violation alleged in the Notice referred to in Paragraph 1 above occurred, as modified by the above stipulated agreement.

B. Imposing upon Respondent a civil penalty of $6,000 for the violation cited in the Notice referred to in Paragraph 1 above, plus interest from the date which the order is signed below until paid in full.

C. Finding that the Department and Commission have satisfied all the requirements of law and the mitigation herein is consistent with public health and safety and is in the public interest.

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///

D. Requiring Respondent to meet the following compliance schedule:

1. By October 15, 1989, Respondent shall submit a plan proposing short-term measures for surface drainage control. [plan has been submitted]

2. By December 1, 1989, Respondent shall submit a feasibility plan for a long-term control of log deck runoff.

3. By February, 1990, Respondent shall submit plans for long-term control of surface drainage.

4. By May 1, 1990, Respondent shall start the bid process for construction of long-term surface drainage controls.

5. By July 1, 1990, Respondent shall start construction of surface drainage controls.

6. By November 15, 1990, Respondent shall complete construction and have operable all surface water drainage controls.

VI

Respondent acknowledges that it has actual notice of the contents and requirements of this stipulated final order and that failure to fulfill any of the requirements hereof would constitute a violation of this stipulated final order and could subject Respondent to liability for additional and independent penalties in amounts as great as the statutory maximum and would not be limited in amount by this stipulated final order. Therefore, should Respondent commit any violation of this stipulated final order, Respondent

///

///

///

///

hereby waives any rights it might then have to any and all ORS 468.125(1) advance notices prior to the assessment of civil penalties for any and all such violations of this stipulated final order.

RESPONDENT

11/13/89
Date

John C Wolcott
(Name John C Wolcott)
(Title V.P. - Wood Products)

DEPARTMENT OF ENVIRONMENTAL QUALITY

12/28/89
Date

Fred Hansen, Director

FINAL ORDER

IT IS SO ORDERED:

ENVIRONMENTAL QUALITY COMMISSION

Date — William P. Hutchison, Jr., Chairman

Date — Emery N. Castle, Member

Date — Henry C. Lorenzen, Member

Date — Genevieve Pisarski Sage, Member

Date — William Wessinger, Member

hereby waives any rights it might then have to any and all ORS 468.125(1) advance notices prior to the assessment of civil penalties for any and all such violations of this stipulated final order.

RESPONDENT

11/13/89
Date

John C. Wolcott
(Name John C. Wolcott)
(Title V.P. - Wood Products.)

DEPARTMENT OF ENVIRONMENTAL QUALITY

12/28/89
Date

Fred Hansen
Fred Hansen, Director

FINAL ORDER

IT IS SO ORDERED:

ENVIRONMENTAL QUALITY COMMISSION

1-19-90
Date

William P. Hutchison, Jr., Chairman

1-19-90
Date

Emery N. Castle, Member

Date

Henry C. Lorenzen, Member

1/19/90
Date

Genevieve Pisarski Sage, Member

Date

William Wessinger, Member

BOHEMIA INC.

cc: V CK Ashbaker WQ
done 10-10-89
LMS

October 3, 1989

Mr. Donald J. Hernandez
750 Front Street
Suite 120
Salem, Oregon 97310

Dear Mr. Hernandez:

The September 18, 1989 meeting between representatives of the Department of Environmental Quality (DEQ) Bohemia Inc., and Russ Fetrow Engineering, Inc. was very useful in defining for us, the short and long term expectations and requirements of the DEQ.

As requested, we have drafted a proposed set of interim measures to control surface water run-off concerns at our Coburg facility. The time lines for implementation of the long term program which were agreed to at our meeting are also detailed below.

The following listing of interim measures are currently in various stages of progress in order to reach completion prior to the onset of wet weather.

1. A temporary irrigation/sprinkler system has been established to land apply log deck surface run-off water during this upcoming fall of 1989 and winter, spring and summer of 1990. At the request of the DEQ in May 1989, the gates in the dam immediately west of the plant site were completely closed so that all water collected behind the dam would be held in storage. Bohemia will utilize available company-owned land north of the mill-site for irrigation purposes in order to achieve a maximum degree of treatment. When the water level behind the dam is sufficiently lowered, we will remove, by dredging or other appropriate methods, as much of the sediments and solids as is possible within 100 feet of the dam.

2. The backwater pool to the east of the ditch (between the log decks and log scaling area) has been hydraulically isolated from the ditch so that all log deck run-off may be confined and collected in this area.

2280 Oakmont Way
Eugene, Oregon 97401-5598
Mailing Address:
P.O. Box 1819
Eugene, Oregon 97440-1819

Telephone (503) 342-6262
Facsimile (503) 341-4639
Telex 364-442

3. A diversion berm is being constructed near the pump house to divert surface drainage into the now isolated backwater area.

4. Re-open the ditch to allow passage of regional storm-water.

We are currently in the process of refining the scope of services with Russ Fetrow Engineering for long term measures to control surface water drainage at the Coburg facility. The time lines agreed to at the meeting with respect to long term measures (following) will be included in any agreement. We will submit copies of the proposed scope of services to your office for review when it has been finalized. Our understanding of the agreed upon time lines are as follows:

1. October 15, 1989 - Provide a narrative to the DEQ of proposed short term measures for surface drainage control (outlined above).

2. December 1, 1989 - Submit to the DEQ a feasibility report for long term control of log deck water from the Coburg facility.

3. January 1, 1990 - DEQ to review and approve of the feasibility report.

4. February 1, 1990 - Submit plans to the DEQ for review and approval of the long term control of surface drainage.

5. May 1, 1990 - Start of bid process for construction of improvements necessary to control long term surface drainage.

6. June 1, 1990 - Bid opening for above referenced construction improvements.

7. July 1, 1990 - Start of construction for above referenced construction improvements.

8. November 15, 1990 - Completion of above referenced construction improvements and all measures for the control of surface water management will be in place and operable.

In addition, as discussed and agreed upon at our meeting on September 18, 1989, Bohemia is proceeding with the layout and construction of a high pressure wash rack at the Coburg truck shop. The system will include a sediment catchment basin and an oil/water separator. All discharge water will be directed into the log deck recirculation basin (backwater pool).

Please call if you have any questions or need additional information. With respect to items of technical concern, you may feel free to contact Russ Fetrow Engineering directly. Thank you for your participation in this process.

Sincerely,

Corey L. Unfried
Environmental Coordinator

CLU/ad

cc: Tom Arlint
Dallas Davis
Ed Haag
Gary Messer, DEQ Salem
[redacted]
Russ Fetrow Engineering, Inc.
Jim Walker

STATE OF OREGON

INTEROFFICE MEMO

TO: Enforcement Section
Larry Schurr

DATE: September 27, 1989

FROM:
Donald J. Hernandez via Gary Messer

SUBJECT:
Bohemia, Inc.
Notice of Assessment of Civil Penalty
ENF-WVR-WQ-89-105
Lane County

On September 18, 1989 a meeting was held at Bohemia Inc., Coburg Mill to discuss action to be taken to remedy the situation which led to the recent fishkill. Personnel in attendance were: Corey Unfried, Environmental Supervisor, Bohemia Inc.; Tom Arlint, Sawmill Division Manager, Bohemia, Inc.; Dallas Davis, Coburg Sawmill Superintendent, Bohemia, Inc.; Jim Walker, Coburg Veneer Superintendent, Bohemia Inc.; Jim Walker, Coburg Veneers Superintendent, Bohemia Inc.; Ed Haag, Bohemia Western Truck Division Manager; Russ Fetrow, Russ Fetrow Engineering Inc.; Dale Wulffenstein, Russ Fetrow Engineering Inc.; Shane Hughes, Russ Fetrow Engineering Inc.; Gary W. Messer, Willamette Valley Region, DEQ; Donald J. Hernandez, Willamette Valley Region, DEQ.

During this meeting activities and target dates were mutually agreed to. They are as follows:

October 15, 1989	Submit plan for interim action.
December 1, 1989	Feasability report for permanent correction.
February 1, 1990	Plans submitted to DEQ for review.
May 1, 1990	Go out for bids on construction.
June 1, 1990	Open Bids.
July 1, 1990	Start Construction.
November 1, 1990	Complete Construction.

As we discussed over the telephone, these dates could go into the settlement document for submission to the EQC, or might go into a stipulation order. Please consider this and advise as to which course of action you prefer to pursue.

Donald J. Hernandez

DJH/mh
Schurr.mem

cc: Water Quality Division

REGIONAL OPERATIONS DIVISIC
DEPARTMENT OF ENVIRONMENTAL QUAL.
RECEIVED
OCT 4 1989

81-125-1387

BOHEMIA INC.

August 25, 1989

Certified Mail - Return Receipt Requested

Hearings Officer
Environmental Quality Commission
811 SW Sixth Avenue
Portland, Oregon 97204

Re: Notice of Assessment of
Civil Penalty
No. WQ-WVR-89-105
Lane County

Dear Sir:

In response to subject notice, Bohemia Inc. requests to have a formal contested case hearing before the Environmental Quality Commission or its hearings officer. Enclosed as required is the written "Answer" in support of this request.

We also request to have an informal discussion with the Department of Environmental Quality.

Sincerely,

Corey L. Unfried

CLU/ad

2280 Oakmont Way
Eugene, Oregon 97401-5598

Mailing Address:
P.O. Box 1819
Eugene, Oregon 97440-1819

Telephone (503) 342-6262
Facsimile (503) 341-4639
Telex 364-442

BOHEMIA INC.

ANSWER

* * * * * *

Re: Notice of Assessment of
Civil Penalty
No. WQ-WVR-89-105

Notice Pg. No.	Ln. No.	Answer
2	5	The point of discharge was into an unnamed drainage ditch that is a tributary to Dry Muddy Creek, approximately 1.2 miles upstream from the confluence. Source: Recently purchased USGS Coburg Quadrangle, 7.5 min., 1967. Dry Muddy Creek and Muddy Creek are east of the Coburg property 0.5 and 1 mile respectively.
2	3	The gate valves were not intentionally opened. The gate valves were installed to control the flow of water through the pond, and were never intended to prohibit complete flow of the drainage ditch (see further discussion below). DEQ personnel ordered the gates fully closed upon their arrival and inspection on 5/1/89. Bohemia believes the "R" value in the penalty determination procedure should be reduced to two (2) because the valves were not intentionally opened. Bohemia believes it was only negligent for not observing the alleged contaminant prior to reaching the ditch and closing the valves sooner.
2	9	While Bohemia admits that the gate valves and culverts were installed without a permit, our records show that DEQ personnel documented our intentions of installing the valves.

2280 Oakmont Way
Eugene, Oregon 97401-5598

Mailing Address:

Telephone (503) 342-6262
Facsimile (503) 341-4639
Telex 364-442

NEIL GOLDSCHMIDT
GOVERNOR

Department of Environmental Quality

811 SW SIXTH AVENUE, PORTLAND, OREGON 97204-1390 PHONE (503) 229-5696

CERTIFIED MAIL P 132 861 277

Bohemia, Inc.
c/o F. J. Kupel
Registered Agent
2280 Oakmont Way
Eugene, OR 97401-5519

AUG 08 1989

Re: Notice of Assessment of
Civil Penalty
No. WQ-WVR-89-105
Lane County

On May 1, 1989, Mr. Gary Messer of the Department's Willamette Valley Regional Office in Salem responded to a complaint of discolored water in Dry Muddy Creek. Mr. Messer observed dark reddish-brown water, and traced it upstream approximately four miles to your facility on Coburg Road. There he observed wastewater discharging from your recirculation pond through two manually operated gate valves.

Mr. Messer met with Plant Superintendent Dallas Davis and Safety Coordinator Mitch Hopping, and advised them that the facility's Water Pollution Control Facilities (WPCF) Permit prohibited all direct discharges to public waters. Your employees indicated that they were not familiar with the permit and questioned why the gate valves and culverts were present if discharge was not allowed. The employees were cooperative and acted immediately to have the gate valves closed.

At the request of this Department, the Oregon Department of Fish and Wildlife surveyed Dry Muddy Creek and observed a very significant fish kill. At one point, 300 to 400 small dead fish were observed for each ten feet of creek surveyed. Other observations of stressed aquatic organisms indicated that the fish kill was related to oxygen depletion. Samples of Dry Muddy Creek showed an increase in chemical oxygen demand from less than 5 mg/l upstream, to 231 mg/l .7 miles downstream from your outfall. Total organic carbon increased from 3 mg/l to 83 mg/l. Color increased from 25 units to 500 units. The unpermitted discharge from your recirculation pond had a very severe detrimental effect on the environment of Dry Muddy Creek.

Because of the discharge which polluted Dry Muddy Creek, and violated your permit and water quality regulations, you are liable for a civil penalty assessment. The civil penalty schedule provides for a penalty of up to $10,000 per day for each violation. In the enclosed Notice, I have assessed a civil penalty of $8,000. In determining the amount of the penalty, I used the procedures set forth in Oregon Administrative Rule (OAR) 340-12-045.

DEQ-1

The Department's findings and civil penalty determination are attached to the Notice as Exhibit 1.

The penalty is due and payable. Appeal procedures are outlined in Section VII of the Notice. If you fail to either pay or appeal the penalty within twenty (20) days, a Default Order and Judgment will be entered against you.

If you wish to discuss this matter, or if you believe there are mitigating factors which the Department might not have considered in assessing the civil penalty, you may request an informal discussion by attaching your request to your appeal. Your request to discuss this matter with the Department will not waive your right to a contested case hearing.

Before any new wastewater outfall is constructed, plans for the outfall must be submitted to and approved by the Department; and a permit authorizing that outfall and discharge must be obtained from the Department. A review of Department and company files has not revealed any approval to construct a discharge from your recirculating pond. The enclosed Notice also cites you for that violation.

I wish to remind you that your permit requires that you provide personnel whose primary responsibility is to assure the continuous performance of your water pollution control facilities within the limits of your permit; and also requires that a continuing program of employee orientation and education be implemented to ensure awareness of the necessity of good in-plant control and quick and proper action in the event of a spill or accident. From comments by your employees, it appears that improvements need to be made in those areas.

I look forward to your cooperation in complying with the Department's rules and your permit in the future. However, if any additional violations occur, you may expect additional civil penalties.

Copies of referenced rules are enclosed. If you have any questions about this action, please contact Larry M. Schurr with the Department's Enforcement Section in Portland at 229-6932 or toll-free at 1-800-452-4011.

Sincerely,

Fred Hansen
Director

FH:ls:b
GK2117
Enclosures
cc: Willamette Valley Region, DEQ
Water Quality Division, DEQ
Department of Justice
Environmental Protection Agency
Oregon Department of Fish and Wildlife

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY OF THE STATE OF OREGON, Department, v. BOHEMIA, INC., an Oregon Corporation, Respondent.	)	NOTICE OF ASSESSMENT OF CIVIL PENALTY No. WQ-WVR-89-105 LANE COUNTY

I. AUTHORITY

This notice is issued to Respondent, Bohemia, Inc., an Oregon Corporation, by the Department of Environmental Quality (Department) pursuant to Oregon Revised Statutes (ORS) 468.125 through 468.140, ORS Chapters 183 and 466, and Oregon Administrative Rules (OAR) Chapter 340, Divisions 11 and 12.

II. PERMIT

On April 13, 1988, the Department issued Water Pollution Control Facilities Permit No. 100452 (Permit) to Respondent. The Permit authorized Respondent to construct, install, modify, or operate a wastewater collection, treatment, control and disposal system in conformance with the requirements, limitations, and conditions set forth in the Permit. The Permit prohibits all direct discharges to public waters. The Permit expires on February 28, 1993. The Permit was in effect at all material times.

III. VIOLATIONS

CLASS I VIOLATIONS:

1. On or about May 1, 1989, Respondent violated ORS 468.720(1)(a) and (2), OAR 340-45-015(2), and Condition A1 of Respondent's Permit in that without first obtaining a National Pollutant Discharge Elimination System

(NPDES) Permit, Respondent discharged pollutants into waters of the state, and navigable and public waters, thereby causing pollution of those waters by intentionally opening two gate valves and allowing industrial wastewater and pollutants from the recirculation pond at Respondent's permitted facility to escape and enter Dry Muddy Creek. The discharge caused a major detrimental effect to the environment of Dry Muddy Creek.

2. On or prior to May 1, 1989, but after September 5, 1987, Respondent violated ORS 468.740(5), ORS 468.742(2), and OAR 340-45-015(1)(e) in that Respondent constructed and used a new outlet for the discharge of wastewater into waters of the state, without first submitting plans and specifications for the outlet, and without first obtaining a permit which specifically authorized the outlet. Specifically, Respondent constructed gate valves and culverts through which wastewater was discharged as described in violation 1 above.

CLASS II VIOLATIONS:

1. None cited.

CLASS III VIOLATIONS:

1. None cited.

IV. ASSESSMENT OF CIVIL PENALTIES

The Director imposes civil penalties for the following violations cited in Section III:

Violation	Penalty Amount
I.	$8,000

Respondent's total civil penalty is $8,000.

The findings and determination of Respondent's civil penalty pursuant to OAR 340-12-045 are attached and incorporated as Exhibit No. 1.

V. EXCEPTION TO ADVANCE NOTICE

The penalty is imposed without advance notice pursuant to OAR 340-12-040(3)(b)(A) and/or (E) in that Respondent intentionally caused the discharge of wastewater by opening two gate valves; and that the discharge was not permitted at all, and as such, would not normally continue for five days.

VI. PAYMENT OF CIVIL PENALTY

The total penalty is now due and payable. Respondent's check or money order in the amount of $8,000 should be made payable to "State Treasurer, State of Oregon" and sent to the Business Office, Department of Environmental Quality, 811 S.W. Sixth Avenue, Portland, Oregon 97204.

VII. OPPORTUNITY FOR CONTESTED CASE HEARING

Respondent has the right, if Respondent so requests, to have a formal contested case hearing before the Environmental Quality Commission (Commission) or its hearings officer regarding the matters set out above pursuant to ORS Chapter 183, ORS 468.135(2) and (3), and OAR Chapter 340, Division 11 at which time Respondent may be represented by an attorney and subpoena and cross-examine witnesses. That request must be made in writing and must be received by the Commission's hearings officer within twenty (20) days from the date of mailing of this Notice (or if not mailed, the date of personal service), and must be accompanied by a written "Answer" to the charges contained in this Notice. In the written "Answer," Respondent shall admit or deny each allegation of fact contained in this Notice and Respondent shall affirmatively allege any and all affirmative claims or defenses to the assessment of this civil penalty that Respondent may have and the reasoning in support thereof. Except for good cause shown:

1. Factual matters not controverted shall be presumed admitted;

2. Failure to raise a claim or defense shall be presumed to be a waiver of such claim or defense;

3. New matters alleged in the "Answer" shall be presumed to be denied unless admitted in subsequent pleading or stipulation by the Department or Commission.

Send the request for hearing and "Answer" to the: Hearings Officer, Environmental Quality Commission, 811 S.W. Sixth Avenue, Portland, Oregon 97204. Following receipt of a request for hearing and an "Answer," Respondent will be notified of the date, time and place of the hearing.

If Respondent fails to file a timely request for hearing or "Answer", the Director on behalf of the Commission may issue a default order and judgment, based upon a prima facie case made on the record, for the relief sought in this Notice.

Failure to appear at a scheduled hearing or meet a required deadline, may result in a dismissal of the contested case.

VIII. OPPORTUNITY FOR INFORMAL DISCUSSION

In addition to filing a request for a contested case hearing, Respondent may also request an informal discussion with the Department by attaching a written request to the hearing request and "Answer".

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IX. CONSEQUENCES OF ADDITIONAL VIOLATIONS

If any violation cited in Section III for which a civil penalty is assessed continues, or if any similar violation occurs, the Director may impose additional civil penalties upon the Respondent.

AUG 08 1989
Date

Fred Hansen, Director

EXHIBIT 1

FINDINGS AND DETERMINATION OF RESPONDENT'S CIVIL PENALTY
PURSUANT TO OREGON ADMINISTRATIVE RULE (OAR) 340-12-045

VIOLATION NO: 1. (Unpermitted discharge of waste which caused pollution of waters of the state.)

CLASSIFICATION: The violation is a Class I violation pursuant to OAR 340-12-055(1)(b), (d) and (e)

MAGNITUDE: The magnitude of the violation is major, in that the discharge caused a major detrimental effect on the receiving stream as indicated by the sample analyses (attached), and by the dead and stressed aquatic organisms observed by the Department of Fish and Wildlife downstream from Respondent's outfall.

CIVIL PENALTY FORMULA: The formula for determining the amount of penalty of each violation is: BP+[(.1xBP)(P+H+E+O+R+C)].

"BP" is the base penalty which is $ 5,000 for a Class I major magnitude violation in the matrix listed in OAR 340-12-042(1)(c).

"P" is Respondent's prior violation(s) and receives a value of 0 because Respondent has no prior violations as defined in OAR 340-12-030(13).

"H" is the past history of Respondent in taking all feasible steps or procedures necessary to correct any prior violation and receives a value of 0 because Respondent has no prior violations as defined in OAR 340-12-030(13).

"E" is the economic condition of Respondent and receives a value of 0 in that Respondent gained no economic benefit from noncompliance.

"O" is whether or not the violation was a single occurrence or was repeated or continuous during the period of the violation and receives a value of +2 in that pollution of public waters continued over a period of at least four (4) days.

"R" is the cause of the violation and receives a value of +6 in that Respondent intentionally discharged the polluting wastewater by opening two gate valves.

"C" is Respondent's cooperativeness in correcting the violation and receives a value of -2 in that Respondent was cooperative in correcting the violation.

PENALTY CALCULATION:

Penalty = BP+[(.1xBP) (P+H+E+O+R+C)]
= $5,000 + [(.1x$5,000) (0+0+0+2+6-2)]
= $5,000 + [(500)(+6)]
= $5,000 + $3,000
= $8,000 civil penalty for violation 1

NEIL GOLDSCHMIDT
GOVERNOR

Environmental Quality Commission

811 SW SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM January 19,1990

To: Environmental Quality Commission

From: Fred Hansen, Director

Subject: Proposed Settlement Agreement
DEQ v. Safety-Kleen Corp. (Clackamas Facility)
Case No. HW-WVR-89-46

On June 13, 1989, the Department assessed a total of $7,200 in civil penalties against Safety-Kleen Corp. (Respondent) for three violations of the Department's hazardous waste management regulations. The Department also cited Respondent for four other violations. On June 26, 1989, Respondent contested the civil penalty and some of the Department's allegations.

In subsequent discussions, attorneys for the Department and Respondent negotiated a proposed settlement agreement which is set forth in the attached Stipulation and Final Order. Under terms of the proposed settlement agreement, Respondent agrees to pay $5,800 in civil penalties.

Violations 1 and 2 are settled as disputed claims, without admission of violation. A typographical error in the Code of Federal Regulations, as well as differences in interpretation of those regulations, could weaken the Department's case. Both alleged violations were considered minor, and Respondent has taken corrective action which fully satisfies the Department. Respondent has admitted violation 3 but argues that the magnitude of the violation should have been rated as minor rather than moderate. To settle the contested issue, Respondent has agreed to pay a $3,800 penalty, which is the same amount Respondent paid for an identical violation at one of its other facilities. Respondent has corrected its violation.

The civil penalty notice, answer, settlement correspondence, and a memo summarizing the Department's settlement rationale are attached for your review.

The proposed settlement agreement is protective of public health and the environment, and I recommend Commission approval. If you agree, please sign and date the Stipulation and Final Order.

Fred Hansen

Attachment
Larry M. Schurr
229-6932
December 12, 1989

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY OF THE STATE OF OREGON, Department, v. SAFETY-KLEEN CORP., a Wisconsin corporation, Respondent.	)	STIPULATION AND FINAL ORDER No. HW-NWR-89-46 ORD No. 092895481

1. On June 13, 1989, the Department of Environmental Quality (Department) issued a Notice of Violation, Compliance Order, and Assessment of Civil Penalty in Case No. HW-NWR-89-46 against Safety-Kleen Corp. regarding its Clackamas, Oregon hazardous waste management facility.

2. On June 26, 1989, Respondent requested a contested case hearing in the matter.

3. The parties have since discussed the alleged violations and have examined several factors which support mitigation of the assessed penalty and settlement of the contested case.

4. The parties now wish to compromise and settle the matter.

NOW THEREFORE, it is stipulated and agreed that:

I

Respondent admits violations 3, 4, and 5 alleged by the Department in the June 13, 1989 Notice of Violation, Compliance Order, and Assessment of Civil Penalty (HW-NWR-89-46)(Notice). Respondent makes no admission with respect to the remaining violations alleged in the Notice. The parties agree to settle those violations as disputed claims.

///

II

Subject to approval by the Commission, the parties agree to mitigate the $7,200 civil penalty assessed in the Notice to $5,800 payable by Respondent upon entry of this Order by the Commission. Payment shall be made to "State Treasurer, State of Oregon" and shall be sent to the Director of the Department of Environmental Quality, 811 S.W. Sixth Avenue, Portland, OR 97204.

III

Nothing herein shall constitute a waiver of DEQ or Commission authority to take any actions in response to future or continuing violations by Safety-Kleen Corp., however, payment of the penalty provided herein shall relieve Safety-Kleen Corp. of all civil liability under Oregon hazardous waste laws for all violations specifically alleged in the Notice.

IV

The Department waives its claim to interest on the $5,800 penalty from the date of Notice through the date which this Order is signed below.

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V

The Commission finds that the Department and Commission have satisfied all the requirements of law, and that the mitigation herein is consistent with public health and safety and is in the public interest.

RESPONDENT

SAFETY-KLEEN CORP.

11/21/89
Date

Scott E. Fore
(Name SCOTT E. FORE)
(Title VICE PRESIDENT ENVIRONMENT, HEALTH & SAFETY)

DEPARTMENT OF ENVIRONMENTAL QUALITY

12/28/89
Date

Fred Hansen, Director

FINAL ORDER

89-928

IT IS SO ORDERED:

ENVIRONMENTAL QUALITY COMMISSION

1-19-90
Date

William P. Hutchison, Jr., Chairman

Date

Henry C. Lorenzen, Member

1-19-90
Date

Emery N. Castle, Member

1/19/90
Date

Genevieve Pisarski Sage, Member

Date

William Wessinger, Member

V

The Commission finds that the Department and Commission have satisfied all the requirements of law, and that the mitigation herein is consistent with public health and safety and is in the public interest.

RESPONDENT

SAFETY-KLEEN CORP.

11/21/89
Date

Scott E. Fore
(Name SCOTT E. FORE)
(Title VICE PRESIDENT ENVIRONMENT, HEALTH & SAFETY)

DEPARTMENT OF ENVIRONMENTAL QUALITY

12/28/89
Date

Fred Hansen, Director

FINAL ORDER

IT IS SO ORDERED:

ENVIRONMENTAL QUALITY COMMISSION

Date — William P. Hutchison, Jr., Chairman

Date — Henry C. Lorenzen, Member

Date — Emery N. Castle, Member

Date — Genevieve Pisarski Sage, Member

Date — William Wessinger, Member

STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY INTEROFFICE MEMO

TO: V.A. Kollias, T.R. Bispham
J. Vilendrer, B. McKnight,
S. Hallock, L. Edelman

DATE: NOV 06 1989

FROM: Larry M. Schurr, Enforcement

SUBJECT: Safety-Kleen Corp. (Clackamas facility)
Proposed Settlement of Case No. HW-NWR-89-46

On June 13, 1989, the Department assessed a total of $7,200 in civil penalties against Respondent Safety-Kleen Corp. (Clackamas facility) for three violations of the Department's hazardous waste management regulations. The Department also put Respondent on civil penalty warning for four other hazardous waste violations.

On June 26, 1989, Respondent filed an "Answer" and requested a contested case hearing. In its answer, Respondent admitted violations 4 and 5, and denied in whole or part the Department's allegations for violations 1, 2, 3, 6, and 7. Civil penalties were assessed only for violations 1, 2, and 3.

By letter dated August 17, 1989, Respondent proposed settlement of the case for $4,000 and set forth its rationale for penalty reduction. Representatives from the Department's Hazardous Waste and Enforcement Sections met with Assistant Attorney General Larry Edelman to discuss Respondent's settlement proposal and arguments:

Violation No. 1: Perchloroethylene waste analysis.

Penalty assessed: $1,600 -- Class I minor violation.

Respondent's proposal: $500 -- settle as disputed claim without admission.

Respondent temporarily stores perchloroethylene at its Clackamas facility in order to accumulate enough material to ship to its California facility where a waste analysis is presumably performed. Respondent collects perchloroethylene from several dry cleaner clients. Respondent argues that because of Respondent's knowledge of its clients' dry cleaning processes, and Respondent's knowledge of the properties of waste perchloroethylene, Respondent was able to store the waste in a manner which did not pose a threat to human health or the environment. Respondent argues that it therefore met the intent of the regulation.

The Department believes that Respondent was technically in violation in that Respondent did not precisely follow its waste analysis plan and test each container. However, the Department acknowledges that the violation was

minor. Respondent has since agreed to do a characteristic analysis of each container of perchloroethylene obtained from each generator client.

It seems appropriate to settle violation no. 1 as a disputed claim without admission and with payment of $1,000 (the amount equal to the base level for a Class I minor violation).

Violation No. 2: Site Security -- Failure to adequately secure a hazardous waste storage tank access pipe.

Penalty Assessed: $1,600 -- Class I minor violation.

Respondent's Proposal: $500 -- Settle as a disputed claim without admission.

Respondent's facility is located in an industrial park with other businesses. Access into the industrial park is controlled by a security guard employed by the industrial park. The subject fill pipe is located inside the industrial park but outside of Respondent's own facility buildings and security fences. Therefore, anyone gaining access into the industrial park past the security guard would also have access to the hazardous waste storage tank fill pipe.

Respondent argues that the presence of a 24-hour industrial park security guard was adequate to meet the security requirements of the regulations. The Department originally argued that according to the regulations such a guard had to be an employee of the facility. However, during review of Respondent's settlement proposal, we discovered that there was a typographical error in the book of federal regulations which cast Respondent's alleged violation in a different light. A security guard not employed by the facility is allowed, but continuous monitoring (such as with a security camera and television monitor) of the active portion of the facility (the fill pipe) is also required. A satisfactory alternative would be to simply place a lock on the fill pipe to secure it, which Respondent has now done.

The Department believes that Respondent was technically in violation, but that the violation was minor. Respondent has since placed a lock on the fill pipe which clearly satisfies the requirements of the regulation. Considering the confusion over the regulation and the minor magnitude of the alleged violation, settlement of violation #2 as a disputed claim without admission and with payment of $1,000 (the amount equal to the base penalty for a Class I minor violation) seems appropriate.

Violation No. 3: Failure to test a hazardous waste storage tank.

Penalty Assessed: $4,000 -- Class I moderate.

Respondent's Proposal: $3,000

Respondent admits that the tank assessment was not done on time, but argues that arrangements for the tank assessment had been made prior to the date of inspection. Respondent also argues that the magnitude of the violation should have been minor rather than moderate, and that the inspection occurred prior

to the revision of the civil penalty rules in Division 12. Under the "old" civil penalty rule, Respondent was assessed a $3,800 civil penalty for an identical tank assessment violation that was documented at its Springfield facility on April 4, 1988.

Respondent proposes a smaller penalty ($3,000) for its second tank assessment violation than was assessed (under the old civil penalty rules) for its first identical violation. That seems inappropriate. However, considering that Respondent's challenge of the magnitude of the violation could be successful, and the fact that Respondent was working towards compliance before the inspection, a civil penalty equal to the first tank assessment civil penalty ($3,800), with full admission by Respondent, seems to be a fair and reasonable settlement of the violation.

The enclosed Stipulation and Final Order formally sets forth the terms of the proposed settlement. Respondent has tentatively agreed to those terms.

Please review, comment and/or clear.

LMS:b
H:\GB9050M

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GUY J. STERNAL

OF COUNSEL
C. JOHN NEWLANDS
STANLEY P. WAGNER, JR.

PLEASE REPLY TO TACOMA OFFICE

August 17, 1989

Mr. Larry M. Schurr
Department of Environmental Quality
Enforcement Section
811 S.W. 6th Avenue
Portland, Oregon 97204-1390

Mr. Jim Vilendre
Hazardous Waste Facilities
Management Section
Department of Environmental Quality
811 S.W. 6th Avenue
Portland, Oregon 97204-1390

Re: Department of Environmental Quality v. Safety-Kleen Corporation; No. HW-NWR-89-46 (Clackamas County, Oregon)

Gentlemen:

This firm represents Safety-Kleen Corporation with regard to DEQ's Notice of Violation, Compliance Order and Assessment of Civil Penalty No. HW-NWR-89-46 sent to Safety-Kleen with Director Fred Hansen's letter of June 13, 1989.

On Safety-Kleen's behalf we filed an Answer and an Application for Hearing. As we said in our June 22, 1989 letter sent to Director Hansen, Safety-Kleen would be willing to withdraw its Application for Hearing when we can determine that Safety-Kleen's response has fully satisfied DEQ and when the penalty assessment has been settled. Director Hansen's letter which accompanied the Notice of Violation and Penalty said if we had any questions to please contact you. We have two questions: (1) is DEQ satisfied with Safety-Kleen's response and (2) is DEQ willing to settle the penalty assessed?

To address the first issue, we would reference Mr. Robert Wachsmuth's letter of June 16, 1989 to Brett McKnight of DEQ. We would appreciate your response; if you need more data please contact Mr. Wachsmuth or me.

To address the second issue, we would ask that you consider the discussion which follows. DEQ imposed civil penalties for three violations. The violations and penalties include the following:

	Violation	Penalty Amount
1.	Waste Analysis	$1,600.00
2.	Security	$1,600.00
3.	Tank Assessment	$4,000.00

Safety-Kleen's proposal, with justification as provided below, is to settle the penalty assessment with a payment (and with a stipulated order) as follows:

	Violation	Penalty Amount
1.	Waste Analysis	$ 500.00
2.	Security	$ 500.00
3.	Tank Assessment	$3,000.00

If DEQ can accept this proposal Safety-Kleen would withdraw its Application for Hearing.

Violation 1. DEQ alleges in Violation 1 that Safety-Kleen "violated general waste analysis requirements set forth in 40 CFR 265.13(a)(1) "by failing to obtain an analysis of waste perchloroethylene. Waste perchloroethylene (or Perc) is stored in drums at Safety-Kleen's Clackamas facility.

EPA's general waste analysis requirement (adopted by DEQ) says that the owner or operator of a TSD facility "must obtain a detailed chemical and physical analysis" of a "representative sample" of the waste. The analysis at a minimum must include information needed to treat, store or dispose of the waste in accord with EPA's RCRA regulations. EPA's rule provides that the waste analysis data may include data from waste generators "and existing published or documented date" on the waste or on waste generated "from similar processes."

EPA's general waste analysis requirement was adopted on May 19, 1980. See, 45 Fed. Reg. 33153. In its commentary preceding adoption EPA describes its "objective-orientated waste analysis standards" and said the purpose of the standards was to protect human health and the environment.

> The purpose of the proposed waste analysis standards was to ensure that owners or operators possessed sufficient information on the properties of the waste which they managed, (sic) to be able to treat, store or dispose of their waste in a manner which would not pose a threat to human health or the environment.

45 Fed. Reg. at 33179.

We contend that DEQ may not be able to establish a general waste analysis violation. (We acknowledge Mr. Wachsmuth's June 16, 1989 letter says Safety-Kleen will obtain a composite sample of its 16 customers; we understand the samples are in the lab for analysis.) We content that DEQ should reduce the penalty proposed to compromise a disputed matter and to save both Safety-Kleen and DEQ the cost and uncertainty of litigation.

Nationally, Safety-Kleen began its dry cleaning waste program in 1985. It was well known when that program began that the cleaning solvent used by the great majority of dry cleaners (possibly approaching 90%) was perchloroethylene. In 1985 and 1986 Safety-Kleen obtained representative samples of dry cleaning waste and had those samples analyzed. The analytical results were provided by DEQ with the Part B permit application for Clackamas.

All of Safety-Kleen's dry cleaning customers in Clackamas used Perc. Safety-Kleen established that these customers used Perc when the dry cleaners signed up for Safety-Kleen's waste removal service. Safety-Kleen's sales forces were trained in how to establish the dry cleaning solvent used. These trained sales persons were instructed to inspect the dry cleaners' machinery to ensure that Perc was established through inspecting waste manifests filled out by these dry cleaner/generators before they purchased Safety-Kleen's services.

Safety-Kleen has sufficient information from this system to manage (i.e., to store at Clackamas) Perc in Oregon. The dry cleaning wastes are stored in sealed drums which Safety-Kleen provides to the dry cleaners. From Clackamas the drums are trucked to an accumulation point in California and ultimately to a recycle center in Texas. Nationwide, since 1985, Safety-Kleen has recorded only one problem with a drum of dry cleaner waste. That drum had been contaminated with lacquer thinner.

In our view, Safety-Kleen's procedure satisfied 40 CFR 265.13. A representative sample was obtained and analyzed in 1985. "Existing published or documented data" on Perc is widely available. Further, Safety-Kleen documented at its customer's location that Perc was being used. This documentation was corroborated by reference to waste manifests. Safety-Kleen clearly possesses "sufficient information" to store and recycle the Perc waste without any threat to human health or the environment. Only one drum of Perc waste has even posed a threat due to the waste compensation since the program began in 1985.

Violation 2. In Violation 2 DEQ alleged that Safety-Kleen "violated security requirements" set forth in 40 CFR 265.14(a) by failing to "minimize the possibility of unauthorized entry" into the active portion of Safety-Kleen's facility. Specifically, DEQ complained that Safety-Kleen failed to lock the waste solvent storage tank access.

EPA's general facility standard for security says a facility, unless exempt, must have a "24-hour surveillance system" for the active portion of the facility or a barrier to surround the facility and "a means to control entry" such as a "locked entrance." See, 40 CFR 265.14(b). EPA intended to make this standard flexible. In its commentary with the adopted regulations EPA specifically noted that

> The standard has been made more flexible by allowing the use of an around-the-clock surveillance system, instead of the physical barrier (i.e, a fence) specified in the proposed rules, to control entry onto a facility.

45 Fed. Reg. 33181 (May 19, 1980). (Emphasis added.) The agency noted in commentary that a surveillance system would be as effective as a physical barrier because "facility guards or facility personnel" could ensure that unauthorized persons did not enter the facility's active portion.

Safety-Kleen's Clackamas facility has a "clean and fill station" located outside Safety-Kleen's Clackamas warehouse. The point of entry to the underground waste storage tank has a lid and when not in operation is covered by a steel cap flush with the ground surface. As noted in DEQ's "Storage Facility Inspection Report Safety-Kleen Corporation (Clackamas)" at page 4 security is provided. The inspector reported,

> During working hours there is an operator on site. There is a security guard (Non-Safety-Kleen employee) which patrols the site after normal working hours.

Safety-Kleen's employees can corroborate the statement that during working hours Safety-Kleen patrols the fill area. Police and security forces patrol the area during off hours.

It is clear that Safety-Kleen provides security meeting EPA's standard. EPA's regulation, 40 CFR 265.14(b)(1) allows security to be provided through a surveillance system including guards or facility personnel. In sum, we are not convinced DEQ can establish the security violation. We request, rather, that DEQ accept Safety-Kleen's proposed settlement to compromise a disputed matter.

Violation 3. DEQ alleges in Violation 3 that Safety-Kleen violated 40 CFR 265.191 by failing to determine whether its "existing underground hazardous waste storage tank was leaking or was unfit for use."

EPA's regulation, 40 CFR 265.191, among other things, that the owner or operator of a tank which lacks secondary containment must keep on file a written, reviewed and certified assessment attesting to the tank's integrity. The assessment was required to be obtained by January 12, 1988. In its answers Safety-Kleen admitted that a qualified tank assessment was not obtained by January 12, 1988. A tank assessment, however, was prepared. DEQ's inspectors were told on October 12, 1988 during their inspection that the facility had a contractor working on the tank assessment.

DEQ imposed a $4,000.00 penalty for Violation 3. In contrast to Violations 1 and 2, DEQ characterized the magnitude of Violation 3 as "moderate" rather than "minor". Characterizing Violation 3 as "moderate" significantly increased DEQ's demand for a penalty.

We reject the idea that Violation 3 is a "moderate" violation. A tank assessment was prepared. The inspectors were told it was pending. Only the date for compliance was missed. In our view simply missing a date would be a minor violation; possibly failing to meet a past-due requirement after being told of the problem would be "moderate" but not merely missing a date in the first instance.

In sum, we request the DEQ accept Safety-Kleen's proposed settlement of Violation 3 to compromise a disputed matter. If this violation must be admitted formally to effect a settlement that would be considered.

Conclusion

We request that DEQ accept Safety-Kleen's proposed settlement.

We submit that DEQ's goal, to obtain compliance, protect public health and the environment and deter future violations (OAR 340-12-026(1)) has been completely satisfied. Mr. Wachsmuth's letter documenting the actions being taken by the company demonstrate compliance. The public health or environment were never harmed or seriously threatened. The issue of compliance has been raised at Clackamas and branch, regional, and corporate Safety-Kleen management have directed their attention to the matter. If a final stipulated order will be signed, it will be done at the level of senior corporate management.

We recognize that DEQ's penalties were assessed in accord with the recently amended "Enforcement Procedure and Civil Penalties" regulation Chapter 340, Division 12. The proposal we made, however, should be accepted as a compromise as DEQ has no guarantee in a hearing it would establish the violations occurred. Further, the violations, if they did occur, actually happened when DEQ's earlier edition (effective September 14, 1988) of Chapter 340, Division 12 was in effect.

Safety-Kleen's proposal is in accord with those regulations. See, OAR 340-12-068(3)(b) (superceded). Those regulations permitted a penalty from $100,000 to $10,000 per violation.

I hope to hear from you.

Very truly yours,

Charles K. Douthwaite

CKD:tbs

cc: Mr. Larry Edelman
Deputy Attorney General
1515 S.W. Fifth Avenue, Suite 410
Portland, Oregon 97201

Mr. Robert P. Wachsmuth
Environmental Engineer
Safety-Kleen Corporation
2750 Thompson Creek Road
Pomona, California 91767

Mr. Richard Peoples
Environmental Manager/
Services Center
Safety-Kleen Corporation
777 Big Timber Road
Elgin, Illinois 60120

Mr. John Souza
Regional Manager
Safety-Kleen Corp.
17009 - 76th West
Edmonds, Washington 98020

Mr. Rick Cozad
Branch Manager
16540 S.E. 130th
Clackamas, Oregon 97015

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OF COUNSEL
C. JOHN NEWLANDS
STANLEY P. WAGNER, JR.

PLEASE REPLY TO TACOMA OFFICE

June 22, 1989

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
JUN 26 1989
OFFICE OF THE DIRECTOR

Mr. Fred Hansen
Director
Department of Environmental Quality
State of Oregon
811 S.W. 6th Avenue
Portland, Oregon 97204-1390

Re: Notice of Violation, Compliance Order and Assessment of Civil Penalty No. HW-NWR-89-46 Clackamas Count ORD No. 092895481

Dear Director Hansen:

You will find enclosed and Answer and Application for Hearing filed on behalf of Safety-Kleen Corporation with respect to the above-referenced Notice of Violation, Compliance Order and Assessment of Civil Penalty.

We understand that Safety-Kleen, through its Environmental Engineer, for the Western Region, Mr. Robert Wachsmuth, provided information and an assurance of corrective action to the Department after a letter notifying Mr. Wachsmuth of the violations was received. It is our understanding that Safety-Kleen will continue to respond to the Department's notice both in writing and orally.

We may find that Safety-Kleen's Application for Hearing can be withdrawn at such a time as the Department is satisfied with Safety-Kleen's response and the penalty assessed has been settled. We will keep you informed.

If you have any question, please call me or Mr. Wachsmuth at (714) 556-1856.

Very truly yours,

Charles K. Douthwaite

CKD:tbs

cc: Mr. Robert P. Wachsmuth
Environmental Engineer
Safety-Kleen Corporation
2750 Thompson Creek Road
Pomona, California 91767

Mr. Rick Cozad
Branch Manager
16540 SE 130th
Clackamas, Oregon 97015

3928e

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
OF THE STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY, OF THE STATE OF OREGON, Department, vs. SAFETY-KLEEN CORP., a Wisconsin corporation, Respondent.	ANSWER

In answer to "Notice of Violation, Compliance Order, and Assessment of Civil Penalty No. HW-NWR-89-46 Clackamas County ORI No. 092895481" Safety-Kleen pleads as follows.

1. With respect to paragraph 1. under "Findings" Safety-Kleen admits the allegations in that paragraph.

2. With respect to paragraph 2. under "Findings" Safety-Kleen admits the allegations in that paragraph.

3. With respect to paragraphs 1. and 2. under "Violations" Safety-Kleen denies the allegations in those paragraphs although Safety-Kleen admits that the hazardous waste storage tank access pipe at its Clackamas facility was not locked on the day of the inspection.

4. With respect to paragraph 3. under "Violations" Safety-Kleen denies that it failed to determine if its underground

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ATTORNEYS-AT-LAW
1200 FIRST INTERSTATE PLAZA
TACOMA, WASHINGTON 98402
TELEPHONE 206—572-4500

storage tank at Clackamas was suited for use (a tank assessment has been submitted) but admits that the submission was made after the date set in 40 CFR 265.192(a) (i.e., after January 12, 1988.)

5. With respect to paragraphs 4., 5., 6. and 7. under "Violations" Safety-Kleen admits paragraphs 4. and 5. and denies paragraph 6. and 7.

6. Safety-Kleen reserves the right to amend or supplement this answer as additional information is obtained by Safety-Kleen.

7. Safety-Kleen has made a response in writing to a letter from DEQ advising it of the violations alleged on the basis of the October 12, 1988 inspection. Safety-Kleen expects to provide further written and an oral response to the Department as soon as possible. Safety-Kleen will attempt to settle the Department's determination of violations and the Department's assessment of a penalty if possible. Safety-Kleen does not waive any right to notice or to a hearing before the Environmental Quality Commission.

DATED this 22nd day of June, 1989.

EISENHOWER, CARLSON, NEWLANDS,
REHA, HENRIOT & QUINN

By: _____
CHARLES K. DOUTHWAITE
Of Attorneys for Respondent
Safety-Kleen Corporation

EISENHOWER, CARLSON, NEWLANDS,
REHA, HENRIOT & QUINN
ATTORNEYS-AT-LAW
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State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
OF THE STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY, OF THE STATE OF OREGON, Department, vs. SAFETY-KLEEN CORP., a Wisconsin corporation, Respondent.	APPLICATION FOR HEARING

Safety-Kleen Corporation, Respondent, applies to the Environmental Quality Commission of the State of Oregon for a hearing on "Notice of Violation, Compliance Order, and Assessment of Civil Penalty, No. HW-NWR-89-46 Clackamas County ORD 092895481." A copy of the referenced Notice of Violation is attached.

This request is made pursuant to ORS 466.190 and OAR 137-03-001 through 137-03-093, as supplemented and modified by OAR Ch. 340, Division 11.

Safety-Kleen Corporation shall be represented in this matter by Charles K. Douthwaite of EISENHOWER, CARLSON, NEWLANDS, REHA, HENRIOT & QUINN, 1200 First Interstate Plaza, Tacoma, Washington 98402. Safety-Kleen requests that the Commission serve all papers and notices related to this proceeding on its counsel and upon Safety-Kleen's Environmental Engineer for the western

EISENHOWER, CARLSON, NEWLANDS,
REHA, HENRIOT & QUINN
ATTORNEYS-AT LAW
1200 FIRST INTERSTATE PLAZA
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region, Mr. Robert P. Wachsmuth, at Safety-Kleen Corporation, 2750 Thompson Creek Road, Pomona, California 91767.

EISENHOWER, CARLSON, NEWLANDS, REHA, HENRIOT & QUINN

By: Charles Douthwaite
Charles K. Douthwaite
of Attorneys for Respondent
Safety-Kleen Corporation

Dated: 6/22/89

EISENHOWER, CARLSON, NEWLANDS,
REHA, HENRIOT & QUINN
ATTORNEYS AT LAW
1200 FIRST INTERSTATE PLAZA
TACOMA, WASHINGTON 98402
TELEPHONE 206—572-4500

Department of Environmental Quality

811 SW SIXTH AVENUE, PORTLAND, OREGON 97204-1390 PHONE (503) 229-5696

CERTIFIED MAIL NO. P 132 861 249

Safety-Kleen Corp.
c/o CT Corporation System
800 Pacific Building
Portland, OR 97204

JUN 13 1989

Re: Notice of Violation, Compliance Order, and Assessment of Civil Penalty No. HW-NWR-89-46
Clackamas County
ORD No. 092895481

Enclosed is a Notice of Violation, Compliance Order, and Assessment of Civil Penalty relating to the October 12, 1988, inspection by the Department of Environmental Quality at the Safety-Kleen Corp. facility in Clackamas, Oregon. The Compliance Order and Civil Penalty Assessment are a result of hazardous waste management violations identified during the inspection. Those violations included violations of General Facility Standards for Waste Analysis, Security, Inspections, and Managing Ignitable and Reactive Wastes; violations pertaining to Contingency Plan and Emergency Procedures including failure to distribute copies of the amended facility contingency plan to emergency response organizations, and failure to carry out the provisions of the facility contingency plan and immediately clean up a spill; and a violation of tank system requirements, including failure to assess the integrity of an existing underground hazardous waste storage tank.

A civil penalty of up to $10,000 may be assessed for each day of each violation. I have set your penalty at a total of $7,200 for the violations cited in the enclosed notice.

The penalty is due and payable to the Department. Appeal procedures are outlined within Section VI of the enclosed notice. If you fail to either pay or appeal the penalty within 20 days, a Default Order and Judgment will be entered against you.

The Department expects your cooperation and full compliance with Oregon's environmental regulations. We are prepared to assist you with questions regarding rule interpretation or the applicability of specific regulations to your facility. We expect you to comply with the hazardous waste regulations at all times.

Please be informed that you are liable for additional civil penalties if you violate the Compliance Order or if you have additional violations of the hazardous waste regulations.

If you wish to discuss this matter, or if you believe there are mitigating factors which the Department might not have considered in assessing the civil penalty, you may request an informal discussion by attaching your request to your appeal. Your request to discuss the matter with the Department will not waive your right to a contested case hearing.

If you have any questions about this action , please contact Larry M. Schurr of the Department's Enforcement Section at 229-6932, or Jim Vilendre of the Department's Hazardous Waste Facilities Management Section at 229-5549.

Sincerely,

Fred Hansen
Director

FH:ls:b
GB8552L
Enclosure(s)
cc: U.S. Environmental Protection Agency
Oregon Department of Justice
Hazardous Waste Section, DEQ
Western States Hazardous Waste Project
Northwest Regional Office, DEQ
Robert Wachsmuth, Regional Engineer, Safety-Kleen Corp.

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY OF THE STATE OF OREGON, Department, v. SAFETY-KLEEN CORP., a Wisconsin corporation, Respondent.	)	NOTICE OF VIOLATION, COMPLIANCE ORDER, AND ASSESSMENT OF CIVIL PENALTY NO. HW-NWR-89-46 CLACKAMAS COUNTY ORD No. 092895481

This Notice of Violation, Compliance Order and Assessment of Civil Penalty is issued by the Department of Environmental Quality (Department or DEQ) pursuant to Oregon Revised Statutes (ORS) 466.190, 466.880, 468.130; and Oregon Administrative Rules (OAR) Chapter 340, Divisions 11 and 12.

I. FINDINGS

1. Respondent Safety-Kleen Corp., a Wisconsin corporation, owns and operates a hazardous waste management facility located in Clackamas, Oregon. Respondent has been assigned EPA Identification No. 092895481.

2. A representative from DEQ and the Environmental Protection Agency (EPA) conducted a compliance inspection at Respondent's facility on October 12, 1988.

II. VIOLATIONS

Based upon the above noted inspection, Respondent has violated provisions of Oregon's hazardous waste laws and regulations applicable to the facility as set forth and incorporated in OAR 340-100-002. Specific violations include the following:

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///

CLASS I VIOLATIONS:

1. Respondent violated general waste analysis requirements set forth in 40 CFR 265.13(a)(1), in that Respondent failed to obtain a detailed chemical and physical analysis of waste perchloroethylene prior to storing the waste at Respondent's facility.

2. Respondent violated security requirements set forth in 40 CFR 265.14(a), in that Respondent failed to minimize the possibility of unauthorized entry of persons into the active portion of Respondent's facility. Specifically, Respondent failed to lock the hazardous waste storage tank access pipe, or to otherwise secure that portion of Respondent's facility pursuant to the requirements set forth in 40 CFR 265.14(b).

3. Respondent violated requirements for assessing existing tank system integrity set forth in 40 CFR 265.191, in that Respondent failed to determine if Respondent's existing underground hazardous waste storage tank was leaking or was unfit for use.

CLASS II VIOLATIONS:

4. Respondent violated a General Facility Standard for managing ignitable, reactive, or incompatible waste set forth in 40 CFR 265.17(a), in that Respondent failed to conspicuously place a "No Smoking" sign in the drum storage area of Respondent's facility where ignitable and reactive hazardous waste is stored.

5. During the week of December 20, 1987, Respondent violated general facility inspection requirements set forth in 40 CFR 265.15(a) and (b), 40 CFR 265.174, and 40 CFR 265.195, in that Respondent failed to follow Respondent's written inspection schedule, and failed to conduct required

inspections.

6. Respondent violated OAR 340-108-020(1) and 40 CFR 265.51(b) in that Respondent failed to immediately clean up a spill that occurred at the "dump and fill" area of Respondent's facility, in accordance with the provisions of Respondent's facility contingency plan.

7. Respondent violated 40 CFR 265.53(b) in that Respondent failed to submit copies of Respondent's revised facility contingency plan to emergency response organizations.

III. COMPLIANCE ORDER

Based upon the foregoing FINDINGS AND VIOLATIONS, Respondent is hereby ORDERED TO:

1. Immediately initiate actions necessary to correct all of the above cited violations and come into full compliance with Oregon's hazardous waste laws.

2. Notify the Department in writing within 15 days of receipt of this Order how Respondent intends to correct each violation and comply with this Order.

3. Within 60 days of receipt of this Order, submit written documentation which demonstrates Respondent's full compliance with this Order.

IV. ASSESSMENT OF CIVIL PENALTIES

The Director imposes civil penalties for the following violations cited in Section II:

Violation	Penalty Amount
1	$1,600
2	1,600
3	4,000

Respondent's total civil penalty is $7,200.

The findings and determination of Respondent's civil penalty pursuant to OAR 340-12-045 are attached and incorporated as Exhibits Nos. 1 through 3.

V. PAYMENT OF CIVIL PENALTY

The total penalty is now due and payable. Respondent's check or money order in the amount of $7,200 should be made payable to "State Treasurer, State of Oregon" and sent to the Business Office, Department of Environmental Quality, 811 S.W. Sixth Avenue, Portland, Oregon 97204.

VI. OPPORTUNITY FOR CONTESTED CASE HEARING

This Notice of Violation, Compliance Order and Assessment of Civil Penalty shall become final unless, within 20 days of issuance Respondent requests a hearing before the Environmental Quality Commission pursuant to ORS 466.190, ORS 468.135(2) and (3), and OAR Chapter 340, Division 11. The request must be made in writing and must be received by the Commission's hearings officer within twenty (20) days from the date of mailing of this notice (or if not mailed, the date of personal service), and must be accompanied by a written "Answer" to the allegations contained in this notice. In the written "Answer", Respondent shall admit or deny each allegation of fact contained in this notice and Respondent shall affirmatively allege any and all affirmative claims or defenses to violations and assessment of any civil penalty that Respondent may have and the reasoning in support thereof. Except for good cause shown:

1. Factual matters not controverted shall be presumed admitted;

2. Failure to raise a claim or defense shall be presumed to be a waiver of such claim or defense;

///

3. New matters alleged in the "Answer" shall be presumed to be denied unless admitted in subsequent pleading or stipulation by the Department or Commission.

Send the request for hearing and "Answer" to the: Hearings Officer, Environmental Quality Commission, 811 S.W. Sixth Avenue, Portland, Oregon 97204. Following receipt of a request for hearing and an "Answer", Respondent will be notified of the date, time and place of the hearing.

If Respondent fails to file a timely request for hearing or "Answer", the Director on behalf of the Commission may issue a default order and judgment based upon a prima facie case made on the record, for the relief sought in this notice.

Failure to appear at a scheduled hearing or meet a required deadline, may result in dismissal of the contested case.

VII. OPPORTUNITY FOR INFORMAL DISCUSSION

In addition to filing a request for a contested case hearing, Respondent may also request an informal discussion with the Department by attaching a written request to the hearing request and "Answer".

VIII. CONSEQUENCES OF ADDITIONAL VIOLATIONS

If any violation cited in Section II continues, or if any similar violation occurs, or if Respondent fails to comply with the Compliance Order in Section III, the Director may impose additional civil penalties upon the Respondent.

JUN 13 1989
Date

Fred Hansen, Director

EXHIBIT 1

FINDINGS AND DETERMINATION OF RESPONDENT'S CIVIL PENALTY
PURSUANT TO OREGON ADMINISTRATIVE RULE (OAR) 340-12-045

VIOLATION NO: 1 (failure to obtain a detailed chemical and physical waste analysis)

CLASSIFICATION: The violation is a Class I violation pursuant to OAR 340-12-068(1)(a).

MAGNITUDE: The magnitude of the violation is minor. Violation involved storing waste perchloroethylene temporarily, pending transfer to Respondent's California facility where the waste analysis is presumably made in accordance with a waste analysis plan.

CIVIL PENALTY FORMULA: The formula for determining the amount of penalty of each violation is: BP+[(.1xBP)(P+H+E+O+R+C)].

"BP" is the base penalty which is $1,000 for a Class I minor magnitude violation in the matrix listed in OAR 340-12-042(1)(e).

"P" is Respondent's prior violation(s) and receives a value of 0, as there were no prior violations as defined in OAR 340-12-030(13).

"H" is the past history of Respondent in taking all feasible steps or procedures necessary to correct any prior violation and receives a value of 0, as there were no prior violations as defined in OAR 340-12-030(13).

"E" is the economic condition of Respondent and receives a value of +2 in that Respondent gained a minor to moderate economic benefit by not performing the waste analysis before storing the waste at the facility.

"O" is whether or not the violation was a single occurrence or was repeated or continuous during the period of the violation and receives a value of +2 in that Respondent regularly fails to perform the waste analysis prior to storing waste perchloroethylene at Respondent's facility.

"R" is the cause of the violation and receives a value of +2 in that the violation resulted from Respondent's negligent failure to perform the waste analysis.

"C" is Respondent's cooperativeness in correcting the violation and receives a value of 0 in that Respondent was neither cooperative nor uncooperative, and insufficient information exists on which to base a finding.

PENALTY CALCULATION:

Penalty = BP+[(.1xBP) (P+H+E+O+R+C)]
= $1,000 + [(.1x1,000) (0+0+2+2+2+0)]
= $1,000 + [(100)(6)]
= $1,000 + 600
= $1,600

EXHIBIT 2

FINDINGS AND DETERMINATION OF RESPONDENT'S CIVIL PENALTY
PURSUANT TO OREGON ADMINISTRATIVE RULE (OAR) 340-12-045

VIOLATION NO: 2 (security requirements)

CLASSIFICATION: The violation is a Class I violation pursuant to OAR 340-12-068(1)(g).

MAGNITUDE: The magnitude of the violation is minor - Respondent did not lock the waste storage tank access pipe, or otherwise secure that portion of Respondent's facility as required by 40 CFR 265.14. However, access into the industrial park area is limited by a security guard that is not Respondent's employee.

CIVIL PENALTY FORMULA: The formula for determining the amount of penalty of each violation is: BP+[(.1xBP)(P+H+E+O+R+C)].

"BP" is the base penalty which is $1,000 for a Class I minor magnitude violation in the matrix listed in OAR 340-12-042(1)(e).

"P" is Respondent's prior violation(s) and receives a value of 0, as there were no prior violations as defined in OAR 340-12-030(13).

"H" is the past history of Respondent in taking all feasible steps or procedures necessary to correct any prior violation and receives a value of 0, as there were no prior violations as defined in OAR 340-12-030(13).

"E" is the economic condition of Respondent and receives a value of +2, in that Respondent gained a minor to moderate economic benefit by failing to secure the site at all times.

"O" is whether or not the violation was a single occurrence or was repeated or continuous during the period of the violation and receives a value of +2 in that Respondent repeatedly failed to lock the waste storage tank access pipe, or otherwise secure that portion of the facility as required by 40 CFR 265.14.

"R" is the cause of the violation and receives a value of +2 in that Respondent was negligent in failing to adequately secure a portion of the facility.

"C" is Respondent's cooperativeness in correcting the violation and receives a value of 0 in that Respondent was neither cooperative nor uncooperative, and there is insufficient information on which to base a finding.

PENALTY CALCULATION:

Penalty = BP+[(.1xBP) (P+H+E+O+R+C)]
= $1,000 + [(.1x1,000) (0+0+2+2+2+0)]
= $1,000 + [(100)(6)]
= $1,000 + 600
= $1,600

EXHIBIT 3

FINDINGS AND DETERMINATION OF RESPONDENT'S CIVIL PENALTY
PURSUANT TO OREGON ADMINISTRATIVE RULE (OAR) 340-12-045

VIOLATION NO: 3 (failure to determine if an underground storage tank was leaking or unfit for use)

CLASSIFICATION: The violation is a Class I violation pursuant to OAR 340-12-068(1)(n).

MAGNITUDE: The magnitude of the violation is moderate. The violation involved one 12,000 gallon capacity tank.

CIVIL PENALTY FORMULA: The formula for determining the amount of penalty of each violation is: BP+[(.1xBP)(P+H+E+O+R+C)].

"BP" is the base penalty which is $2,500 for a Class I moderate magnitude violation in the matrix listed in OAR 340-12-042(1)(e).

"P" is Respondent's prior violation(s) and receives a value of 0, as there were no prior violations as defined in OAR 340-12-030(13).

"H" is the past history of Respondent in taking all feasible steps or procedures necessary to correct any prior violation and receives a value of 0, as there were no prior violations as defined in OAR 340-12-030(13).

"E" is the economic condition of Respondent and receives a value of +2 in that Respondent gained a minor to moderate economic benefit by delaying the required tank assessment.

"O" is whether or not the violation was a single occurrence or was repeated or continuous during the period of the violation and receives a value of +2 in that Respondent has been in continuous violation since the effective date of the rule.

"R" is the cause of the violation and receives a value of +2 in that Respondent negligently failed to have the required tank assessment done.

"C" is Respondent's cooperativeness in correcting the violation and receives a value of 0, in that Respondent was neither cooperative nor uncooperative, and as there is insufficient information exists on which to base a finding.

PENALTY CALCULATION:

Penalty = BP+[(.1xBP) (P+H+E+O+R+C)]
= $2,500 + [(.1x2,500) (0+0+2+2+2+0)]
= $2,500 + [(250)(6)]
= $2,500 + 1,500
= $4,000

NEIL GOLDSCHMIDT
GOVERNOR

Environmental Quality Commission

811 SW SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

TO: Environmental Quality Commission **DATE:** January 19, 1990

FROM: Director

SUBJECT: Request for Approval of Settlement Agreement of Case No HW-WVR-89-86, Technical Images, Inc.

Respondent owns and operates a facility in Newberg, Oregon which manufacturers custom printed circuit boards. On June 7, 1989, DEQ assessed a $16,000 civil penalty against Respondent for violations of the Departments hazardous waste management rules. Specifically, Respondent was assessed a penalty for the following: 1) Failure to mark accumulation dates on each container of hazardous waste; 2) Storage of hazardous waste for more than 90 days without a permit; and 3) Systematic failure to mark containers with the words "hazardous waste". On June 19, 1989, Respondent filed for a contested case hearing with the Commission's Hearing Officer and a request for an informal meeting with the Department.

On July 21, 1989, the Department met with Respondent at Respondent's facility. A site inspection was conducted and all of the violations had been corrected. To date, virtually all hazardous waste has been shipped off-site. Respondent currently presents no threat of harm to the environment or the public. During the informal meeting, Respondent claimed that the company was financially incapable of paying the penalty. On August 14, 1989, Respondent submitted financial information which was reviewed by Judith Hatton, of the Department's Business Office. On October 11, 1989, Ms. Hatton submitted a report which concluded that a civil penalty would cause serious financial hardship.

After further consideration of this case, the Department recommends changing the civil penalty determination factors as follows:

A. Change the "E" factor (economic condition), for Violations 1-3 (Exhibits 1-3), from 0 for insufficient information on which to base a finding to a -4 for poor economic condition. Financial information submitted by Respondent indicates that Respondent's economic condition is poor.

B. Change the "R" factor (cause of the violation) for Violations 1-3 (Exhibits 1-3), from +6 for intentional to +2 for negligence, as the violations can be better attributed to negligence by Respondent rather than an intentional/willful action on Respodent's part.

C. Change the magnitude of Violation no. 2 (Exhibit 2 - failure to ship hazardous waste off site within the 90 day accumulation period), from a Class I major to a Class I minor. Respondent was cited for accumulating the following containers of hazardous waste for more than 90 days: 1) Twenty (20) wooden bins; 2) Twenty-five (25) fiberglass totes of sludge; and 3) Nine (9) drums. After the civil penalty was issued to Respondent, the 20

wooden bins, which were labelled hazardous waste, were subsequently tested and were characterzied as a non-hazardous solid waste. Furthermore, Respondent claimed there was a misunderstanding regarding the 25 fiberglass totes of sludge. Respondent made a good faith effort to properly characterize the waste. Respondent identified the waste as a copper bearing material. The waste comes from the etch line and not the plating line. Since the waste did not have any of the normal plating wastes in it, Respondent concluded it was not a (F006) electroplating hazardous waste. The waste was intended to be shipped to a copper mining operation for reclaiming of the copper.

On the face of the definition of electroplating found in the regulations, one would not know that the etching process encompasses the electroplating process. The Department's inspector suspected the waste was hazardous and referred to the background documents to confirm that the broader definition of electroplating includes etching. On April 27, 1989 the Department held a technical assistance meeting with Respondent. At that meeting, Respondent was informed that the copper etchant waste was included in the definition of electroplating operations and as such, was an (F006) electroplating hazardous waste. Also, the Department's inspector directed Respondent to label and mark the fiberglass totes with an accumulation date of 4/27/89. Respondent agreed to have the hazardous waste shipped off-site within 90 days of that date and Respondent complied with this requirement. While this does not excuse the violation, the Department believes Respondent acted in good faith and that Respondent thought the Department did not intend to assess a civil penalty if immediate steps were taken to correct the violation.

The result of this recalculation reduces the civil penalty from $16,000 to $4,800. The Department further recommends suspending $2,800 of the $4,800 remaining civil penalty provided there are no Class I hazardous waste management violations for a period of one year from the date of the Order, and allowing Respondent to pay the remaining balance of $2,000 in monthly payments of $100 until paid in full. On November 14, 1989, Respondent agreed to accept settlement of this contested case as specified above.

I believe that Respondent's apparent financial condition justifies a suspension of $2,800 of the civil penalty and that such a suspension is protective of public health and the environment. Should Respondent have any further Class I violations in the next year, the suspended portion of the penalty will be automatically reinstated.

The civil penalty assessment action, settlement correspondence, and the proposed Stipulation and Final Order are attached for your review and consideration.

I recommend Commission approval of this settlement proposal which requires Respondent to pay $2,000 of the $4,800 civil penalty and suspends $2,800 of the civil penalty. If you agree, please sign and date Stipulation and Final Order No. HW-WVR-89-86.

Fred Hansen

Attachments
Nancy L. Hogan
229-6610
December 15, 1989

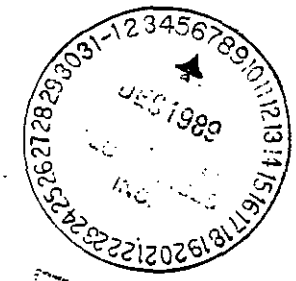
DAVE FROHNMAYER
ATTORNEY GENERAL

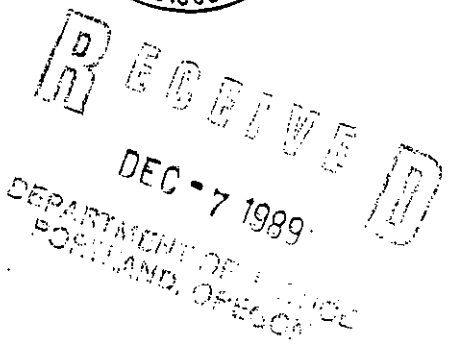
JAMES E. MOUNTAIN, JR.
DEPUTY ATTORNEY GENERAL

DEPARTMENT OF JUSTICE

PORTLAND OFFICE
1515 SW 5th Avenue
Suite 410
Portland, OR 97201
Telephone: (503) 229-5725
FAX: (503) 229-5120

December 5, 1989





Mr. Herbert D. Rustrum
President
Technical Images, Inc.
2206 Mountain View Drive
Newberg, OR 97132

Re: Case No. HW-WVR-89-86

Dear Mr. Rustrum:

Please find enclosed a proposed Stipulation and Final Order to resolve the above-referenced matter on the terms we discussed on November 14, 1989.

Please sign the document on behalf of the company and return it to me. As you know, before the proposed settlement can become final, it must be presented to the Environmental Quality Commission (EQC) for approval.

We will try to get it on EQC's next meeting agenda. Therefore, please return the signed document as quickly as possible.

Thank you for you cooperation.

Sincerely,

Larry Edelman
Assistant Attorney General

12-6-89

LE:aa
Enclosure

Dear Larry,
signed stipulation is enclosed.
Thank you for your cooperation.
Sincerely,
Herb Rustrum

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY, OF THE STATE OF OREGON,	)	
Department,	)	STIPULATION AND FINAL ORDER No. HW-WVR-89-86
v.	)	
TECHNICAL IMAGES, INC.,	)	
Respondent.	)	

1. On June 7, 1989, the DEQ issued a Notice of Assessment of Civil Penalty and a Department Order, Case No. HW-WVR-89-86, requiring Respondent to inter alia: pay a $16,000 civil penalty, and take steps to bring its facility into compliance with hazardous waste management regulations by specified dates.

2. Respondent filed a timely Answer and requested a contested case hearing.

3. DEQ and Respondent met several times to discuss settlement of the contested case hearing and respondent's presentation of mitigating factors.

4. Respondent has now complied with all directives in the Compliance Order.

5. Respondent and DEQ now wish to settle the contested case.

6. Respondent stipulates that DEQ and the Commission have jurisdiction over the subject matter and the parties in

this action, and Respondent waives any right to contest this Stipulation and Final Order.

7. Respondent hereby waives a contested case hearing on Case No. HW-WVR-89-86.

8. Respondent neither admits nor denies the violations alleged in DEQ's Notice of Violation, Compliance Order and Assessment of Civil Penalty No. HW-WVR-89-86.

NOW, THEREFORE, the parties agree to entry of the following Final Order:

A. The Environmental Quality Commission shall mitigate the assessed civil penalty to $4,800 and shall suspend and waive $2,800 of the assessed civil penalty, provided that Respondent have no stipulated or adjudicated Class I violations of Oregon hazardous waste law, for one year from the date of entry of this Order. Respondent shall pay the remaining $2,000 of the assessed penalty in monthly installments of $100.00 per month beginning upon signing of this Stipulation and Final Order.

B. Should Respondent have any Class I violations of Oregon's hazardous waste laws during the one (1) year period beginning upon the date of entry of this Order, Respondent shall pay the $2,800 suspended portion of the civil penalty within 10 days of receipt of a Notice of Violation from the Department of Environmental Quality.

/ / /

C. DEQ reserves the right to enter future orders requiring additional action, or additional assessments of civil penalties against Respondent for any future violations, as necessary to assure compliance with all applicable hazardous waste laws and regulations. Such remedies might include, but are not limited to, injunctive relief. This Stipulation and Final Order shall, however, relieve Respondent from all civil liability for all violations specifically referenced herein.

D. Respondent acknowledges that it has actual notice of the contents and requirements of the Stipulation and Final Order and that failure to fulfill any of the requirements hereof would constitute a violation of this Stipulation and Final Order.

RESPONDENT

12-6-'89
Date

Robert D. Rustrum, President
Technical Images, Inc.

DEPARTMENT OF ENVIRONMENTAL QUALITY

12/28/89
Date

FRED HANSEN, DIRECTOR

FINAL ORDER

IT IS SO ORDERED:

ENVIRONMENTAL QUALITY COMMISSION

Date

William P. Hutchison, Jr.
Chairman

Date

Henry C. Lorenzen, Member

/ / /

C. DEQ reserves the right to enter future orders requiring additional action, or additional assessments of civil penalties against Respondent for any future violations, as necessary to assure compliance with all applicable hazardous waste laws and regulations. Such remedies might include, but are not limited to, injunctive relief. This Stipulation and Final Order shall, however, relieve Respondent from all civil liability for all violations specifically referenced herein.

D. Respondent acknowledges that it has actual notice of the contents and requirements of the Stipulation and Final Order and that failure to fulfill any of the requirements hereof would constitute a violation of this Stipulation and Final Order.

RESPONDENT

12-6-'89
Date

Hubert D. Kuetzen, President
Technical Images, Inc.

DEPARTMENT OF ENVIRONMENTAL QUALITY

12/28/89
Date

FRED HANSEN, DIRECTOR

FINAL ORDER

IT IS SO ORDERED:

ENVIRONMENTAL QUALITY COMMISSION

1-19-90
Date

William P. Hutchison, Jr.
Chairman

Date

Henry C. Lorenzen, Member

/ / /

1/19/90
Date

Emery N. Castle, Member

1/19/90
Date

Genevieve Pisarski Sage, Member

Date

William Wessinger, Member

Date	Emery N. Castle, Member
Date	Genevieve Pisarski Sage, Member
Date	William Wessinger, Member

Environmental Quality Commission
811 SW SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

October 23, 1989

CERTIFIED MAIL - P 882 467 668

Herbert D. Rustrum, President
Technical Images, Inc.
2206 Mountain View Drive
Newberg, OR 97132

Re: DEQ v Technical Images, Inc.
Case No. HW-WVR-89-86

On September 5, 1989, I agreed to postpone the scheduled September 14, 1989 hearing for 30 days to permit development of a settlement, and to reschedule approximately two weeks later if necessary. I have not been told of a settlement.

Hearing is **RESCHEDULED** to:

Date: November 9, 1989
Time: 9:00 AM
Place: Room 9A
DEQ Offices
811 SW Sixth Avenue
Portland, OR 97204

Sincerely,

Linda K. Zucker
Hearings Officer

LKZ:Y
HY9015
cc: Enforcement Section, DEQ
Hazardous Waste Section, DEQ
Willamette Valley Region, DEQ

NEIL GOLDSCHMIDT
GOVERNOR

Environmental Quality Commission

811 SW SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

July 17, 1989

CERTIFIED MAIL P 882 474 936

Herbert D. Rustrum, President
Technical Images, Inc.
2206 Mountain View Drive
Newberg, OR 97132

Re: DEQ v Technical Images, Inc.
Case No. HW-WVR-89-86

Formal hearing in this case is scheduled as follows:

Date: September 14, 1989
Time: 9:00 A.M.
Place: Room 9 A
DEQ Offices
811 SW Sixth Avenue
Portland, OR 97204-1390

In the meantime, you can pursue informal discussions.

To assist you to prepare for hearing, I have enclosed an information sheet and a copy of agency rules of practice and procedure.

If Technical Images does not choose to be represented by an attorney, it should read and consider ORS 183.455, also enclosed.

Sincerely,

Linda K. Zucker
Hearings Officer

LKZ:y
HY8698
Enclosure
cc: Enforcement Section, DEQ
Hazardous & Solid Waste Division, DEQ
Willamette Valley Region, DEQ

HHE → NLC

TECHNICAL IMAGES, INC. 2206 MOUNTAIN VIEW DRIVE • NEWBERG, OREGON 97132
"PRIDE IN PERFORMANCE" TELEPHONE 503—538-3175
FAX 503—537-0404

June 19, 1989

Environmental Quality Commission
ATTN: Hearing Officer
811 S.W. Sixth Avenue
Portland, Oregon 97204

Dear Sir,

Technical Images, Inc. requests a hearing before the Environmental Quality Commision pursuant to ORS 466.190, reference "Notice of Violation and Compliance Order", and "Assessment of Civil Penalty No. HW-WVR-89-86".

Technical Images, Inc. (T.I.) denies each and every finding of fact and denies each and every violation as charged, except as follows:

REF: I. **Findings**
1. Accepted
2. As listed, these are inaccurate and misleading and consequently T.I. denies each and every finding, except that it acknowledges that it is a fully regulated generator and does generate hazardous wastes, although not as listed.
3. T.I. accepts the fact that DEQ conducted an inspection at their facility.

II. **Violations**
Class I Violations are denied as alleged.
Class II Violations are denied as alleged.

III. **Compliance Order**
T.I. requests that the Compliance Order be withdrawn.

IV. **Assessment of Civil Penalties**
T.I. requests that any and all Civil Penalties be withdrawn.

V. **Payment of Civil Penalty**
T.I. requests that if any penalty must be assessed, that a prolonged period be granted for payment of any penalties.

VI. **Opportunity for Contested Case Hearing**
T.I. requests this opportunity to contest each and every charge.

Reasonings to answers are listed below:

Technical Images had been in full compliance of each and every regulation to the best of it's knowledge and had been working in close cooperation with regular contacts through DEQ's representative, Cynthia Parker, until she left her position with DEQ. During this time, T.I. had set up and executed very detailed procedures for handling waste, proper documentation and proper timing for shipment of any waste off site. In addition, T.I. had worked with Cynthia for proper arrangements with a "closure program" for testing and removal of any possible contaminated soil. This finalization of the closure program had been handled by Russ Fetrow Engineering. It is T.I.'s understanding that Cynthia had verbally accepted everything as done or submitted in this closure plan. This included a properly accepted "Emergency Contingency Plan" and "Employee Training Program" as well as other necessary elements of a good program. There were a few issues that we had asked Cynthia for clarification on or assistance with, such as the remaining dirt on hand. We had retained another consultant (Pegasus Waste Management) who was reviewing all of our wastes. Upon their review, we still had 20 boxes of dirt awaiting disposition. It was their opinion that this dirt was not hazardous waste and should be put in the land fill. The proper documentation and dialogue had been handled by them with Cynthia. It is T.I.'s understanding that Cynthia had given tentative concurrance with this viewpoint, but had not actually given a written approval. There was another area that I had asked for assistance with - this was waste fuse oil (which is basically just peanut oil). It is one of those gray areas. Is it a hazardous waste or just a waste? If just a waste, how is it best handled? We were reluctant to put it in waste stream discharge and had contacted McClary Columbia. They had determined it was not a hazardous waste, but had approved a profile for us to ship to them as non-regulated waste. Since non-regulated waste is not to go to a treatment area, we are in a "catch 22" situation. I had so advised Cynthia and asked for her assistance, prior to her leaving DEQ. At any point it is crucial to understand that these issues existed when Cynthia left.

1. All procedures, plans, etc. had been verbally OK'd by Cynthia for the "closure program" and we did not realize that the closure plan was not finally approved unless in writing. She had not given written approval when she left DEQ's employment.

2. 20 boxes of dirt were on site awaiting her final written approval for landfill. The fuse oil was on site waiting her advise on proper procedure.

3. T.I. was advised by Cynthia that she was too busy with other projects of environmental concern. T.I.'s problem was not immediate and she would get back to us when she had more time. T.I. would just have to wait.

4. In fact, we did not know that Cynthia had even left DEQ until later when we were pressing for decisions.

At a later time, I contacted Dave St. Louis (head of Willamette Area DEQ at Salem and Cynthia's supervisor) and asked what was going on and what should I do? He advised me that DEQ was going to put someone else on as our representative and that in the meantime we were just to sit tight and do nothing until someone from DEQ contacted us. I repeated "You mean we are to do nothing until someone from DEQ contacts us?" His answer was yes, even though he knew at the time that we had those open issues that needed decisions.

As time went on, T.I. continued having serious financial problems and did the best that it could under some very trying situations. We had three different changes in our internal environmental control person, many changes in how each of these people operated, much cutback in employment and periods of layoffs. In effect, the circuit board department was barely able to exist. I, as president, had always tried to oversee the environmental part, making sure that proper procedures had been followed, etc. Unfortunately, I had been partially disabled as a result of a heart attack and it does appear that I may have been misled into thinking that everything was better in this respect than was actually the case. It was just not humanly possible for me to properly keep tabs on everything, struggle as we did, we still tried our very best to do the best job possible.

There may be some problems, but mostly these problems remaining are due to just misunderstanding, for example:

1. There was a drum of MEK that had an older date on it. When we checked into this situation, it was found out that this was the date we started to fill the drum and it was not full yet. Apparently we now know that the drum should have been kept at the area of accumulation.
2. There were several drums of ferric chloride that were being accumulated for return to the supplier for recycling as previously arranged for.
3. There was a serious misunderstanding on the 24 tote bags of non-electroplated waste that had been treated and the related drums waiting to be treated. It was everyone's understanding that this was not classified as an electroplated waste until a technical session was held at Salem on April 27, 1989. At that time it was then ruled that this was an F006 waste and that the correct date of accumulation should be set at April 27th. This was done the next working day. Obviously, if they had not been classified as a waste until April 27th, then certainly T.I. should not be in violation for this issue.

When you consider that at the time of the inspection, T.I. had recently hired a new person to be in charge of environmental issues and had just

recently been clearing up a lot of problems from former employees due to what the company had felt was a serious drug problem, creating all new people in the plating area (there are only 4 altogether). In addition, T.I. was trying to revamp the plating department and was quite torn up as a result.

At any rate, it is our strong feeling that most, if not all, of the issues are just errors in how DEQ originally interpreted the situation and once properly reviewed, are really not violations at all. The citation should be withdrawn. In addition T.I. has worked closely with the inspector, gotten better clarification on some issues and responded accordingly. It is our understanding that all issues have been taken care of properly and the only open issues are actually disposal of the dirt (which has now been classified as just that - dirt - not a waste) and the tote bags of F006 waste. Both of these are in final stages of removal.

It is our intention to provide a lot of additional information at the time of the hearing and to present this information which we have available regarding this whole case.

In addition to the above request for a Contested Case Hearing, T.I. requests an informal discussion to cover this citation and issues pertaining to it.

Sincerely,

Herbert D. Rustrum
President

Department of Environmental Quality

811 SW SIXTH AVENUE, PORTLAND, OREGON 97204-1390 PHONE (503) 229-5696

JUN 7 1989

CERTIFIED MAIL NO. P 194 974 185

Technical Images, Inc.
c/o Herbert D. Rustrum,
Registered Agent
2206 Mountain View Drive
Newberg, OR 97132

Re: Notice of Violation, Compliance Order, and Assessment of Civil Penalty No. HW-WVR-89-86

Enclosed is a Notice of Violation, Compliance Order, and Assessment of Civil Penalty relating to the March 7, 8, and 13, 1989, inspection by the Department of Environmental Quality at the Technical Images, Inc. facility in Newberg, Oregon. The Compliance Order and Civil Penalty Assessment are a result of hazardous waste management violations identified during the inspection. Those violations included the following:

- Failure to comply with general inspection requirements;
- Storage of hazardous waste for more than 90 days;
- Failure to comply with container management requirements;
- Failure to comply with personnel training requirements; and
- Failure to comply with contingency plan and emergency procedures requirements.

The Department has issued Technical Images four Notices of Violation and Intent to Assess Civil Penalty since 1984. You have a history of repeated violations despite the Department's efforts to encourage your compliance with the Department's rules and regulations.

A civil penalty of up to $10,000 may be assessed for each day of each violation. I have set your penalty at a total of $16,000 for the violations cited in the enclosed notice.

The penalty is due and payable to the Department. Appeal procedures are outlined within Section VI of the enclosed notice. If you fail to either pay or appeal the penalty within 20 days, a Default Order and Judgment will be entered against you.

The Department expects your cooperation and full compliance with Oregon's environmental regulations. We are prepared to assist you with questions regarding rule interpretation or the applicability of specific regulations to your facility. We expect you to comply with the hazardous waste regulations at all times.

Please be informed that you are liable for additional civil penalties if you violate the Compliance Order or if you have additional violations of the hazardous waste regulations.

If you wish to discuss this matter, or if you believe there are mitigating factors which the Department might not have considered in assessing the civil penalty, you may request an informal discussion by attaching your request to your appeal. Your request to discuss the matter with the Department will not waive your right to a contested case hearing.

If you have any questions about this action, please contact Nancy Couch of the Department's Enforcement Section at our toll-free call-back number at 1-800-452-4011.

Sincerely,

Fred Hansen
Director

FH:nc:b
GB8536L
Enclosure(s)
cc: U.S. Environmental Protection Agency
Oregon Department of Justice
Hazardous Waste Section, DEQ
Western States Hazardous Waste Project
Willamette Valley Region, DEQ

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY OF THE STATE OF OREGON, Department, v. TECHNICAL IMAGES, INC., an Oregon corporation, Respondent.	)	NOTICE OF VIOLATION AND COMPLIANCE ORDER, AND ASSESSMENT OF CIVIL PENALTY NO. HW-WVR-89-86 YAMHILL COUNTY

This Notice of Violation and Compliance Order is issued by the Department of Environmental Quality (Department or DEQ) pursuant to Oregon Revised Statutes (ORS) 466.190.

I. FINDINGS

1. Respondent Technical Images, Inc., an Oregon corporation, owns and operates a facility located in Newberg, Oregon.

2. Respondent is a fully regulated generator and generates the following hazardous wastes:

Methyl ethyl ketone from cleaning circuit boards, a "F005" hazardous waste;

Metals precipitation sludges from electroplating operations, a "F006" hazardous waste;

Etchants and plating baths from the electroplating operations, a "D002" hazardous waste;

Tin lead baths from the electroplating operations, a "D008" hazardous waste; and

Contaminated soil from cleanup of past practices of outside storage, a "D008" hazardous waste.

3. Representatives of DEQ conducted a compliance inspection at Respondent's facility on March 7, 8, and 13, 1989.

II. VIOLATIONS

Based upon the above noted inspection, Respondent has violated provisions of Oregon's hazardous waste laws and regulations applicable to the facility as set forth and incorporated in OAR 340-100-002. Respondent has accumulated hazardous waste on-site without fully complying with these regulations and has committed the following violations:

CLASS I VIOLATIONS:

1. Respondent violated 40 CFR 262.34(a)(2) by failing to clearly mark containers of hazardous waste accumulated on-site, with the date on which accumulation into those containers began. The following containers had no accumulation date: 1, 3, 7B, C1, C2, 9A, 10A, twenty-five (25) fiberglass totes of F006 sludge and twelve (12) drums of F006 sludge in the metal precipitation area. The following containers had an accumulation date of January 1989, but the date was not complete as to the day/month/year and the date was placed on the drums by Respondent on March 8, 1989: drums 1B, 2B, 4B, 5B, 8B, 9B, 11B through 20B, 22B, 23B, 25B through 33B, 3A through 7A, three (3) unnumbered drums in the etch room.

2. Respondent violated 40 CFR 262.34(a) and (b) in that Respondent accumulated hazardous waste on-site for more than 90 days immediately preceding March 7, 8, and 13, 1989, without either first obtaining a hazardous waste storage facility permit, or having interim status as a hazardous waste storage facility. Twenty (20) wooden bins of D008 hazardous waste had accumulation dates of 4/28/86 and 4/24/86; twenty-five (25) fiberglass totes of F006 hazardous waste had no accumulation date marked on

them; drums C3 and C4 were dated 8/5/88; an unnumbered drum in the hazardous waste storage area was dated 8/8/88; drum 2 was dated 6/3/87; drum 6 was dated 8/8/88; an unnumbered drum in the metal precipitation area was dated 8/9/88; drum 60 was dated 8/9/88 and drums 10B and 21B were dated 11/14/88.

3. Respondent violated 40 CFR 262.34(a)(3) by systematically failing to clearly mark containers of hazardous waste being accumulated on-site with the words "Hazardous Waste". Respondent failed to mark the following containers with the words "Hazardous Waste": twenty-five (25) fiberglass totes of F006 sludge on-site, drums 9A, 10A, C1, C2, and twelve (12) drums in the metal precipitation area.

CLASS II VIOLATIONS:

4. Respondent violated 40 CFR 262.34(a)(4) by failing to have an adequate contingency plan for Respondent's Facility as required by 40 CFR 265.52, 265.53, and 265.54, and failed to comply with emergency coordinator and emergency procedures as required by 40 CFR 265.55 and 265.56.

5. Respondent violated 40 CFR 262.34(a)(4) by accumulating hazardous waste on-site, without writing and implementing a personnel training program for hazardous waste as required by 40 CFR 265.16.

III. COMPLIANCE ORDER

Based upon the foregoing FINDINGS AND VIOLATIONS, Respondent is hereby ORDERED TO:

1. Immediately initiate actions necessary to correct all of the above cited violations and come into full compliance with Oregon's hazardous waste laws.

2. Within 30 days of receipt of this Order, correct violations 1 and 3.

3. Within 60 days of receipt of this Order, correction violations 2, 4 and 5.

4. Within 60 days of receipt of this Order, submit written documentation which demonstrates Respondent's full compliance with this Order.

IV. ASSESSMENT OF CIVIL PENALTIES

The Director imposes civil penalties for the following violations cited in Section II:

Violation	Penalty Amount
1	4,000
2	8,000
3	4,000

Respondent's total civil penalty is $16,000.

The findings and determination of Respondent's civil penalty pursuant to OAR 340-12-045 are attached and incorporated as Exhibit(s) No. 1 through 3.

V. PAYMENT OF CIVIL PENALTY

The total penalty is now due and payable. Respondent's check or money order in the amount of $16,000 should be made payable to "State Treasurer, State of Oregon" and sent to the Business Office, Department of Environmental Quality, 811 S.W. Sixth Avenue, Portland, Oregon 97204.

VI. OPPORTUNITY FOR CONTESTED CASE HEARING

This Notice of Violation and Compliance Order shall become final unless, within 20 days of issuance of this Notice and Order, Respondent requests a hearing before the Environmental Quality Commission (Commission) pursuant to ORS 466.190. The request must be made in writing and must be received by the Commission's hearings officer within twenty (20) days from the date of mailing of this Notice (or if not mailed, the date of personal service), and must be accompanied by a written "Answer" to the allegations contained in this Notice. In the written "Answer", Respondent shall admit or deny each allegation of fact contained in this Notice and Respondent shall affirmatively allege any and all

affirmative claims or defenses that Respondent may have and the reasoning in support thereof. Except for good cause shown:

1. Factual matters not controverted shall be presumed admitted;

2. Failure to raise a claim or defense shall be presumed to be a waiver of such claim or defense;

3. New matters alleged in the "Answer" shall be presumed to be denied unless admitted in subsequent pleading or stipulation by the Department or Commission.

Send the request for hearing and "Answer" to the: Hearings Officer, Environmental Quality Commission, 811 S.W. Sixth Avenue, Portland, Oregon 97204. Following receipt of a request for hearing and an "Answer", Respondent will be notified of the date, time and place of the hearing. If Respondent fails to file a timely request for hearing or "Answer", the Order shall become a final and enforceable order of the Environmental Quality Commission by operation of law without any further action or proceeding. If the Order becomes final by operation of law, the right to judicial review, if any, is outlined within ORS 466.190(5).

Failure to appear at a scheduled hearing or meet a required deadline, may result in a dismissal of the contested case.

VII. CONSEQUENCES OF ADDITIONAL VIOLATIONS

If violations continue or recur, or if Respondent fails to comply with the Compliance Order, the Department may impose additional civil penalties.

JUN 7 1989
Date

Fred Hansen, Director

EXHIBIT 1

FINDINGS AND DETERMINATION OF RESPONDENT'S CIVIL PENALTY
PURSUANT TO OREGON ADMINISTRATIVE RULE (OAR) 340-12-045

VIOLATION NO: 1 (failure to clearly mark the date upon which each period of accumulation began on each container)

CLASSIFICATION: The violation is a Class I violation pursuant to OAR 340-12-068(1)(w).

MAGNITUDE: The magnitude of the violation is moderate. Approximately 19, 55-gallon drums, and 25 fiberglass totes had no accumulation date. In addition, approximately 35, 55-gallon drums were marked with an incomplete accumulation date.

CIVIL PENALTY FORMULA: The formula for determining the amount of penalty of each violation is: BP+[(.1xBP)(P+H+E+O+R+C)].

"BP" is the base penalty which is $2,500 for a Class I, moderate magnitude violation in the matrix listed in OAR 340-12-042(1).

"P" is Respondent's prior violation(s) and receives a value of 0, as the Respondent has no prior violations as defined in OAR 340-12-030(13).

"H" is the past history of Respondent in taking all feasible steps or procedures necessary to correct any prior violation and receives a value of 0, as the Respondent has no prior violations as defined in OAR 340-12-030(13).

"E" is the economic condition of Respondent and receives a value of 0, as there is insufficient information.

"O" is whether or not the violation was a single occurrence or was repeated or continuous during the period of the violation and receives a value of 2, as this was repeated.

"R" is the cause of the violation and receives a value of 6, as Respondent knew or should have known to clearly mark the accumulation date on each container. On January 8, 1986 and June 23, 1986, Respondent was issued a Notice of Intent to Assess Civil Penalty for failing to mark the accumulation date on containers of hazardous waste.

"C" is Respondent's cooperativeness in correcting the violation and receives a value of -2 in that Respondent was cooperative.

PENALTY CALCULATION:

Penalty = BP+[(.1xBP) (P+H+E+O+R+C)]
= $2,500 + [(.1x2,500) (0+0+0+2+6-2)]
= $2,500 + [(250)(6)]
= $2,500 + 1,500
= $4,000

EXHIBIT 2

FINDINGS AND DETERMINATION OF RESPONDENT'S CIVIL PENALTY
PURSUANT TO OREGON ADMINISTRATIVE RULE (OAR) 340-12-045

VIOLATION NO: 2 (failure to ship hazardous waste off-site within the 90-day accumulation period)

CLASSIFICATION: The violation is a Class I violation pursuant to OAR 340-12-068(c).

MAGNITUDE: The magnitude of the violation is major. Respondent has been accumulating hazardous waste on-site in approximately 54 containers with accumulation dates dating as far back as April 24, 1986.

CIVIL PENALTY FORMULA: The formula for determining the amount of penalty of each violation is: BP+[(.1xBP)(P+H+E+O+R+C)].

"BP" is the base penalty which is $5,000 for a Class I, major magnitude violation in the matrix listed in OAR 340-12-042(1).

"P" is Respondent's prior violation(s) and receives a value of 0, as Respondent has no prior violations as defined in OAR 340-12-030(13).

"H" is the past history of Respondent in taking all feasible steps or procedures necessary to correct any prior violation and receives a value of 0, as Respondent has no prior violations as defined in OAR 340-12-030(13).

"E" is the economic condition of Respondent and receives a value of 0, as there is insufficient information.

"O" is whether or not the violation was a single occurrence or was repeated or continuous during the period of the violation and receives a value of 2, as this was repeated.

"R" is the cause of the violation and receives a value of 6, as Respondent knew or should have known that it is unlawful to store hazardous waste for more than 90 days without a permit. On January 24, 1984, October 26, 1984, January 8, 1986 and June 23, 1986, Respondent was issued a Notice of Intent to Assess Civil Penalty for storing hazardous waste on-site longer than 90 days without a permit.

"C" is Respondent's cooperativeness in correcting the violation and receives a value of -2 as Respondent was cooperative.

PENALTY CALCULATION:

Penalty = BP+[(.1xBP) (P+H+E+O+R+C)]
= $5,000 + [(.1x5,000) (0+0+0+2+6-2)]
= $5,000 + [(500)(6)]
= $5,000 + 3,000
= $8,000

EXHIBIT 3

FINDINGS AND DETERMINATION OF RESPONDENT'S CIVIL PENALTY
PURSUANT TO OREGON ADMINISTRATIVE RULE (OAR) 340-12-045

VIOLATION NO: 3 (systematic failure to follow container labeling requirements)

CLASSIFICATION: The violation is a Class I violation pursuant to OAR 340-12-068(u).

MAGNITUDE: The magnitude of the violation is moderate. Respondent failed to mark approximately 25 fiberglass totes and 16, 55-gallon drums of hazardous waste with the words "Hazardous Waste".

CIVIL PENALTY FORMULA: The formula for determining the amount of penalty of each violation is: BP+[(.1xBP)(P+H+E+O+R+C)].

"BP" is the base penalty which is $2,500 for a Class I moderate magnitude violation in the matrix listed in OAR 340-12-042(1).

"P" is Respondent's prior violation(s) and receives a value of 0, as Respondent has no prior violations as defined by OAR 340-12-030(13).

"H" is the past history of Respondent in taking all feasible steps or procedures necessary to correct any prior violation and receives a value of 0, as Respondent has no prior violations as defined by OAR 340-12-030(13).

"E" is the economic condition of Respondent and receives a value of 0, as there is insufficient information.

"O" is whether or not the violation was a single occurrence or was repeated or continuous during the period of the violation and receives a value of 2, as this was repeated.

"R" is the cause of the violation and receives a value of 6, as Respondent knew or should have known to mark each container with the words "Hazardous Waste". On October 26, 1984, Respondent was issued a Notice of Intent to Assess Civil Penalty for failing to mark the words "Hazardous Waste" on all containers which contained hazardous waste.

"C" is Respondent's cooperativeness in correcting the violation and receives a value of -2, as Respondent was cooperative.

PENALTY CALCULATION:

Penalty = BP+[(.1xBP) (P+H+E+O+R+C)]
= $2,500 + [(.1x2,500) (0+0+0+2+6-2)]
= $2,500 + [(250)(6)]
= $2,500 + 1,500
= $4,000

NEIL GOLDSCHMIDT
GOVERNOR

Environmental Quality Commission

811 SW SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

TO: Environmental Quality Commission **DATE:** January 19, 1990

FROM: Director

SUBJECT: Request for Approval of Settlement Agreement in Case No.HW-WVR-89-104, Columbia Helicopters, Inc.

Respondent Columbia Helicopters, Inc. is an FAA approved aircraft repair station. Respondent is a logging and transporter which utilizes helicopters for its operations. Those helicopters are repaired and maintained by Respondent's facility in Aurora, Oregon. On June 29, 1989, DEQ assessed a $4,700 civil penalty against Respondent for violations of the Department's hazardous waste management regulations. Specifically, Respondent failed to conduct hazardous waste determinations on all wastes generated, and failed to date containers with accumulation dates. On July 18, 1989, Respondent filed a contested case hearing request with the Commission's hearings officer and a request for an informal meeting with the Department.

On August 2, 1989, the Department met with Respondent. The Department granted Respondent's request for additional time to fully comply with the Department's compliance order and submit further documentation relating to the cited violations. After further review of this case, the Department recommends changing the magnitude of Violation #1 (Exhibit 1 - Failure to conduct hazardous waste determinations on all wastes generated) from a Class I moderate to a Class I minor violation. The Department originally cited Respondent for failure to characterize small amounts of waste oil, media paint stripping, wastewater and wastewater treatment sludge. These materials were handled in an environmentally safe manner. Respondent subsequently demonstrated through knowledge of process that the waste oil and waste media were non-hazardous waste. Respondent believes the amount of sludge in the bottom of the treatment tank to be de minimis. While the Department maintains these are violations of the hazardous waste management rules, the Department agrees that after considering the above information, the violation should be a minor magnitude rather than a major magnitude.

Based upon this recommended change, the original $4,700 civil penalty is recalculated to $2,600. On November 21, 1989, Respondent agreed to accept a settlement of this contested case in the amount of $2,600. Respondent signed and returned the attached Stipulation and Final Order and enclosed a check for $2,600, which is being held by the Department pending resolution of this case.

The civil penalty assessment action, settlement correspondence, and the proposed Stipulation and Final Order are attached for your review and consideration.

I believe the circumstances of Respondent's violation justify a mitigation of the penalty to $2,600. I recommend Commission approval of this settlement proposal. If you agree, please sign and date Stipulation and Final Order No. HW-WVR-89-104.

Fred Hansen

Attachments
Nancy L. Hogan
229-6610
December 15, 1989

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY, OF THE STATE OF OREGON, Department, v. COLUMBIA HELICOPTERS, INC., Respondent.	)	STIPULATION AND FINAL ORDER No. HW-WVR-89-104 MARION COUNTY

WHEREAS:

1. On June 29, 1989, the Department of Environmental Quality (Department) filed with the Environmental Quality Commission (Commission) a Notice of Assessment of Civil Penalty in Case No. HW-WVR-89-104, against Columbia Helicopters, Inc. (Respondent), assessing a total $4,700 civil penalty upon Respondent ($3,500 for violation no. 1 and $1,200 for violation no. 2).

2. On July 18, 1989, the Respondent filed a request for hearing and answer to the Notice referred to in Paragraph 1 above.

3. The parties wish to compromise and settle the civil penalty referred to in Paragraph 1 above on the following terms.

NOW THEREFORE, in consideration of the mutual covenants and agreements of the parties hereto, it is stipulated and agreed that:

I

Respondent hereby waives any and all objections it may have: to the form, content, manner of service and timeliness of the Notice referred to in Paragraph 1 above; to a contested case hearing thereon and judicial review, thereof; and to service of a copy of this stipulated final order, which

order shall be effective upon signing by or on behalf of the Commission.

II

Respondent admits each and every fact and violation alleged in the Notice referred to in Paragraph 1 above, except that Respondent neither admits nor denies the allegation alleged in violation 5.a) of the Notice. The parties agree that the magnitude of violation 1 (Exhibit 1 - failure to conduct a hazardous waste determinations on all wastes generated.) is minor rather than moderate. Based upon this change, the civil penalty determination for violation no. 1 in Exhibit 1 of the Notice changes from $3,500 to the following:

Penalty = BP + [(.1xBP) (P+H+E+O+R+C)]
= $1,000 + [(.1x1,000) (0+0+0+2+2+0)]
= $1,400

The $1,200 civil penalty for violation no. 2 remains the same. The total civil penalty is $2,600, $1,400 for violation no. 1 and $1,200 for violation no. 2.

III

Subject to approval by the Commission, the parties agree to a mitigation of the $4,700 civil penalty to $2,600.

IV

The Department hereby waives its claim to interest on the penalty from the date of Notice referred to in Paragraph 1 above through the date which the order is signed below.

///

///

///

V

The Commission shall enter a final order:

A. Finding that each and every fact and violation alleged in the Notice referred to in Paragraph 1 above occurred.

B. Imposing upon Respondent a civil penalty of $2,600 for the violation cited in the Notice referred to in Paragraph 1 above, plus interest from the date which the order is signed below until paid in full.

C. Finding that the Department and Commission have satisfied all the requirements of law and the mitigation herein is consistent with public health and safety and is in the public interest.

RESPONDENT
COLUMBIA HELICOPTERS, INC.

December 13, 1989
Date

By: _____
(Name Wes Lematta)
(Title President)

DEPARTMENT OF ENVIRONMENTAL QUALITY

DEC 0 6 1989
Date

Fred Hansen
Director

FINAL ORDER

IT IS SO ORDERED:

ENVIRONMENTAL QUALITY COMMISSION

1-19-90
Date

William P. Hutchison, Jr., Chairman

1-19-90
Date

Emery N. Castle, Member

Date

Henry C. Lorenzen, Member

1/19/90
Date

Genevieve Pisarski Sage, Member

Date

William Wessinger, Member

V

The Commission shall enter a final order:

A. Finding that each and every fact and violation alleged in the Notice referred to in Paragraph 1 above occurred.

B. Imposing upon Respondent a civil penalty of $2,600 for the violation cited in the Notice referred to in Paragraph 1 above, plus interest from the date which the order is signed below until paid in full.

C. Finding that the Department and Commission have satisfied all the requirements of law and the mitigation herein is consistent with public health and safety and is in the public interest.

RESPONDENT
COLUMBIA HELICOPTERS, INC.

December 13, 1989
Date

By: _____
(Name Wes Lematta)
(Title President)

DEPARTMENT OF ENVIRONMENTAL QUALITY

DEC 0 6 1989
Date

_____
Fred Hansen
Director

FINAL ORDER

IT IS SO ORDERED:

ENVIRONMENTAL QUALITY COMMISSION

Date — William P. Hutchison, Jr., Chairman

Date — Emery N. Castle, Member

Date — Henry C. Lorenzen, Member

Date — Genevieve Pisarski Sage, Member

Date — William Wessinger, Member

Department of Environmental Quality

811 SW SIXTH AVENUE, PORTLAND, OREGON 97204-1390 PHONE (503) 229-5696

December 6, 1989

Columbia Helicopters, Inc.
c/o Richard H. Humphreys, Jr.
Attorney at Law
P.O. Box 3500
Portland, Oregon 97208

RE: Columbia Helicopters, Inc.
Case No. HW-WVR-89-104
Revision to proposed
Stipulation and Final
Order
Marion County

Dear Mr. Humphreys:

The Department's attorney, Larry Edelman, informed me that you were concerned about liability of Violation No. 5.a) of the Notice in Case No. HW-WVR-89-184 because of your client's pending case with the Environmental Protection Agency. Your client agreed to admit to all the violations alleged in the Notice, except for Violation No. 5.a). I have enclosed a revised Order for your review and your client's signature. The Order has been revised to state that Respondent neither admits nor denies that violation. Please return the signed document and a check made payable to the "State Treasurer, State of Oregon" to me as soon as possible, as I am scheduling the proposed settlement for consideration by the Environmental Quality Commission (EQC) at its January 1990 meeting.

If you have any questions, please contact Nancy Hogan of the Department's Enforcement Section at (503) 229-6610.

Sincerely,

Fred Hansen
Director

cc: Hazardous Waste Facilities Management Section, DEQ
Willamette Valley Region, DEQ
Larry Edelman, Oregon Department of Justice

Department of Environmental Quality

811 SW SIXTH AVENUE, PORTLAND, OREGON 97204-1390 PHONE (503) 229-5696

DEC 0 4 1989

Columbia Helicopters, Inc.
c/o Richard H. Humphreys, Jr.
Attorney at Law
P.O. Box 3500
Portland, OR 97208

Re: DEQ v. Columbia Helicopters, Inc.
Case No. HW-WVR-89-104
Marion County

Dear Mr. Humphreys:

The proposed Stipulation and Final Order that was negotiated between the Department and your client, Columbia Helicopters, Inc., which recommends mitigation of the $4,700 civil penalty assessed in Case No. HW-WVR-89-104 to $2,600, is enclosed for your review and your client's signature. Please return the signed document and a check made payable to the "State Treasurer, State of Oregon" to me by no later than December 11, 1989. I will then schedule the proposed settlement for consideration by the Environmental Quality Commission (EQC) at its January 1990 meeting. I will send you a copy of the fully executed document if approved by the EQC.

If you have any questions, please contact Nancy Hogan of the Department's Enforcement Section at (503) 229-6610.

Sincerely,

Fred Hansen
Director

H:\GB9159L1
Enclosure(s)
cc: Hazardous Waste Facilities Management Section, DEQ
Willamette Valley Region, DEQ
Larry Edelman, Oregon Department of Justice
Environmental Protection Agency

DEQ-1

NEIL GOLDSCHMIDT
GOVERNOR

CAR → TRB → NLH

Environmental Quality Commission

811 SW SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

November 2, 1989

CERTIFIED MAIL P 882 467 667

Richard H. Humphreys, Jr.
General Counsel
Columbia Helicopters, Inc.
P.O. Box 3500
Portland, OR 97208

Larry Edelman, Assistant Attorney General
Department of Justice
1515 SW 5th Avenue
Suite 410
Portland, OR 97201

Re: DEQ v Columbia Helicopters, Inc.
No. HW-WVR-89-104

This case is scheduled as follows:

Date:	November 28, 1989
Time:	9:00 AM
Place:	Room 9A DEQ Headquarters 811 SW Sixth Avenue Portland, Oregon 97204

I have enclosed a copy of agency rules of practice and procedure and an information sheet to assist you to prepare for hearing. If you have any questions, please call me at 229-5383.

Sincerely,

Linda K. Zucker
Hearings Officer

LKZ:y
HY9014
Enclosures
cc: Enforcement Section, DEQ
Hazardous Waste Section, DEQ
Willamette Valley Region, DEQ

DEQ-46

NEIL GOLDSCHMIDT
GOVERNOR

Department of Environmental Quality

811 SW SIXTH AVENUE, PORTLAND, OREGON 97204-1390 PHONE (503) 229-5696

August 9, 1989

Columbia Helicopters, Inc.
Richard H. Humphreys, Jr.
General Counsel
P.O. Box 3500
Portland, OR 97208

Re: Notice of Violation, Compliance Order, and Assessment of Civil Penalty, No: HW-WVR-89-104
DEQ v. Columbia Helicopters, Inc.

Dear Mr. Humphreys:

In response to your letter dated August 4, 1989 and Mr. Herbert Kluth's letter dated August 7, 1989, requesting an additional 30 days to correct the violations cited in the Compliance Order in the above-referenced case, the Department hereby grants Columbia Helicopters, Inc. an additional 30 days from the date of this letter to correct the violations listed in the Compliance Order. The Department does not intend to inspect Columbia Helicopters, Inc. during that 30-day extension period to ascertain compliance with the Order. However, we expect the Order requirements to be completed on or before September 8, 1989.

The Department looks forward to your cooperation. If you have any questions, please call me at 229-6232.

Sincerely,

Van A. Kollias

Van Kollias
Enforcement Manager
Regional Operations

VAK:nc:b
GB8803

cc: Larry Edelman, Department of Justice
Hazardous Waste Section, DEQ
Willamette Valley Region, DEQ
Linda Zucker, Hearings Officer, EQC
Herbert Kluth, Hazardous Waste Manager, Columbia Helicopters, Inc.

COLUMBIA HELICOPTERS, INC.

August 4, 1989

Department of Environmental Quality
811 SW 6th Ave.
Portland, OR. 97204-1390

Attn: Nancy Couch
Enforcement Section

RE: HW-WVR-89-104

Dear Ms. Couch:

Per our meeting of August 2, 1989, this will confirm our request for an additional thirty (30) days time regarding the compliance order period to correct. Since we had appealed the order, it seemed axiomatic that the period of time to correct would be stayed pending resolution of the appeal. As I understand the Department's position, lodging an appeal does not stay the correction period. It would be helpful if you notified people of that position at the outset.

I found the informal meeting less than helpful, given the Department's attitude that the only issues to be looked at were whether or not the Department made a glaring error. The only party to benefit would be the Department, saving themselves looking like fools in front of the Commission. If there is to be no room to negotiate, I would not participate in such a meeting again unless the only charge was obviously false.

On the off-hand chance that there may be some reconsideration of the Department's position, I would like to reiterate that the violations seemed to me to be extremely technical. We have a moderate class I violation for apparently not stating the obvious: our waste oil comes out of our trucks - I'm still not sure what violation occurred. And for not analyzing less than a handful of - did anyone ever agree if it was sludge, sediment or just stuff - material that

MAILING ADDRESS: P.O. Box 3500 Portland, Oregon 97208 LOCATION: Aurora Airport Aurora, Oregon
TELEPHONE: 503/657-1111 503/678-1222 FAX: (503) 678-5841 TELEX: 36-0307

accumulated over two years in a process DEQ approved we use. And for not sending out for analysis some plastic beading material with paint residue. And a minor Class I violation for mistakenly moving satellite collection drums to a holding area. For this we get a fine of $4,700.00.

I find this extremely harsh. At any rate, we would appreciate a second look at the situation. Perhaps there is room to negotiate an equitable resolution without resort to a formal hearing.

Yours very truly,

COLUMBIA HELICOPTERS, INC.

Richard H. Humphreys, Jr.
General Counsel

RHH:slc

COLUMBIA HELICOPTERS, INC.

July 18, 1989

Department of Environmental Quality
811 S.W. 6th Ave.
Portland, OR. 97204-1390

RE: REQUEST FOR HEARING AND ANSWER TO NOTICE OF VIOLATION NO. HW-WVR-89-104

Enclosed please find our request for hearing and answer to the above referenced matter. We believe it would be beneficial to meet with the Department regarding these allegations as it appears to us there is confusion regarding several alleged violations and a meeting may clear these problems up. Please advise.

Yours very truly,

COLUMBIA HELICOPTERS, INC.

Richard H. Humphreys, Jr.
General Counsel

RHH:slc
Encl.

MAILING ADDRESS: P.O. Box 3500 Portland, Oregon 97208 LOCATION: Aurora Airport Aurora, Oregon
TELEPHONE: 503/657-1111 503/678-1222 FAX: (503) 678-5841 TELEX: 36-0307

COLUMBIA HELICOPTERS, INC.

July 18, 1989

Department of Environmental Quality
811 S.W. 6th Ave.
Portland, OR. 97204

Attn: Hearings Office, EQC

RE: NOTICE OF VIOLATION, COMPLIANCE ORDER, AND ASSESSMENT OF CIVIL PENALTY NO. HW-WVR-89-104

We request a hearing before the Environmental Quality Commission regarding the above referenced matter.

In answer to the allegations contained in the Notice of Violation we state the following:

1. We admit we are an Oregon corporation and are the owners of property located at the north end of the Aurora State Airport in Marion County, Oregon.

2. We admit finding #2.

3. We admit finding #3.

4. We admit finding #4.

5. We admit finding #5.

6. We do not know what "Media slurry waste" is being alleged in finding #6 and therefor deny same.

7. The first Class I violation, failure to conduct hazardous waste determinations is so general we cannot respond and therefor deny the same.

8. The second Class I violation, failure to clearly mark containers of hazardous waste, we admit. This violation occured as a result of unfamiliarity with the technical requirements of the code. Had the drums which were misdated remained in the appropriate satellite collection areas, no violation would have occurred.

MAILING ADDRESS: P.O. Box 3500 Portland, Oregon 97208 LOCATION: Aurora Airport Aurora, Oregon
TELEPHONE: 503.657-1111 503/678-1222 FAX: (503) 678-5841 TELEX: 36-0307

9. The first Class II violation, failure to mark a container with the words "Hazardous Waste", we admit one tank did not carry the proper label. This was immediately corrected upon receipt of the initial Notice of Violation received June 5, 1989.

10. The second Class II violation, denying access to a representative of the Department on June 12, 1989, we deny. On June 12, 1989, three representatives from the Willamette Valley Region arrived unannounced and requested to make an inspection. Mr. Herb Kluth of Columbia met with the representatives and told them he was involved with other matters and would not be available that day to meet with them. When asked if he was denying them access he said of course not, but he was engaged in other pressing business and did not have time to answer questions or conduct a walk around tour. He asked them to call back for another time. The representatives left, called the following day and a time was set on June 14, 1989 when Mr. Kluth met with the representatives and spent several hours with them.

11. The third Class II violation, part (a), incorrectly characterizing Turco paint stripping waste as a characteristic waste D007 without first determining if it was a listed waste, we deny. The violation is confusing different materials we utilize and we cannot respond to the violation as it is worded.

12. The third Class II violation, part (b), labeling the "Media slurry waste 'Hazardous Waste' but failing to determine whether it was a listed hazardous waste or characteristic waste", we have no idea what this refers to. We utilize a plastic media paint stripping method which does not leave a "slurry".

13. The fourth Class II violation, part (a), accumulating hazardous waste on-site for more than 90 days without a permit specifically a drum of Freon TCM and a drum of acetone, we admit. However, as with the answer to the first Class I violation, these were accumulation drums and had they been left at the satellite accumulation area, no violation would have occurred.

14. The fourth Class II violation, part (b), accumulating hazardous waste for more than 90 days in a storage tank, we deny. The tank is part of a DEQ approved method of boiling off waste water from an etch and alodine treatment. The DEQ approved this method in 1987.

The inspection which led to this notice of violation and assessment of civil penalties was conducted in August, 1988. We were not informed of any violations until we received a notice of violation from the Willamette Valley Region on June 5, 1989. No penalties were proposed for the violations listed. Some of the violations included in that notice were simply incorrect. Some had inaccurate descriptions of the methods utilized here. We responded to that notice of violation on June 23, 1989. A follow-up inspection was made on June 27, 1989. The instant notice of violation and assessment of penalties was issued June 29, 1989 and served on us July 3, 1989. It is fairly obvious that our response to the original notice of violation was not even considered. Assessment of penalties in such a case seems totally unwarranted.

Yours very truly,

COLUMBIA HELICOPTERS, INC.

Richard H. Humphreys, Jr.
General Counsel/Secretary

RHH:slc

NEIL GOLDSCHMIDT
GOVERNOR

Department of Environmental Quality

811 SW SIXTH AVENUE, PORTLAND, OREGON 97204-1390 PHONE (503) 229-5696

JUN 2 9 1989

CERTIFIED MAIL NO. P 882 467 598

Columbia Helicopters, Inc.
c/o C T Corporation System
Registered Agent
800 Pacific Building
Portland, OR 97204

Re: Notice of Violation, Compliance Order, and Assessment of Civil Penalty No. HW-WVR-89-104

Enclosed is a Notice of Violation, Compliance Order, and Assessment of Civil Penalty relating to the August 15, 1988 joint inspection by the Environmental Protection Agency and the Department of Environmental Quality at the Columbia Helicopters, Inc.'s (CHI) facility in Aurora, Oregon.

On June 12, 1989, representatives of the Department visited CHI for purposes of updating the August, 1988 inspection and was denied access. CHI and the Department agreed upon a later date for conducting the inspection. On June 27, 1989, Gil Hargreaves and John Taylor of the Department conducted a follow-up inspection at CHI. The Compliance Order and Civil Penalty Assessment are a result of hazardous waste management violations identified during those inspections. Those violations included the following:

- Storage of hazardous waste for more than 90 days;
- Failure to comply with container management requirements; and
- Failure to conduct hazardous waste determinations on all generated wastes.

A civil penalty of up to $10,000 may be assessed for each day of each violation. I have set your penalty at a total of $4,700 for the violations cited in the enclosed notice.

The penalty is due and payable to the Department. Appeal procedures are outlined within Section VI of the enclosed notice. If you fail to either pay or appeal the penalty within 20 days, a Default Order and Judgment will be entered against you.

The Department expects your cooperation and full compliance with Oregon's environmental regulations. We are prepared to assist you with questions regarding rule interpretation or the applicability of specific regulations to your facility. We expect you to comply with the hazardous waste regulations at all times.

Please be informed that you are liable for additional civil penalties if you violate the Compliance Order or if you have additional violations of the hazardous waste regulations.

If you wish to discuss this matter, or if you believe there are mitigating factors which the Department might not have considered in assessing the civil penalty, you may request an informal discussion by attaching your request to your appeal. Your request to discuss the matter with the Department will not waive your right to a contested case hearing.

If you have any questions about this action , please contact Nancy Couch of the Department's Enforcement Section at our toll-free call-back number at 1-800-452-4011.

Sincerely,

Fred Hansen
Director

FH:nc:b
GB8625L
Enclosure(s)
cc: U.S. Environmental Protection Agency
Oregon Department of Justice
Hazardous Waste Section, DEQ
Western States Hazardous Waste Project
Willamette Valley Region, DEQ

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY OF THE STATE OF OREGON, Department, v. COLUMBIA HELICOPTERS, INC., an Oregon corporation, Respondent.	)	NOTICE OF VIOLATION AND COMPLIANCE ORDER, AND ASSESSMENT OF CIVIL PENALTY NO. HW-WVR-89-104 MARION COUNTY

This Notice of Violation and Compliance Order is issued by the Department of Environmental Quality (Department or DEQ) pursuant to Oregon Revised Statutes (ORS) 466.190.

I. FINDINGS

1. Respondent Columbia Helicopters, Inc., an Oregon corporation, owns and operates a facility located in Aurora, Oregon.

2. Respondent is a generator of hazardous waste, ORD 009673609, and generates or has generated the following hazardous wastes:

1,1,1 trichloroethane, a degreaser, a "F001" hazardous waste;

Freon TF, Freon TCM used to degrease in the hydraulic shop, "F001" hazardous wastes;

Acetone (paint thinner) used for cleaning equipment, a "F003" hazardous waste;

Acids and caustics used for cleaning motor parts, "D002" hazardous wastes;

Waste methylene chloride mixture rinse waters from paint stripping and wash down process of small parts, "F002" and "D007" hazardous wastes;

Waste methylene chloride mixture from paint stripping of aircraft, a "F002" hazardous waste;

///

Chevron thinner used for cleaning parts, a "D001" hazardous waste; and

Freon/oil mixture used for cleaning equipment, a "F002" hazardous waste.

3. Representatives of DEQ and the Environmental Protection Agency conducted a joint compliance inspection at Respondent's Facility on August 15, 1988.

4. Representatives of DEQ conducted a follow-up inspection on June 27, 1989.

5. ORS 459.385 allows the Department or authorized personnel to enter upon the premises of any person regulated under ORS 466.005 to 466.385 and 466.890 at reasonable times, to determine compliance with and to enforce ORS 466.005 to 466.385 and 466.890.

6. During the June 27, 1989 inspection, it was observed that Respondent was storing Media slurry waste, a hazardous waste, in an above-ground storage tank.

II. VIOLATIONS

Based upon the above-noted inspections, Respondent has violated provisions of Oregon's hazardous waste laws and regulations applicable to the facility as set forth and incorporated in OAR 340-100-002. Respondent has accumulated hazardous waste on-site without fully complying with these regulations and has committed the following violations:

CLASS I VIOLATIONS:

1. Respondent violated OAR 340-102-011(2) by failing to determine if a residue (as defined in OAR 340-100-010) generated by Respondent was a hazardous waste. Respondent failed to conduct hazardous waste determinations on the waste oil, the Media paint stripping wastes, and the

wastewater and wastewater treatment sludges from the chemical conversion coating of aluminum.

2. Respondent violated 40 CFR 262.34(a)(2) by failing to clearly mark containers of hazardous waste accumulated on-site, with the date on which accumulation into each container began. Drum no. 9 had no accumulation date marked on it. Drum nos. 1 through 8 and 10 were marked with the dates when the drums were full rather than with the date when accumulation of hazardous waste began in each drum.

CLASS II VIOLATIONS:

3. Respondent violated 40 CFR 262.34(a)(3) by failing to clearly label or mark each container or tank in which hazardous waste was accumulated on-site, with the words "Hazardous Waste". The hazardous waste treatment tank was not marked with the words "Hazardous Waste".

4. Respondent violated ORS 466.195 by denying a representative of the Department access to inspect Respondent's Facility on June 12, 1989.

5. Respondent violated OAR 340-102-011(2) by:

a) incorrectly characterizing the Turco paint stripping waste as a characteristic waste (D007) without first determining whether or not it was a listed waste (F002), and

b) labeling the Media slurry waste "Hazardous Waste" but failing to determine whether it was a listed hazardous waste or characteristic hazardous waste.

6. Respondent violated 40 CFR 262.34(a) and (b) in that Respondent accumulated hazardous waste on-site for more than 90 days immediately preceding August 15, 1988, without either first obtaining a hazardous waste storage facility permit, or having interim status as a hazardous waste

storage facility. Specifically:

a) One, 55-gallon drum of Freon TCM had an accumulation date of April 6, 1988, and one, 55-gallon drum of acetone had an accumulation date of April 14, 1988.

b) For several years, Respondent has been accumulating wastewater and wastewater treatment sludges from the chemical conversion coating of aluminum in a treatment tank.

III. COMPLIANCE ORDER

Based upon the foregoing FINDINGS AND VIOLATIONS, Respondent is hereby ORDERED TO:

1. Immediately initiate actions necessary to correct all of the above cited violations and come into full compliance with Oregon's hazardous waste laws.

2. Within 30 days of receipt of this Order, correct violations 1, 2, 3, 5. and 6.a) and submit written documentation which demonstrates Respondent's full compliance with this Order.

3. If Respondent determines there is hazardous waste in the treatment tanks, then immediately submit a plan and schedule for complying with all applicable hazardous waste tank regulations set forth in 40 CFR 265, Subpart J.

4. Respondent, upon any future request of any officer, employee or representative of the Department, shall allow said person(s) to enter upon the premises, during normal business hours, to determine compliance with and to enforce DEQ rules and regulations, to furnish upon request all information relating to a solid or hazardous waste and permit such person at all reasonable times to have access to and to copy all records relating to such wastes, to inspect and obtain samples of such wastes and samples of any

containers or labeling for such wastes.

5. Correct violation 6.b. by maintaining, and submitting to DEQ upon request, records which demonstrate that the wastewaters and wastewater treatment sludges treated in any hazardous waste treatment tank, are stored less than 90 days. In the alternative, submit a schedule within 30 days for complying with the requirements of 40 CFR 262.34(b).

IV. ASSESSMENT OF CIVIL PENALTIES

The Director imposes civil penalties for the following violations cited in Section II:

Violation	Penalty Amount
1	$3,500
2	1,200

Respondent's total civil penalty is $4,700.

The findings and determination of Respondent's civil penalty pursuant to OAR 340-12-045 are attached and incorporated as Exhibits No. 1, 2 and 3.

V. PAYMENT OF CIVIL PENALTY

The total penalty is now due and payable. Respondent's check or money order in the amount of $4,700 should be made payable to "State Treasurer, State of Oregon" and sent to the Business Office, Department of Environmental Quality, 811 S.W. Sixth Avenue, Portland, Oregon 97204.

VI. OPPORTUNITY FOR CONTESTED CASE HEARING

This Notice of Violation and Compliance Order shall become final unless, within 20 days of issuance of this Notice and Order, Respondent requests a hearing before the Environmental Quality Commission (Commission) pursuant to ORS 466.190. The request must be made in writing and must be received by the Commission's hearings officer within twenty (20) days from

the date of mailing of this Notice (or if not mailed, the date of personal service), and must be accompanied by a written "Answer" to the allegations contained in this Notice. In the written "Answer", Respondent shall admit or deny each allegation of fact contained in this Notice and Respondent shall affirmatively allege any and all affirmative claims or defenses that Respondent may have and the reasoning in support thereof. Except for good cause shown:

1. Factual matters not controverted shall be presumed admitted;

2. Failure to raise a claim or defense shall be presumed to be a waiver of such claim or defense;

3. New matters alleged in the "Answer" shall be presumed to be denied unless admitted in subsequent pleading or stipulation by the Department or Commission.

Send the request for hearing and "Answer" to the: Hearings Officer, Environmental Quality Commission, 811 S.W. Sixth Avenue, Portland, Oregon 97204. Following receipt of a request for hearing and an "Answer", Respondent will be notified of the date, time and place of the hearing. If Respondent fails to file a timely request for hearing or "Answer", the Order shall become a final and enforceable order of the Environmental Quality Commission by operation of law without any further action or proceeding. If the Order becomes final by operation of law, the right to judicial review, if any, is outlined within ORS 466.190(5).

Failure to appear at a scheduled hearing or meet a required deadline, may result in a dismissal of the contested case.

///

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VII. CONSEQUENCES OF ADDITIONAL VIOLATIONS

If violations continue or recur, or if Respondent fails to comply with the Compliance Order, the Department may impose additional civil penalties.

JUN 2 9 1989
Date

Fred Hansen, Director

EXHIBIT 1

FINDINGS AND DETERMINATION OF RESPONDENT'S CIVIL PENALTY
PURSUANT TO OREGON ADMINISTRATIVE RULE (OAR) 340-12-045

VIOLATION NO: 1 (failed to conduct hazardous waste determinations on all wastes generated)

CLASSIFICATION: The violation is a Class I violation pursuant to OAR 340-12-068(1)(a).

MAGNITUDE: The magnitude of the violation is moderate. Respondent failed to conduct a hazardous waste determination on the waste oil, Media paint stripping waste and the wastewater and wastewater treatment sludges from the chemical conversion coating of aluminum from January 1987 to August 1988.

CIVIL PENALTY FORMULA: The formula for determining the amount of penalty of each violation is: BP+[(.1xBP)(P+H+E+O+R+C)].

"BP" is the base penalty which is $2,500 for a Class I moderate magnitude violation in the matrix listed in OAR 340-12-042(1).

"P" is Respondent's prior violation(s) and receives a value of 0, as Respondent has no prior violations as defined in OAR 340-12-030(13).

"H" is the past history of Respondent in taking all feasible steps or procedures necessary to correct any prior violation and receives a value of 0, as Respondent has no prior violations as defined in OAR 340-12-030(13).

"E" is the economic condition of Respondent and receives a value of 0, as there is insufficient information on which to base a finding.

"O" is whether or not the violation was a single occurrence or was repeated or continuous during the period of the violation and receives a value of 2, as the violation was repeated.

"R" is the cause of the violation and receives a value of 2, as Respondent's violation was a result of negligence.

"C" is Respondent's cooperativeness in correcting the violation and receives a value of 0, as there is insufficient information on which to base a finding.

PENALTY CALCULATION:

Penalty = BP+[(.1xBP) (P+H+E+O+R+C)]
= $2,500 + [(.1x2,500) (0+0+0+2+2+0)]
= $2,500 + [($250)(4)]
= $2,500 + 1,000
= $3,500

EXHIBIT 2

FINDINGS AND DETERMINATION OF RESPONDENT'S CIVIL PENALTY
PURSUANT TO OREGON ADMINISTRATIVE RULE (OAR) 340-12-045

VIOLATION NO: 2 (failure to date containers with accumulation dates)

CLASSIFICATION: The violation is a Class I violation pursuant to OAR 340-12-068(1)(w).

MAGNITUDE: The magnitude of the violation is minor. Respondent dated ten containers once they were full rather than dating containers when they began accumulating hazardous waste from January 1987 to August 1988.

CIVIL PENALTY FORMULA: The formula for determining the amount of penalty of each violation is: BP+[(.1xBP)(P+H+E+O+R+C)].

"BP" is the base penalty which is $1,000 for a Class I, minor magnitude violation in the matrix listed in OAR 340-12-042(1).

"P" is Respondent's prior violation(s) and receives a value of 0 as Respondent has no prior violations as defined in OAR 340-12-030(13).

"H" is the past history of Respondent in taking all feasible steps or procedures necessary to correct any prior violation and receives a value of 0, as Respondent has no prior violations as defined in OAR 340-12-030(13).

"E" is the economic condition of Respondent and receives a value of 0 as there is insufficient information on which to base a finding.

"O" is whether or not the violation was a single occurrence or was repeated or continuous during the period of the violation and receives a value of 2, as the violation was repeated.

"R" is the cause of the violation and receives a value of 2, as Respondent's violation was a result of negligence.

"C" is Respondent's cooperativeness in correcting the violation and receives a value of -2, as Respondent was cooperative in correcting the violation by marking hazardous waste containers properly.

PENALTY CALCULATION:

Penalty = BP+[(.1xBP) (P+H+E+O+R+C)]
= $1,000 + [(.1x1,000) (0+0+0+2+2-2)]
= $1,000 + [(100)(2)]
= $1,000 + 200
= $1,200

NEIL GOLDSCHMIDT
GOVERNOR

Environmental Quality Commission

811 SW SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

TO: Environmental Quality Commission **DATE:** January 19, 1990

FROM: Director

SUBJECT: Request for Approval of Settlement Agreement in Case No. WQ-WVR-89-101, Roger DeJager

Respondent Roger DeJager, owns and operates a dairy in Jefferson, Oregon. On July 10, 1989, DEQ assessed a $1,600 civil penalty against Respondent for discharging animal wastewater from Respondent's tile line drain pipe into public waters. On July 25, 1989, Respondent filed a contested case hearing request with the Commission's hearings officer and a request for an informal meeting with the Department.

At the time the penalty was assessed, the specific source of the wastewater was undetermined. On August 30, 1989 the Department met with Respondent and representatives from the Oregon Department of Agriculture and Soil Conservation Service. No one present at the meeting could identify the source of wastewater entering the creek. Respondent had earlier installed a subsurface pattern tile drain system under the direction of the Soil Conservation Service. Although Respondent had been implementing "best management practices" as required under the Long Term Agreement developed with Soil Conservation Service, it was determined that animal wastewater was discharging from Respondent's subsurface pattern drain system into a ditch which joins Bashaw Creek. The purpose of the system was to drain the water off the land.

After further review of this case, the Department recommends changing the civil penalty determination factors as follows:

A. Change the "R" factor from 2 for negligence to a 0 for insufficient information as to the cause of the violation. The violation was not directly caused by Respondent's negligence.

B. Change the "O" factor from 2 for repeated or continuous to a 0 for single occurrence. The violation was documented on one day and thus is a single occurence rather than repeated.

C. Change the "P" factor from 4 for one prior identical Class II violation to 2 for an unrelated Class II violation, as the prior violation was for a discharge of silage liquor and the violation at issue was for the discharge of animal wastewater.

Based upon these recommended changes, the original $1,600 civil penalty is recalculated to $1,000. On November 21, 1989 Respondent agreed to accept a settlement of this contested case in the amount of $1,000. Respondent further agreed to install

a recycling pump to collect wastewater irrigation runoff and recycle to the waste storage pond, by no later than January 31, 1990. Respondent signed and returned the attached Stipulation and Final Order and enclosed a check for $1000, which is being held by the Department pending resolution of this case.

The civil penalty assessment action, settlement correspondence, and the proposed Stipulation and Final Order are attached for your review and consideration.

I believe the circumstances of Respondent's violation justify a mitigation of the penalty to $1,000. I recommend Commission approval of this settlement proposal. If you agree, please sign and date Stipulation and Final Order No. WQ-WVR-89-101.

Fred Hansen

Attachments
Nancy L. Hogan
229-6610
December 15, 1989

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY, OF THE STATE OF OREGON, Department, v. ROGER DEJAGER, Respondent.	)	STIPULATION AND FINAL ORDER No. WQ-WVR-89-101 MARION COUNTY

WHEREAS:

1. On July 10, 1989, the Department of Environmental Quality (Department) filed with the Environmental Quality Commission (Commission) a Notice of Assessment of Civil Penalty in Case No. WQ-WVR-89-101, against Roger DeJager (Respondent), assessing a $1,600 civil penalty upon Respondent.

2. On July 25, 1989, the Respondent filed a request for hearing and answer to the Notice referred to in Paragraph 1 above.

3. The parties wish to compromise and settle the civil penalty referred to in Paragraph 1 above on the following terms.

NOW THEREFORE, in consideration of the mutual covenants and agreements of the parties hereto, it is stipulated and agreed that:

I

Respondent hereby waives any and all objections it may have: to the form, content, manner of service and timeliness of the Notice referred to in Paragraph 1 above; to a contested case hearing thereon and judicial review, thereof; and to service of a copy of this stipulated final order, which order shall be effective upon signing by or on behalf of the Commission.

II

Respondent admits each and every fact and violation alleged in the Notice referred to in Paragraph 1 above, except that the parties agree to change the civil penalty determination factors as follows:

A. Factor "O" of Exhibit 1 is changed from a 2 for repeated or continuous to a 0 for a single occurrence.

B. Factor "R" of Exhibit 1 is changed from a 2 for negligence to a 0 for insufficient information as to the cause of the violation.

C. Factor "P" of Exhibit 1 is changed from 4 for one prior identical Class II violation to a 2 for an unrelated Class II violation.

D. The civil penalty determination based upon the above changes is as follows:

Penalty = BP+[(.1xBP) (P+H+E+O+R+C)]
= $1,000 + [(.1x1,000) (2-2+0+0+0+0)]
= $1,000

III

Subject to approval by the Commission, the parties agree to a mitigation of the $1,600 civil penalty to 1,000.

IV

The Department hereby waives its claim to interest on the penalty from the date of Notice referred to in Paragraph 1 above through the date which the order is signed below.

V

The Commission shall enter a final order:

A. Finding that each and every fact and violation alleged in the Notice referred to in Paragraph 1 above occurred.

///

B. Imposing upon Respondent a civil penalty of $1,000 for the violation cited in the Notice referred to in Paragraph 1 above, plus interest from the date which the order is signed below until paid in full.

C. Finding that the Department and Commission have satisfied all the requirements of law and the mitigation herein is consistent with public health and safety and is in the public interest.

D. Requiring Respondent to install a recycling pump to collect wastewater irrigation runoff and recycle it to the waste storage pond on or before January 31, 1990 and inform the Department in writing as soon as the pump is installed and operational.

VI

Respondent acknowledges that it has actual notice of the contents and requirements of this stipulated final order and that failure to fulfill any of the requirements hereof would constitute a violation of this stipulated final order and could subject Respondent to liability for additional and independent penalties in amounts as great as the statutory maximum and would not be limited in amount by this stipulated final order. Therefore, should Respondent commit any violation of this stipulated final order, Respondent hereby waives any rights it might then have to any and all ORS 468.125(1)

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advance notices prior to the assessment of civil penalties for any and all such violations of this stipulated final order.

RESPONDENT

12-14-89
Date

(Name Roger De Lay)
(Title Chairman)

DEPARTMENT OF ENVIRONMENTAL QUALITY

12/28/89
Date

Fred Hansen
Director

FINAL ORDER

IT IS SO ORDERED:

ENVIRONMENTAL QUALITY COMMISSION

Date — William P. Hutchison, Jr., Chairman

Date — Emery N. Castle, Member

Date — Henry C. Lorenzen, Member

Date — Genevieve Pisarski Sage, Member

Date — William Wessinger, Member

advance notices prior to the assessment of civil penalties for any and all such violations of this stipulated final order.

RESPONDENT

12-14-89
Date

Roger De Hoyos
(Name)
(Title Chairman)

DEPARTMENT OF ENVIRONMENTAL QUALITY

12/28/89
Date

Fred Hansen
Director

FINAL ORDER

IT IS SO ORDERED:

ENVIRONMENTAL QUALITY COMMISSION

1-19-90
Date

William P. Hutchison, Jr., Chairman

1-19-90
Date

Emery N. Castle, Member

Date

Henry C. Lorenzen, Member

1/19/90
Date

Genevieve Pisarski Sage, Member

Date

William Wessinger, Member

Department of Environmental Quality

811 SW SIXTH AVENUE, PORTLAND, OREGON 97204-1390 PHONE (503) 229-5696

DEC 0 4 1989

Roger DeJager
3292 Wintel Road
Jefferson, OR 97352

Re: DEQ v. Roger DeJager
Case No. WQ-WVR-89-101
Marion County

Dear Mr. DeJager:

The proposed Stipulation and Final Order that was negotiated between the Department and you which recommends mitigation of the $1,600 civil penalty assessed in Case No. WQ-WVR-89-101 to $1,000, is enclosed for your review and signature. Please return the signed document and a check made payable to the "State Treasurer, State of Oregon" to me by no later than December 11, 1989. I will then schedule the proposed settlement for consideration by the Environmental Quality Commission (EQC) at its January 1990 meeting. I will send you a copy of the fully executed document if approved by the EQC.

If you have any questions, please contact Nancy Hogan of the Department's Enforcement Section at (503) 229-6610.

Sincerely,

Fred Hansen
Director

H:\GB9158L
Enclosure(s)
cc: Water Quality Division, DEQ
Willamette Valley Region, DEQ
Larry Edelman, Oregon Department of Justice
Environmental Protection Agency
Alan Youse, Oregon Department of Agriculture

NEIL GOLDSCHMIDT
GOVERNOR

Environmental Quality Commission

811 SW SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

October 13, 1989

CERTIFIED MAIL - P 882 467 666

Roger DeJager
3292 Wintel Road
Jefferson, OR 97352

Re: DeJager v DEQ
WQ-WVR-89-101

At your request your contested case hearing is RESCHEDULED to November 14, 1989 in Room 10A, DEQ Offices, 811 SW Sixth Avenue, Portland, Oregon 97204.

November 10, 1989 is a state holiday.

Sincerely,

Linda K. Zucker
Hearings Officer

LKZ:y
HY8988
cc: Laurence Edelman, Justice Department, Portland
Water Quality Division, DEQ
Enforcement Section, DEQ
Willamette Valley Region, DEQ

Department of Environmental Quality

811 SW SIXTH AVENUE, PORTLAND, OREGON 97204-1390 PHONE (503) 229-5696

October 6, 1989

Roger DeJager
3292 Wintel Road
Jefferson, Oregon 97352

Re: Case No. WQ-WVR-89-101

Dear Mr. DeJager:

On August 30, 1989, the Department met with you in Salem to discuss any new information on which to consider a mitigation of your civil penalty. Those present at the meeting were Alan Youse and John Mellott, of the Department of Agriculture, Kent Ashbaker and Nancy Couch, DEQ, and Fred Gelderman and Monte Graham, Soil Conservation Service.

The Department has reviewed all the information which was provided as a result of the informal discussion on August 30, 1989. This review was conducted with the Director. The Department concluded that although you have made many efforts to correct past problems, the information provided did not warrant a reduction of the civil penalty. The Department is therefore prepared to proceed with the contested case hearing set for October 23, 1989.

Aside from this proceeding, any discharge of animal waste water from the tile drainage system to public waters must be eliminated. Should additional discharge be documented, you would be liable for additional civil penalties. If you are interested, the Department would be willing to consider entering into a Stipulated Order to allow you to continue to operate while you design and implement a system to eliminate all discharges of waste waters from the tile drainage system into public waters. The Stipulated Order could settle violations resulting from the discharge of waste water from the tile system so that no additional penalties would be levied while you are correcting the problem in accordance with a schedule set forth in the Order.

If you would like to enter into such a Stipulated Order with the Department, please contact me 1-800-452-4011, with a detailed proposed schedule for the design and construction of such necessary controls as soon as possible. The schedule would need to be developed on as tight a time frame as possible, for it to be acceptable to the Department.

Sincerely,

Nancy Couch

Nancy Couch
Enforcement Section

cc: Water Quality Division, DEQ
Larry Edelman, Department of Justice
Alan Youse, Oregon Department of Agriculture
Soil Conservation Service, U.S. Department of Agriculture

UNITED STATES
DEPARTMENT OF
AGRICULTURE

SOIL
CONSERVATION
SERVICE

1659 25TH Street SE
SALEM, OREGON 97302
(503) 399-5746

Date: September 29, 1989

Nancy Couch
Department of Environmental Quality
811 S.W. 6th Avenue
Portland, OR 97204

Dear Nancy,

Enclosed is the information and opinions you requested on the Roger DeJager Dairy. This follows the meeting held in the DEQ office in Salem August 30, 1989. People at the meeting were you and Kent Ashebaker of DEQ, John Mallot and Alan Youse of ODA, Roger DeJager, and Fred Gelderman and Monte Graham of SCS. You invited all of us to review what has been done on Roger's dairy over the last 10 or more years to control animal waste discharges, because he asked for a preliminary discussion before you decide if or how much a fine would be levied against him.

Sincerely,

Fred W. Gelderman

Fred W. Gelderman
District Conservationist

cc: Don Greiner, A.C., SCS, Albany

UNITED STATES
DEPARTMENT OF
AGRICULTURE

SOIL
CONSERVATION
SERVICE

1659 25TH Street SE
SALEM, OREGON 97302
(503) 399-5746

Date: September 29, 1989

Nancy Couch
Department of Environmental Quality
811 S.W. 6th Avenue
Portland, OR 97204

Dear Nancy,

Enclosed is the information and opinions you requested on the Roger DeJager Dairy. This follows the meeting held in the DEQ office in Salem August 30, 1989. People at the meeting were you and Kent Ashebaker of DEQ, John Mallot and Alan Youse of ODA, Roger DeJager, and Fred Gelderman and Monte Graham of SCS. You invited all of us to review what has been done on Roger's dairy over the last 10 or more years to control animal waste discharges, because he asked for a preliminary discussion before you decide if or how much a fine would be levied against him.

Sincerely,

Fred W. Gelderman

Fred W. Gelderman
District Conservationist

cc: Don Greiner, A.C., SCS, Albany

ROGER DEJAGER

September 29, 1989

To: Nancy Couch:
Enforcement, DEQ

The meeting held with Roger DeJager, ODA, and DEQ in the DEQ office in Salem August 30, 1989, brought out most of the facts. Roger has been working with SCS and DEQ ,and has been installing practices under their direction, for many years. Since 1985, he has been putting in "best management practices" as required under a Long Term Agreement developed with SCS. Discharges from his operation have reached the waters of the State of Oregon more than once. But, concerning the discharge of April 1989, it was pointed out that effluent reached the waters of the State of Oregon through an underground outlet designed by SCS, included in his LTA, and cost-shared by ASCS. It meets SCS standards and specs.

Roger said that there has been concern of effluent reaching the tile system when the manure tank was full, but during a test with a full manure tank no effluent was seen coming from the tile line. Alan Youse said something to the effect that it is Monte Graham's belief that effluent entered the system at a downspout outlet junction box at the corner of the barn. In any case, Roger stated and we confirm that both of these potential problems have been corrected. We would like to point out that no source of pollution was identified. In fact, Roger and SCS have taken our best shot at solving the problem, but we do not know for sure if the problem is solved at this time.

The system for Roger was designed before Monte came to Salem. The interpretation by DEQ of what we say may cost Roger thousands of dollars. Our comments will reflect on the quality of the animal waste design done by the present and past SCS personnel. We do know this letter to you will be circulated in SCS, ODA, and DEQ. However, because you asked for our thoughts and comments, here they are.

In our opinion, the single most important item in any system is long-term storage, which in this case, is an Animal Waste Storage Pond. For the DeJager Dairy, we believe the designed 180 days of storage is not a sufficient length of time. Further, to install tile without provision for sufficient long term storage requires application of effluent on soils when they are at field capacity. In our opinion, to stop effluent from reaching waters of the State of Oregon from the tile system installed on this dairy, a recycle system will be required. We have discussed both of these items with Roger and are working on solutions.

As stated in the meeting, Roger actually has approximately 90 days of storage. He has built three ponds, two with cost share. Each time they were designed for 180 days of storage. Why doesn't Roger have 180 days of storage? The most commonly heard answers are that Roger increased his herd or the roof water is running into the storage pond. In studying the file looking for answers we found these facts:

In 1979, the design was for 400 milking cows, the same herd size as Roger has today. In addition to the milking herd, he does have 100 large heifers which contribute to waste pond volume. Although these heifers have been present in the past, they have never been used as part of the design. In 1986, the design was for 300 cows. This took into account the milking cows only. Neither dry cows or large heifers were considered, according to the documentation.

The design in 1979 called for 4.0 acre feet of effluent storage, but indications from the 1986 design are that only 2.4 acre feet of effluent storage was built. Neither of the designs took prewash sprinklers into account. Prewash sprinklers are a major water source that contribute to effluent volume.

Slab area runoff in the 1986 design was estimated to be two acres by the field office technician, but was reduced to one acre by the Area Technician. Two acres is more correct, although we have not measured the area on site.

The bottom line of all this is that the present long term effluent storage is only 5.6 acre feet.

If the 1979 data is used, effluent production would be about 1300 cubic feet per day. As Roger said, the 30 day storage system for this tank "was a joke". In fact, Roger pumps over 4,000 cubic feet per day from his tank. Under heavy rains there is more. This volume requires a long term storage capacity of 16.5 acre feet for 180 days. It is our opinion, based on other designs we have done, that this is a more accurate figure.

Management was discussed at the meeting. As stated, we don't believe you can install $180,000 worth of practices, flip a switch and receive a perfect product. We believe everyone is an individual with capabilities and limitations. No two people, two dairies, or dairy staffs are alike. For this reason, it is up to those suppling technical assistance to match the needs of the operator to his or her abilities to handle a Waste Management System and to provide as much training how to operate the system as possible.

If you count the hours that have been spent by ODA, DEQ and SCS on the Roger DeJager it would probably exceed one thousand. In addition, thousands of dollars have been spent. No one predicated or could have predicted that the animal waste would get into the tile system at any given point, causing the effluent discharge which is in question. In fact the investigation conducted by Alan Yousey did not find the source of pollution. Roger says that he believes it is coming from one place and we believe it may be coming from another. Without knowing the true source, we don't know if it will happen again. What action will DEQ take next time?

We hope this information and these thoughts will be of help to you. If you have more questions, please contact us.

STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY INTEROFFICE MEMORANDUM

DATE: September 5, 1989

TO: Nancy Couch, Enforcement Section

FROM: Kent Ashbaker, WQ

SUBJECT: Roger DeJagar

Nancy, you wanted my prospective of the meeting we had with Roger DeJagar, Alan Youse, and the SCS on August 30th.

After listening to everything Mr. DeJagar had done over the years to correct his problems, it appeared to me that Alan was a little hasty in making the enforcement referral. The referral was probably a result of continual complaints by a neighbor.

I think that Mr. DeJagar has done everything he has been told to do, and more. He has had some accidents which were caused by extraordinary rainfall events and probably could not have been anticipated. It appears that the field tiles, which he was told to put in, will be a continuing problem without a ready solution. He has investigated locations where manure drainage might be entering the field tiles and has replaced the one broken line that he found. I'm not sure what more we could have expected him to do.

It appears that the primary problem he has now is that his system as designed by SCS is not large enough under today's design criteria. We should probably try to commit him to an expansion of his ponds rather than imposing a penalty.

I think that we should try to mitigate a good portion of his penalty, if not all.

Oregon Department of Agriculture

635 CAPITOL STREET NE, SALEM, OREGON 97310-0110

DATE: September 1, 1989

TO: Nancy Couch, Enforcement Section, DEQ, Portland

FROM: Alan Youse, ODA

SUBJECT: ROGER DEJAGER CIVIL PENALTY ASSESSMENT

As a result of our informal meeting with Mr. DeJager and after careful review and consideration, the division suggests mitigation on this enforcement element.

Penalty formula Cooperativeness

-- Remove the 0 and replace with -2
-- No change for the remaining elements of the civil penalty assessment

ODA RECOMMENDATION FOR DEQ DEPARTMENT ORDER

-- ODA Complete a physical herd count.
-- Operator to submit a waste management plan that includes all the appropriate best management practices (BMPs) for proper waste utilization by November 1, 1989
-- Implement additional waste storage facilities that may be required by October 30, 1990

RECOMMENDATION FOR CONSIDERATION

-- ODA to randomly monitor and collect water samples from the inlet of the subsurface tile near the northeast corner of the barn area and the already confirmed point of discharge on the southeast corner of the property near Bashaw Creek.
-- Insure that the irrigation line at the pump station on Bashaw Creek (sample site 89041D does not discharge waste water when the irrigation cycle is completed.
-- Insure that there are no direct connections between the irrigation line the waste storage pond, reception pit, and the pump station, sample site 89041D that will allow waste water to discharge into Bashaw Creek after the irrigation cycle.

M7/bm9/nr

January 28 1991

Department of Environmental quality

Hearing officer

in regard to the letter and

assesment No WQ-WVR-89-101

I Recieved I would like a hearing

of informal discussion of all the

I have done to protect the inviromment

with the help and engineering of

USDA Soil conservation service

Sincerely

Roger R De Jager

ROGER DE JAGER.

Department of Environmental Quality

811 SW SIXTH AVENUE, PORTLAND, OREGON 97204-1390 PHONE (503) 229-5696

JUL 1 0 1989

CERTIFIED MAIL P 194 974 175

Roger DeJager
3292 Wintel Road
Jefferson, OR 97352

Re: Notice of Civil Penalty Assessment
No. WQ-WVR-89-101
Marion County

On April 19, 1989 Alan Youse, of the Oregon Department of Agriculture (ODA), conducted a complaint investigation in response to several complaints that animal waste from your dairy has been discharging into a drainage ditch.

During the inspection, Mr. Youse observed a 12-inch corrugated pipe tile outlet from a subsurface pattern drain tile system draining your farm and discharging animal waste into a ditch east of your dairy. The ditch joins Bashaw Creek, which enters Keesneck Lake and discharges into the Willamette River. A large number of "bloodworms", an indicator of low dissolved oxygen and heavy organic waste loading, were observed along the water line and ditch bank. Water samples collected from your discharge tested at 1,300,000 fecal coliform bacteria per 100 milliliters (ml) of sample, confirming that the discharge was significantly contaminated with animal waste. The discharge of animal waste into waters of the state which poses a moderate risk of harm to the environment is a Class II violation. This is considered a significant water quality violation and is subject to a civil penalty of up to $10,000 per day for each violation.

ODA has been receiving complaints about discharges from your dairy for several years. You have received several warnings from the Department regarding animal waste discharges which violate state water quality standards. On November 3, 1981, the Department assessed you a civil penalty of $500 (case no. WQ-WVR-81-105) for discharging silage liquor to surface public waters which resulted in a significant fish kill within Keesneck Lake. On September 18, 1987, you were assessed a civil penalty of $1,000 (case no. WQ-WVR-87-68) for discharging manure into Bashaw Creek. Both of these civil penalty assessments were subsequently mitigated and paid.

In the enclosed Notice, I have assessed a civil penalty of $1,600. In determining the amount of the penalty, I used the procedures set forth in Oregon Administrative Rule (OAR) 340-12-045.

The penalty is due and payable. Appeal procedures are outlined in Section VI of the Notice. If you fail to either pay or appeal the penalty

within twenty (20) days, a Default Order and Judgment will be entered against you.

As you know, it is your responsibility, as owner and operator of this dairy, to see that you comply with state water quality laws. The Department of Agriculture was not able to determine the specific source of the discharge from your pipe. The discharges may have been caused by inadequate storage facilities, an unknown quantity of fresh water added to the pond used for flushing alleyways, a saturated soil profile caused by winter and spring rains and/or over irrigation of pasture and cropland. If you have not already corrected the problem, you must immediately take measures to ensure that animal waste from your dairy operation does not enter into public waters in the future. I look forward to your cooperation in complying with the Department's rules in the future.

If you wish to discuss this matter, or if you believe there are mitigating factors which the Department might not have considered in assessing the civil penalty, you may request an informal discussion by attaching your request to your appeal. Your request to discuss this matter with the Department will not waive your right to a contested case hearing. Please be advised that because of your past history, prior civil penalties, and the Department's support of two civil penalty mitigations before the Environmental Quality Commission, I would not be very receptive to considering a civil penalty mitigation proposal for this civil penalty or any future civil penalties should violations continue or recur.

Copies of referenced rules are enclosed. If you have any questions about this action, please contact Nancy Couch with the Department's Enforcement Section in Portland, toll-free at 1-800-452-4011.

Sincerely,

Fred Hansen
Director

FH:nc:b
GB8673L
Enclosures
cc: Water Quality Division, DEQ
Department of Justice
Environmental Protection Agency
Alan Youse, Oregon Department of Agriculture

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY OF THE STATE OF OREGON, Department, v. ROGER DEJAGER, Respondent.	)	NOTICE OF ASSESSMENT OF CIVIL PENALTY No. WQ-WVR-89-101 MARION COUNTY

I. AUTHORITY

This notice is issued to Respondent, Roger DeJager, by the Department of Environmental Quality (Department) pursuant to Oregon Revised Statutes (ORS) 468.125 through 468.140, ORS Chapters 183 and 466, and Oregon Administrative Rules (OAR) Chapter 340, Divisions 11 and 12.

II. PERMIT

On July 28, 1987, the Department issued General Permit Water Pollution Control Facilities Permit No. 0800 (Permit) to Respondent. The Permit authorized Respondent to construct, install, modify, or operate a waste water collection, treatment, control and disposal system in conformance with the requirements, limitations and conditions set forth in the Permit. The Permit expires on July 31, 1992. The Permit was in effect at all material times.

III. PRIOR NOTICE AND CIVIL PENALTY ASSESSMENTS

A Notice of Assessment of Civil Penalty (WQ-WVR-81-105) from former Director William H. Young was issued to Respondent on November 3, 1981, and cited Respondent for violations of Oregon water quality laws and the Department's water quality rules. Respondent was warned in Paragraph IX of that Notice that future violations would result in further penalties.

A Notice of Assessment of Civil Penalty (WQ-WVR-87-68) from Director Fred Hansen was issued to Respondent on September 18, 1987, and cited Respondent for violations of Oregon's water quality laws and the Department's water quality rules. Respondent was warned in Paragraph VIII of that Notice that future violations would result in further penalties.

IV. VIOLATIONS

Respondent owns and operates a dairy, a commercial or industrial establishment, on property described as Tax Lots 600 and 700, Section 19, Township 9 South, Range 3 West, Marion County, Oregon. Bashaw Creek, waters of the State, runs along or near Respondent's property.

CLASS I VIOLATIONS:

None.

CLASS II VIOLATIONS:

1. On or about April 19, 1989, Respondent violated ORS 468.720(1)(a), OAR 340-51-020(1), and Condition 1 of Water Pollution Control Facilities Permit No. 0800, in that Respondent discharged animal waste (sewage) from Respondent's tile line drainpipe, located on the above-described property, into a ditch which joins Bashaw Creek. The ditch and Bashaw Creek are waters of the State.

CLASS III VIOLATIONS:

None.

V. ASSESSMENT OF CIVIL PENALTIES

The Director imposes civil penalties for the following violations cited in Section II:

Violation	Penalty Amount
1	$1,600

Respondent's total civil penalty is $1,600.

The findings and determination of Respondent's civil penalty pursuant to OAR 340-12-045 are attached and incorporated as Exhibit No. 1.

VI. EXCEPTION TO ADVANCE NOTICE

The penalties are being imposed without advance notice pursuant to OAR 340-12-040(3)(b)(B) as the violation consists of disposing of sewage (as defined by ORS 468.700(4)) at an unauthorized disposal site.

VII. PAYMENT OF CIVIL PENALTY

The total penalty is now due and payable. Respondent's check or money order in the amount of $1,600 should be made payable to "State Treasurer, State of Oregon" and sent to the Business Office, Department of Environmental Quality, 811 S.W. Sixth Avenue, Portland, Oregon 97204.

VIII. OPPORTUNITY FOR CONTESTED CASE HEARING

Respondent has the right, if Respondent so requests, to have a formal contested case hearing before the Environmental Quality Commission (Commission) or its hearings officer regarding the matters set out above pursuant to ORS Chapter 183, ORS 468.135(2) and (3), and OAR Chapter 340, Division 11 at which time Respondent may be represented by an attorney and subpoena and cross-examine witnesses. That request must be made in writing and must be received by the Commission's hearings officer within twenty (20) days from the date of mailing of this Notice (or if not mailed, the date of personal service), and must be accompanied by a written "Answer" to the charges contained in this Notice. In the written "Answer," Respondent shall admit or deny each allegation of fact contained in this Notice and Respondent shall affirmatively allege any and all affirmative claims or

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defenses to the assessment of this civil penalty that Respondent may have and the reasoning in support thereof. Except for good cause shown:

1. Factual matters not controverted shall be presumed admitted;

2. Failure to raise a claim or defense shall be presumed to be a waiver of such claim or defense;

3. New matters alleged in the "Answer" shall be presumed to be denied unless admitted in subsequent pleading or stipulation by the Department or Commission.

Send the request for hearing and "Answer" to the: Hearings Officer, Environmental Quality Commission, 811 S.W. Sixth Avenue, Portland, Oregon 97204. Following receipt of a request for hearing and an "Answer," Respondent will be notified of the date, time and place of the hearing.

If Respondent fails to file a timely request for hearing or "Answer", the Director on behalf of the Commission may issue a default order and judgment, based upon a prima facie case made on the record, for the relief sought in this Notice.

Failure to appear at a scheduled hearing or meet a required deadline, may result in a dismissal of the contested case.

IX. OPPORTUNITY FOR INFORMAL DISCUSSION

In addition to filing a request for a contested case hearing, Respondent may also request an informal discussion with the Department by attaching a written request to the hearing request and "Answer".

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X. CONSEQUENCES OF ADDITIONAL VIOLATIONS

If any violation cited in Section II for which a civil penalty is assessed continues, or if any similar violation occurs, the Director may impose additional civil penalties upon the Respondent.

7/10/89
Date

Lydia R. Taylor
Fred Hansen, Director

EXHIBIT 1

FINDINGS AND DETERMINATION OF RESPONDENT'S CIVIL PENALTY
PURSUANT TO OREGON ADMINISTRATIVE RULE (OAR) 340-12-045

VIOLATION NO: 1 (discharging animal waste into public waters)

CLASSIFICATION: The violation is a Class II violation pursuant to OAR 340-12-055(2)(d).

MAGNITUDE: The magnitude of the violation is moderate. The estimated flow was 50 to 100 gallons per minute during the period of inspection. The presence of a large number of "bloodworms" along the ditch water line and bank below the discharge indicate that waste has discharged over a period of time to create conditions optimal for large populations of bloodworms.

CIVIL PENALTY FORMULA: The formula for determining the amount of penalty of each violation is: BP+[(.1xBP)(P+H+E+O+R+C)].

"BP" is the base penalty which is $1,000 for a Class II moderate magnitude violation in the matrix listed in OAR 340-12-042(1).

"P" is Respondent's prior violation(s) and receives a value of 4, as Respondent has one prior identical Class II violation in case no. WQ-WVR-81-105.

"H" is the past history of Respondent in taking all feasible steps or procedures necessary to correct any prior violation and receives a value of -2, as Respondent took all feasible steps to correct the violation.

"E" is the economic condition of Respondent and receives a value of 0, as there is insufficient information on which to base a finding.

"O" is whether or not the violation was a single occurrence or was repeated or continuous during the period of the violation and receives a value of 2, as the violation was repeated or continuous.

"R" is the cause of the violation and receives a value of 2, as the violation was a result of Respondent's negligence.

"C" is Respondent's cooperativeness in correcting the violation and receives a value of 0, as there is insufficient information on which to base a finding.

PENALTY CALCULATION:

Penalty = BP+[(.1xBP) (P+H+E+O+R+C)]
= $1,000 + [(.1x1,000) (4-2+0+2+2+0)]
= $1,000 + [(100)(6)]
= $1,000 + 600
= $1,600

NEIL GOLDSCHMIDT
GOVERNOR

Environmental Quality Commission

811 SW SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

REQUEST FOR EQC ACTION

Meeting Date: January 19, 1990
Agenda Item: F
Division: Water Quality
Section: Construction Grants

SUBJECT:

North Albany Health Hazard Area: Approval of Alternative Plan for Alleviating Certified Health Hazard.

PURPOSE:

Approval of the Alternative Plan will advance the process leading to provision of sanitary sewer service in the North Albany health hazard area and to the alleviation of conditions that constitute a danger to public health due to inadequate installations for the treatment and disposal of sewage.

ACTION REQUESTED:

___ Work Session Discussion
___ General Program Background
___ Potential Strategy, Policy, or Rules
___ Agenda Item ___ for Current Meeting
___ Other: (specify)

___ Authorize Rulemaking Hearing
___ Adopt Rules
Proposed Rules Attachment ___
Rulemaking Statements Attachment ___
Fiscal and Economic Impact Statement Attachment ___
Public Notice Attachment ___

___ Issue a Contested Case Order
___ Approve a Stipulated Order
___ Enter an Order
Proposed Order Attachment ___
_X_ Approve Department Recommendation
___ Variance Request Attachment ___
___ Exception to Rule Attachment ___
___ Informational Report Attachment ___
_X_ Other: Approve the Alternative Plan Attachment ___

DESCRIPTION OF REQUESTED ACTION:

The Department of Environmental Quality requests that the Environmental Quality Commission approve the Alternative Plan to city annexation for alleviation of conditions dangerous to public health in the North Albany area which has been submitted by the Benton County Commissioners acting as the Governing Body of the North Albany County Service District (NACSD), pursuant to a finding that the Alternative Plan is the best and most expeditious method for alleviating the hazardous conditions because of these considerations:

- Through intensive local deliberations, the Benton County Commissioners and the Albany City Council have arrived at an initial agreement that would allow the expeditious provision of sewer service to the North Albany health hazard area by the City of Albany without the requirement of annexation.

- Rejection of the Alternative Plan would return the health hazard abatement process to one requiring annexation by the City of Albany. Mandatory annexation includes an exclusion process, and is also likely to provoke litigation opposing annexation. These, if protracted, would delay the provision of sewer service to alleviate the health hazard, and may jeopardize the availability of grant and/or loan funding to partially finance the solution.

- The Alternative Plan proposes the installation of a sewage collection system in the North Albany health hazard area that would convey all wastewater flows to the City of Albany Sewage Treatment Plant including flows currently treated at the Riverview Heights Subdivision Sewage Treatment Plant, a facility which violates its permit. This approach has been determined preliminarily to be the most cost-effective method of providing sewer service to the health hazard area and is the same sewer system design concept that would be employed in an annexation scenario.

AUTHORITY/NEED FOR ACTION:

_X_	Required by Statute: ORS 222.890 Enactment Date: 1983	Attachment _A_
___	Statutory Authority: _____	Attachment ___
___	Pursuant to Rule: _____	Attachment ___
___	Pursuant to Federal Law/Rule: _____	Attachment ___

___ Other: Attachment ___
___ Time Constraints:

DEVELOPMENTAL BACKGROUND:

___ Advisory Committee Report/Recommendation Attachment ___
___ Hearing Officer's Report/Recommendations Attachment ___
___ Response to Testimony/Comments Attachment ___
___ Prior EQC Agenda Items: (list) Attachment ___
___ Other Related Reports/Rules/Statutes: Attachment ___
_X_ Supplemental Background Information:

Background Information on the Issue Attachment B
North Albany Sanitary Survey Attachment C
State Health Division Findings Attachment D
Letter from DEQ regarding Riverview Heights Sewage Treatment Plant Attachment E
Department of Justice Legal Opinion Attachment F
Alternative Plan and Letters of Transmittal Attachment G
Letter from City of Albany and Minutes Regarding Alternative Plan Attachment H

REGULATED/AFFECTED COMMUNITY CONSTRAINTS/CONSIDERATIONS:

Opposition on the part of some significant (if not quantifiable) portion of the residents of North Albany to annexation as a means of solving the problem of failing on-site disposal systems is well known and long standing. It is reasonable to predict that EQC approval of the Alternative Plan will be more favorably viewed in the area than would rejection.

Rejection of the Alternative Plan and reversion to the mandatory annexation process is likely to produce litigation. It is worthwhile to note that the State Health Division's hearing process was officially described as "vigorously contested". Two local organizations, "Stop Annexation - Not Sewers" and "Kingston Against City Annexation" were represented by attorneys at the hearings.

It is also the case that elected officials and staff of Benton County and the City of Albany, through the Albany/Benton County (ABC) Committee, invested considerable time and effort in the development of the Alternative Plan; both jurisdictions are on record supporting it. Having taken the effort this far, both are likely to want an opportunity to make the Plan work.

PROGRAM CONSIDERATIONS:

From the perspective of Department staff workload and other agency program concerns it does not appear that approval or rejection of the Alternative Plan by the EQC would have significantly different impacts. Whether the problems in North Albany are addressed with or without annexation, Water Quality Division staff will be involved with the responsible local jurisdictions in facilities planning, permit issues, review of plans and specifications, and funding issues.

The North Albany health hazard area is ranked first on the Construction Grants Priority List.

ALTERNATIVES CONSIDERED BY THE DEPARTMENT:

Under the Health Hazard Abatement Law (ORS 222.840 to 222.915), the Commission must choose between two alternatives when an Alternative Plan has been referred to it by the State Health Division for review. The alternatives for the Commission to consider are:

1. Approve the Alternative Plan based on a conclusion that it provides a method preferable to city annexation for alleviating the health hazard.

   If the Commission approves the Alternative Plan, the responsible jurisdiction has six months to submit a more fully developed final Alternative Plan for the Commission to review and certify.

2. Reject the Alternative Plan based on a conclusion that city annexation provides the best and most expeditious method to alleviate the health hazard.

   If the Commission rejects the Alternative Plan, the health hazard abatement process reverts to mandatory annexation.

DEPARTMENT RECOMMENDATION FOR ACTION, WITH RATIONALE:

The Department recommends alternative No. 1, approval of the Alternative Plan.

The Alternative Plan proposes a structural solution that would effectively solve the problems of failing on-site sewage disposal systems and an inadequately functioning treatment plant (Riverview Heights Sewage Treatment Plant) that have been determined to constitute a danger to public health. The proposed facilities consist of a network of interceptor and collector sewers and attendant pump stations

that would convey all wastewater flows in the North Albany health hazard area to the Albany Sewage Treatment Plant (STP). On the basis of preliminary analysis, the proposed facilities appear to be technically sound and the most cost-effective design concept, taking advantage of the capacity of the Albany STP. Indeed, from the engineering perspective the Alternative Plan is not alternative at all in that it is the same structural solution that the City of Albany would pursue under the more conventional annexation process. In this regard, the Alternative Plan is consistent with local comprehensive plans because Albany remains the provider of service, albeit without annexation.

From an implementation and schedule perspective the Alternative Plan is advantageous and preferable to annexation because it is more likely to result in the early provision of sewer service. The Alternative Plan schedule calls for completion of facilities planning/funding application by late spring of 1990 followed by phased design and construction to be completed by March 1992. Because the Alternative Plan is more acceptable to the public to be served than annexation, it would avoid the litigation that is likely to be initiated if mandatory annexation proceeds. Moreover, because the NACSD already exists and its boundaries include the entire health hazard area, no exclusion process may be initiated as would be the case under an annexation process. The exclusion process allows property owners, through a hearings process before the State Health Division, to have individual properties excluded from a mandatory annexation area. These facts make it likely that grant and/or loan funding could be applied for much earlier under the Alternative Plan. Delay in application for funds decreases the certainty of availability. Also, if the exclusion process were carried out under annexation, there might be a reduction in the number of properties included in the annexation boundary to share the cost of sewer construction, to the extent that individual petitions for exclusion were successful.

The long-standing sewage disposal problem in North Albany has until now proved intractable, principally because of the annexation issue. Through hard work and compromise the local jurisdictions and affected residents have worked-out a viable solution that is widely acceptable. The local effort should be recognized by giving the parties involved a chance to make it work.

It is important to note that if the Commission approves the Alternative Plan before it today, the responsible jurisdiction has six months to prepare and submit a final

Alternative Plan for Commission review and certification which shows:

- That Albany will extend sewer service extra-territorially.
- That financing has been assured.
- Detailed plans and specifications for the facilities, and a time schedule.
- That the facilities would alleviate the health hazard as well and as quickly as would be the case through annexation.

Thus, the NACSD as the jurisdiction submitting the Alternative Plan would have an opportunity to resolve with the City of Albany any unsettled issues from the initial Alternative Plan. The Commission would have the opportunity to take a second look at the Alternative Plan in a more detailed version prior to certifying the Alternative Plan for implementation.

CONSISTENCY WITH STRATEGIC PLAN, AGENCY POLICY, LEGISLATIVE POLICY:

The Alternative Plan is consistent with agency and legislative policy pertaining to water quality and health hazard abatement.

ISSUES FOR COMMISSION TO RESOLVE:

Should the Commission approve the Alternative Plan based on a conclusion that it provides an alternative preferable to city annexation as the best and most expeditious method for the alleviation of the health hazard conditions in North Albany?

INTENDED FOLLOWUP ACTIONS:

Subsequent to Commission approval of the initially submitted Alternative Plan:

1. Work with the responsible jurisdiction toward the development and submission of the final Alternative Plan within the required time-frame. In addition to the more typical facilities plan/plans and specifications type of information, the final Alternative Plan must resolve the outstanding questions pertaining to future status of the NACSD and jurisdictional responsibility for constructing and operating the proposed sewerage facilities.

2. Review the final Alternative Plan and prepare evaluations and recommendations for the Commission's consideration.

In the event that the final Alternative Plan is certified by the Commission:

1. Assist the responsible jurisdiction with grant and/or loan applications.

2. Monitor progress in the provision of sewer service in accordance with the certified Alternative Plan.

Approved:

Section: _____

Division: Lydia Taylor

Director: Lori Burpham for Fred Hansen

Report Prepared By: Richard J. Santner

Phone: 229-5219

Date Prepared: December 8, 1989

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of the city into which the city surrendering its charter is merged, on or before the date on which the merger becomes effective, shall file for record with the officer of the county in which the city is located having charge and custody of the deed records of the county, certified copies of the written statements of returns of the election in the two cities. The county officers shall enter the statements of returns of record in the deed records of the county. [Amended by 1983 c.350 §52]

222.720 [Repealed by 1983 c.350 §331a]

222.750 Annexation of unincorporated territory surrounded by city. When territory not within a city is surrounded by the corporate boundaries of the city, or by the corporate boundaries of the city and the ocean shore or a stream, bay, lake or other body of water, it is within the power and authority of that city to annex such territory. However, this section does not apply when the territory not within a city is surrounded entirely by water. Unless otherwise required by its charter, annexation by a city under this section shall be by ordinance or resolution subject to referendum, with or without the consent of any owner of property within the territory or resident in the territory. [Amended by 1963 c.444 §1; 1985 c.702 §16]

222.810 [Amended by 1953 c.562 §2; repealed by 1969 c.49 §1]

222.820 [Repealed by 1969 c.49 §1]

222.830 [Repealed by 1969 c.49 §1]

HEALTH HAZARD ABATEMENT

222.840 Short title. ORS 222.840 to 222.915 shall be known and may be cited as the Health Hazard Abatement Law. [1983 c.407 §2]

222.850 Definitions for ORS 222.840 to 222.915. As used in ORS 222.840 to 222.915, unless the context requires otherwise:

(1) "Affected territory" means an area within the urban growth boundary of a city and which is otherwise eligible for annexation to that city and in which there exists an actual or alleged danger to public health.

(2) "Assistant director" means the Assistant Director for Health.

(3) "City council" means the legislative body of a city.

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

(5) "Danger to public health" means a condition which is conducive to the propagation of communicable or contagious disease-producing organisms and which presents a reasonably clear possibility that the public generally is being exposed to disease-caused physical suffering or illness, including a condition such as:

(a) Impure or inadequate domestic water.

(b) Inadequate installations for the disposal or treatment of sewage, garbage or other contaminated or putrifying waste.

(c) Inadequate improvements for drainage of surface water and other fluid substances.

(6) "District" means any one of the following:

(a) A metropolitan service district formed under ORS chapter 268.

(b) A county service district formed under ORS chapter 451.

(c) A sanitary district formed under ORS 450.005 to 450.245.

(d) A sanitary or a water supply authority formed under ORS 450.650 to 450.989.

(e) A domestic water supply district formed under ORS chapter 264.

(7) "Division" means the Health Division of the Department of Human Resources. [1967 c.624 §1; 1973 c.637 §1; 1975 c.639 §1; 1983 c.407 §4]

222.855 Annexation to remove danger to public health. In addition to the procedures authorized in ORS 222.010 to 222.750, territory otherwise eligible for annexation in accordance with ORS 222.111 which is within the urban growth boundary of a city may be annexed by passage of an ordinance as provided in ORS 222.900 without any vote in such territory or any consent by the owners of land therein if it is found, as provided in ORS 222.840 to 222.915, that a danger to public health exists because of conditions within the territory and that such conditions can be removed or alleviated by sanitary, water or other facilities ordinarily provided by incorporated cities. [1967 c.624 §2; 1973 c.637 §2; 1975 c.639 §2; 1981 c.888 §7]

222.860 Proposal for annexation. (1) The city council of any city shall adopt a resolution containing a proposal for annexation without vote or consent in the affected territory. The proposal may contain terms of annexation as provided in ORS 222.111 and shall:

(a) Describe the boundaries of the affected territory; and

(b) Describe the conditions alleged to be causing a danger to public health.

(2) The governing body of any district having jurisdiction over the affected territory may adopt a resolution containing a proposal for annexation

to the city without vote or consent in the affected territory. The proposal shall:

(a) Describe the boundaries of the affected territory; and

(b) Describe the conditions alleged to be causing a danger to public health.

(3) The local board of health having jurisdiction shall verify the conditions alleged in the proposal to be causing a danger to public health, based upon its knowledge of those conditions.

(4) The council or governing body shall cause a certified copy of the resolution together with verification by the local board of health having jurisdiction, to be forwarded to the division and request the division to ascertain whether conditions dangerous to public health exist in the affected territory. [1967 c.624 §3; 1973 c.637 §3; 1975 c.639 §3; 1981 c.888 §8; 1983 c.407 §5]

222.865 [1967 c.624 §4; 1973 c.637 §4; repealed by 1975 c.639 §18]

222.870 Hearing in affected territory; notice. (1) Upon receipt of the certified copy of the resolution, and verification by the local board of health having jurisdiction, the division shall review and investigate conditions in the affected territory. If it finds substantial evidence that a danger to public health exists in the territory, it shall issue an order for a hearing to be held within the affected territory, or at a place near the affected territory if there is no suitable place within that territory at which to hold the hearing, not sooner than 30 days from the date of the order.

(2) Upon issuance of an order for a hearing, the division shall immediately give notice of the resolution and order by publishing them in a newspaper of general circulation within the city and the affected territory once each week for two successive weeks and by posting copies of the order in four public places within the affected territory. [1973 c.624 §6; 1973 c.637 §5; 1975 c.639 §4; 1983 c.407 §6]

222.875 Purpose and conduct of hearing; written findings of fact. (1) The hearing shall be for the sole purpose of determining whether a danger to public health exists due to conditions in the affected territory. It may be conducted by one or more members of the division's staff to whom authority to conduct such a hearing is delegated. It shall proceed in accordance with rules which may be established by the division. Any person who may be affected by the finding, including residents of the city, may be heard. Within 60 days following the hearing, the person conducting the hearing shall prepare and submit to the division written findings of fact and recommendations based thereon. The division shall publish a notice of the issuance of such findings and recommendations in the newspaper utilized for the notice of hearing under ORS 222.870, advising of the opportunity for presentation of a petition under subsection (2) of this section.

(2) Within 15 days after the publication of notice of issuance of findings in accordance with subsection (1) of this section any person who may be affected by the findings, including residents of the city, or the affected city, may petition the assistant director according to rules of the division to present written or oral arguments on the proposal. If a petition is received the assistant director may set a time and place for receipt of argument. [1967 c.624 §7; 1973 c.637 §6; 1975 c.639 §5; 1983 c.407 §7]

222.880 Health Division order or finding; hearing upon petition; alteration of boundaries. (1) Within 30 days following the final hearing of any arguments received by petition under the provisions of ORS 222.875 (2) the assistant director shall review the arguments and the findings and recommendations of the person conducting the hearing as provided in ORS 222.875 (2). If the assistant director finds no danger to public health exists because of conditions within the affected territory, the assistant director shall issue an order terminating the proceedings under ORS 222.840 to 222.915 with reference to the affected territory.

(2) If the assistant director finds that a danger to public health exists because of conditions within the affected territory, the assistant director shall file a certified copy of findings with the city and, except where the condition causing the danger to public health is impure or inadequate domestic water, with the commission.

(3) If the assistant director determines that a danger to public health exists because of conditions within only part of the affected territory, the assistant director may, upon petition and hearing, reduce the boundaries of the affected territory to that part of the territory that presents a danger if the area to be excluded would not be surrounded by the affected territory remaining to be annexed and would not be directly served by the sanitary, water or other facilities necessary to remove or alleviate the danger to public health existing within the affected territory remaining to be annexed. The findings shall describe the boundaries of the affected territory as reduced by the assistant director. The assistant director shall file a certified copy of findings with the city and,

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except where the condition causing the danger to public health is impure or inadequate domestic water, the commission.

(4) In determining whether to exclude any area the assistant director may consider whether or not such exclusion would unduly interfere with the removal or alleviation of the danger to public health in the affected territory remaining to be annexed and whether the exclusion would result in an illogical boundary for the extension of services normally provided by an incorporated city.

(5) The city shall, when requested, aid in the determinations made under subsections (3) and (4) of this section and, if necessary, cause a study to be made. [1967 c.624 §8; 1973 c.637 §7; 1975 c.639 §6; 1983 c.407 §8]

222.883 Suspension of proceedings by Health Division; purpose; limit. At any time after the assistant director under ORS 222.880 finds that conditions dangerous to public health exist, the division may order further proceedings on the findings filed under ORS 222.880 halted in order to allow a city, district or persons affected by the findings to develop and propose an alternative plan to annexation for the removal or alleviation of the conditions dangerous to public health. Proceedings may be stayed under this section for not longer than 30 days. [1983 c.407 §3]

222.885 Alternative plan by petition or resolution; stay of proceedings. (1) Within 60 days after the assistant director under ORS 222.880 finds that conditions dangerous to public health exist, a petition, signed by not less than 51 percent of the electors registered in the affected territory, may be filed with the division. Such petition shall suggest an alternative plan to annexation to the city for removal or alleviation of the conditions dangerous to public health. The petition shall state the intent of the residents to seek annexation to an existing district authorized by law to provide facilities within the affected territory necessary to remove or alleviate the dangerous conditions or to seek, with the approval of the city or district, extraterritorial extension of a city's or district's sewer or water lines. The petition shall be accompanied by a proposed plan which shall state the type of facilities to be constructed, a proposed means of financing the facilities, and an estimate of the time required to construct such facilities and place them in operation.

(2) Within 30 days after the assistant director under ORS 222.880 finds that conditions dangerous to public health exist, a resolution adopted by the city council or the governing body of any district having jurisdiction over the affected territory may be filed with the division. The resolution shall suggest an alternative plan to annexation to the city for removal or alleviation of the conditions dangerous to public health. The resolution shall be accompanied by a proposed plan which shall state the type of facilities to be constructed, a proposed means of financing the facilities, and an estimate of the time required to construct such facilities and place them in operation.

(3) Upon receipt of such petition or resolution adopted by a district or city council, the division shall:

(a) Immediately forward copies of any petition or resolution to the city or district referred to in the petition or resolution, and, except where the condition causing the danger to public health is impure or inadequate domestic water, to the commission.

(b) Order further proceedings on the findings filed under ORS 222.880 stayed pending the review permitted under ORS 222.890 and this section. [1967 c.624 §8a (1), (2); 1973 c.637 §8; 1975 c.639 §7; 1983 c.83 §26; 1983 c.407 §9]

222.890 Review of alternative plan. (1) An alternative plan referred to in ORS 222.885 shall be reviewed by the division in cases where danger to public health is caused by impure or inadequate domestic water and in all other cases by the commission. The plan shall be approved or rejected by the appropriate authority. In reviewing the alternative plan contained in the petition, the authority shall consider whether, in its judgment, the plan contains a preferable alternative for the alleviation or removal of the conditions dangerous to public health. If it determines that annexation to the city provides the best and most expeditious method of removing or alleviating the dangerous conditions, the alternative plan shall be rejected and further proceedings on the finding filed under ORS 222.880 shall resume.

(2) If the reviewing authority finds that the alternative plan provides a preferable method of alleviating or removing the dangerous conditions, the petitioners or appropriate governing body shall have six months within which to present to such authority information showing:

(a) That the territory in which the conditions dangerous to public health exist has received approval for the extension of a city's or district's sewer or water lines within the territory or has annexed to a district authorized by law to provide facilities necessary to remove or alleviate the dangerous conditions, and that financing of the facilities for extension of such facilities to the territory has been assured.

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(b) Detailed plans and specifications for the construction of such facilities.

(c) A time schedule for the construction of such facilities.

(d) That such facilities, if constructed, will remove or alleviate the conditions dangerous to public health in a manner as satisfactory and expeditious as would be accomplished by the proposed annexation to the city.

(3) The authority shall review the final plan presented to it by the petitioners, city or district and shall promptly certify whether the requirements of subsection (2) of this section have been met. If the requirements have been met, the division shall certify the alternative plan. Further annexation proceedings on the findings filed under ORS 222.880 shall be suspended and the city shall be so notified. If the requirements of subsection (2) of this section are not met by the petitioners, city or district or whenever the reviewing authority determines that the requirements of the certified plan are not being satisfied, further proceedings on the findings filed under ORS 222.880 shall resume. [1967 c.624 §8a (3), (4), (5); 1973 c.637 §9; 1975 c.639 §8; 1983 c.407 §10]

222.895 [1967 c.624 §9; 1973 c.637 §10; repealed by 1975 c.639 §9 (222.896 enacted in lieu of 222.895)]

222.896 Judicial review. Judicial review of final orders under ORS 222.840 to 222.915 shall be as provided in ORS 183.480 to 183.500 for judicial review of contested cases. [1975 c.639 §10 (enacted in lieu of 222.895)]

222.897 Study and plan for alleviation of health danger by city; procedure if city fails to act. (1) Upon receipt of a certified copy of the division's findings under ORS 222.880, the city council shall cause a study to be made and preliminary plans and specifications developed for the sanitary, water or other facilities necessary to remove or alleviate the conditions causing a danger to public health. The council shall prepare a schedule setting out the steps necessary to put the plan into operation and the time required for each step in the implementation of the plan. A copy of the plans and specifications and the time schedule shall, in the case where the danger to public health is caused by impure or inadequate domestic water, be submitted to the division and in all other cases to the commission.

(2) If the city within 90 days, fails to complete the requirements in subsection (1) of this section, the division shall conduct the necessary studies and prepare plans and other documents required for the consideration of the proposal and the final determination of the proceedings. The expense of the study and preparation of the plans and other documents shall be paid by the city upon vouchers properly certified by the assistant director. [1975 c.639 §12]

222.898 Determination if health danger can be alleviated; approval of plans; notice to city. (1) Within 60 days of receipt of the preliminary plans and other documents submitted as required by ORS 222.897, the appropriate reviewing authority shall determine whether the conditions dangerous to public health within the territory proposed to be annexed can be removed or alleviated by the sanitary, water or other facilities proposed by the plans and specifications.

(2) If such authority considers the proposed facilities and the time schedule for installation of such facilities adequate to remove or alleviate the dangerous conditions, it shall approve the proposal and certify its approval to the city.

(3) If the authority considers the proposed facilities or time schedule inadequate, it shall disapprove the proposal and certify its disapproval to the city including the particular matters causing the disapproval. The city council shall then submit an additional or revised proposal.

(4) In the event the authority upon review of the plans and other documents submitted under subsection (1) of this section determines that the danger to public health in the area proposed to be annexed cannot be removed or alleviated by sanitary, water or other facilities ordinarily provided by incorporated cities it shall terminate the proceedings upon the proposal and notify the city. [1975 c.639 §13]

222.900 City to adopt ordinance. (1) Subject to subsection (2) of this section, upon receipt of the certified copy of the finding as provided in ORS 222.880 (2) or (3) and certification of approval of plans under ORS 222.898, the city council shall adopt an ordinance which shall:

(a) Contain the legal description of the territory annexed;

(b) Contain the terms of the annexation, if any, made under ORS 222.111;

(c) Adopt the plans, specifications and time schedule as approved by the division or commission; and

(d) Declare the territory annexed to the city in accordance with ORS 222.840 to 222.915.

(2) An ordinance shall not be enacted as provided in subsection (1) of this section until the expiration of the time for appeal under the provisions of ORS 222.896 and, in the event an appeal

is filed, following the determination of that appeal.

(3) If the division makes its finding under ORS 222.880 (3), the city shall not annex a greater area than that described in the finding. The recorder, or other officer performing the duties of the recorder, shall transmit a transcript to the Secretary of State, including certified copies of the resolution required in ORS 222.860, the finding of the assistant director, and the ordinance proclaiming annexation of the territory.

(4) If the city council adopts the ordinance of annexation as provided in subsection (1) of this section, it shall within one year thereafter prepare plans and specifications for the sanitary, water or other facilities proposed to be provided in the annexed area, in compliance with ORS 448.115 to 448.285 or 468.742 and shall then proceed in accordance with the time schedule to construct or install these facilities. The commission shall use its powers of enforcement under ORS 448.305, 454.010 to 454.040, 454.205 to 454.255, 454.405, 454.425, 454.505 to 454.535, 454.605 to 454.745, and ORS chapter 468 to insure that the facilities are constructed or installed in conformance with the approved plans and schedule. The manner of financing the cost of the facilities shall be determined by the city council. [1967 c.624 §10; 1973 c.637 §11; 1975 c.639 §14; 1983 c.740 §57]

222.905 Application to initiate annexation. (1) The local board of health or the boundary commission having jurisdiction shall, if it believes a danger to public health exists within a territory otherwise eligible for annexation in accordance with ORS 222.111, proceed in the same manner as a city is authorized to proceed under ORS 222.860.

(2) Any 11 residents of territory otherwise eligible for annexation in accordance with ORS 222.111 who believe a danger to public health exists within such territory may apply to the local board of health to initiate proceedings to annex such territory as provided in subsection (1) of this section. The local board of health shall within a reasonable time, but not more than 90 days, investigate the matters alleged in the application and shall either initiate proceedings or certify to the petitioners that the investigation disclosed insufficient evidence to initiate proceedings. [1967 c.624 §11; 1973 c.637 §12; 1975 c.639 §15; 1981 c.888 §9]

222.910 [1967 c.624 §5; 1973 c.637 §13; repealed by 1975 c.639 §16 (222.911 enacted in lieu of 222.910)]

222.911 Participation of interested division assistant director, officer or employe prohibited. No officer or employe of the division who owns property or resides within affected territory that is subject to proceedings under the provisions of ORS 222.840 to 222.915 shall participate in an official capacity in any investigation, hearing or recommendation relating to such proceedings. If the assistant director is such a person, the assistant director shall so inform the Governor, who shall appoint another person to fulfill the duties of the assistant director in any investigation, hearing or recommendation relating to such proceeding. [1975 c.639 §17 (enacted in lieu of 222.910)]

222.915 Application of ORS 222.840 to 222.915. The provisions of ORS 222.840 to 222.915 do not apply to proceedings to annex territory to any city if the charter or ordinances of the city conflict with or are inconsistent with ORS 222.840 to 222.915. [1967 c.624 §12; 1971 c.673 §5]

PENALTIES

222.990 Penalties. Failure to comply with the provisions of ORS 222.010 subjects the city to a penalty of $100 which may be recovered by an action in the name of the county in which the city is located.

Background Information on the Issue

The unincorporated part of Benton County known as North Albany is north of the Willamette River, adjacent to the portion of the City of Albany in the vicinity of N.W. Hickory St. that is also north of the Willamette. The area is primarily residential in nature and is within the Urban Growth Boundary (UGB).

The North Albany County Service District (NACSD) provides water to most of North Albany through purchase from the City of Albany. The NACSD also operates a sewage collection system and treatment plant serving the 123 homes in the Riverview Heights Subdivision. The remainder of North Albany relies on on-site sewage disposal systems. Problems with on-site disposal systems have been significant and long-standing in some parts of North Albany, but have never been resolved.

In May of 1987, the Benton County Board of Health received a petition from North Albany residents requesting the initiation of health hazard proceedings under the Health Hazard Abatement Law (ORS 222.840 to 222.915). The Board of Health ordered a sanitary survey for those portions of North Albany that were of most concern as a basis for the health hazard proceedings (Attachment C).

The survey was conducted during the first two weeks of February 1988 by Benton County sanitarians with the participation of sanitarians from DEQ and the State Health Division. The survey found a failure rate of 39% among the 310 on-site disposal systems surveyed, widely distributed over the survey area. As a result of the survey, the Benton County Health Division concluded that there was a reasonably clear possibility that the public was being exposed to hazardous conditions due to inadequate installations for the treatment and disposal of sewage. The Riverview Heights Subdivision Treatment Plant, because of failure to comply with discharge standards, was included in the category of inadequate installations. The survey further concluded that the extension of city sewer service to the area was the only permanent solution to this situation (Attachment C).

As the next step in the Health Hazard Abatement process, the State Health Division held hearings on the proposed annexation between June and September, 1988. Based on the hearings process, the State Health Division Administrator issued a finding in May, 1989 that a public health hazard existed in the area proposed for annexation. The findings included a determination that the Riverview Heights Treatment Plant discharges inadequately treated sewage into the environment (Attachment D). Documentation provided by DEQ had been incorporated into the findings regarding the treatment plant (Attachment E).

Under the Health Hazard Abatement Law, once the State Health Division has found that a danger to public health exists, the usual course of events is for the city adjacent to the health hazard area to prepare preliminary plans, specifications and a schedule for review by the EQC (except in cases where the problem is related to impure domestic water). If these are

approved by the EQC, the City proceeds with annexation, finalizes the plans and specifications, and constructs the facilities.

However, the law allows for submission of an alternative plan to city annexation by a district (such as a county service district) having jurisdiction over the health hazard area. If such an alternative plan is forthcoming, the State Health Division may suspend the city annexation process to allow submission and review of the alternative plan.

On May 16, 1989, Health Division Administrator Kristine M. Gebbie stayed the city annexation process in the case of North Albany to allow the development and submission of an alternative plan to city annexation. The stay was initially for 90 days but was extended for an additional 90 days until November 15, 1989.

During the May-November 1989 period the Albany/Benton County (ABC) Committee composed of elected officials from these jurisdictions and deliberating with the support and participation of staff, consultant and interested citizens, worked intensively on the development of an alternative plan to city annexation that would effectively deal with the health hazard problems and would be acceptable to local governments and affected residents.

One important question that arose during the ABC Committee's work pertained to a possible requirement that the EQC, which has responsibility for review of alternative plans, take into account the acknowledged comprehensive plan for the Albany urban area which establishes Albany as the preferred provider of urban services within the UGB. DEQ's Water Quality Division requested an opinion on this and related questions from the State of Oregon Department of Justice. In summary, the Department of Justice determined that the EQC does not need to comply with an acknowledged comprehensive plan in its determination of the preferability of an alternative plan to city annexation (Attachment F).

After an alternative plan to city annexation has been submitted to the State Health Division, it is referred to the EQC as the reviewing authority (except in cases where the danger to public health is caused by impure domestic water). The EQC must approve or reject the alternative based on a judgement as to whether or not the alternative plan is preferable to city annexation for the alleviation of conditions dangerous to public health. If the alternative plan is rejected, the health hazard abatement process reverts to the mandatory city annexation procedure. If the alternative plan is approved, then the entity submitting the alternative plan has six months within which to further develop and submit a final alternative plan. The final alternative plan, if determined to provide a means as expeditious and satisfactory as city annexation for the alleviation of conditions dangerous to public health, will be certified as such by the EQC. If the EQC does not certify the final alternative plan, the health hazard abatement process reverts to mandatory city annexation.

The Benton County Board of Commissioners acting as the Governing Body of the NACSD has submitted an (initial) alternative plan to the State Health Division, which in turn has referred it to the EQC for review in accordance

with the Health Hazard Abatement Law as outlined above (Attachment G). The City of Albany has provided the Benton County Commissioners with a statement of support for the Alternative Plan based on the inclusion of certain provisions (Attachment H).

The Alternative Plan contains the following important elements:

1. The City of Albany will provide sewer service from the Albany Sewage Treatment Plant to the health hazard area without requiring annexation.

2. The NACSD will transfer its water and sewer facilities and operations to the City of Albany. The continued existence of the NACSD as a taxing/contracting authority will be determined later. Jurisdictional responsibility for implementation of the facilities construction aspect of the Alternative Plan will depend on the determination regarding the continued existence of the NACSD.

3. The NACSD will not oppose sewer and water surcharges imposed by the City of Albany on areas which are not annexed to the City but receive sewer and water service.

4. Benton County will transfer land use administration in the UGB to the City of Albany. Benton County will provide in-kind planning services to the Albany Planning Department to help implement the Alternative Plan's land use components.

5. After details of the Alternative Plan have been agreed to by Albany and Benton County, an election offering phased-value annexation will be held. If the election fails the Alternative Plan will be implemented.

6. The facilities design component of the Alternative Plan shows a network of interceptor sewers and attendant pump stations that would provide sewer service to the health hazard area. The Riverview Heights Subdivision collection system would be connected to the new interceptors. The Riverview Heights Treatment Plant would be abandoned. Collector sewers would be constructed to access properties presently using on-site disposal systems. All flows would be conveyed to the Albany Sewage Treatment Plant.

7. The collector sewers would be financed by Bancroft bonds. The interceptors would be financed by general obligation bonds or by assessments, reduced by any EPA grant or loan.

8. The proposed project schedule calls for completion of the facilities planning/funding application phase by late spring of 1990. Project design and construction would be completed in three phases. Project completion (service connections) is projected to be achieved by March of 1992.

(Please see Attachment G, the Alternative Plan, for further details and maps.)

NORTH ALBANY SANITARY SURVEY

BENTON COUNTY

MARCH 16, 1988

BENTON COUNTY HEALTH DEPARTMENT

ENVIRONMENTAL HEALTH DIVISION

530 NW 27TH STREET

CORVALLIS, OREGON 97330

757-6841

TABLE OF CONTENTS

3/16/88

NORTH ALBANY SANITARY SURVEY
FEBRUARY, 1988

INTRODUCTION

The area known as North Albany lies in unincorporated enton County, immediately adjacent to the city limits of Al ny which extend across the Willamette River to N. W. Hick ry Street. The area is predominantly residential in natu e, with lot sizes ranging from one quarter acre to several acres in size. Some farming practices continue on larger tracts of land.

Drinking water is provided to most of North Albany by the North Albany County Service District which purchases water from the City of Albany. Except for the Riverview Heights Subdivision, the area continues to be served by individual septic tank and drainfield systems. Riverview Heights is served by a sewage treatment plant which is operated by the County Service District.

HISTORY

For many years, septic tank problems have plagued some of the neighborhoods in North Albany. The major cause of septic problems has been poorly drained soils. Other factors which have contributed to the problems include small lot size, lack of system maintenance, and poor system design. These factors, in part, prompted the Benton County Health Department to place a moratorium on septic tank permits in Princeton Heights and Kingston Heights in 1971.

A Health Department survey of septic tanks in the Gibson Hill Road area, known as Area II, documented a failure rate of 36% in 1979. In addition, Benton county is under an Environmental Quality Commission order to upgrade or replace the Riverview Heights treatment plant which is inadequate to serve the 125 homes in the subdivision.

Over the years, several plans for correcting the problems have been discussed. Citizen initiatives to annex to the City of Albany for sewer services have been unsuccessful. Many individual septic system repairs have been attempted, but they are often unsuccessful, or provide only temporary improvement. The Health Department continues to receive complaints about the problems, as well as calls from citizens requesting help and voicing concern.

PURPOSE

The Benton County Board of Health, through its Health Department, has a responsibility to protect the healt and welfare of Benton County citizens and visitors. In B ton County, the Board of Commissioners (Board) serves as e Board of Health.

On May 20, 1987, the Board received a petition from No th Albany residents requesting initiation of health hazard annexation proceedings for the North Albany area. After discussions with the Department of Environmental Quality (DEQ) and the Oregon State Health Division (OSHD), it was determined that suspected problem areas needed to be surveyed in order to better define the basis for the health hazard proceedings.

A Board Order adopted on June 3, 1987 directed the Benton County Environmental Health Division to conduct the survey and present the results to the Board of Health along with a resolution initiating health hazard proceedings under ORS 222.905. A copy of the Board Order and map of the survey area appear as Figure 1 and Map 1 of this report.

3/16/88

FIGURE 1

N. Albany Survey

BEFORE THE BOARD OF HEALTH
FOR THE STATE OF OREGON, FOR THE COUNTY OF BENTON

In the Matter of Conducting a Sanitary Survey in North Albany) ORDER

THE ABOVE ENTITLED MATTER COMING NOW FOR THE CONSIDERATION OF THE BOARD AND,

IT APPEARING TO THE BOARD

THAT, on May 20, 1987 the Board of Health received a petition from North Albany residents requesting that the County initiate health hazard proceedings under ORS 222.905 for all of the North Albany Urban Growth Boundary; and

THAT subsequent meetings with staff from the Department of Environmental Quality and Health Division indicate that a resolution involving the whole urban growth boundary would be returned; and

THAT the areas of most significant concern are Area IIA, Kingston and Princeton Heights.

NOW, THEREFORE, IT IS HEREBY ORDERED that Environmental Health staff in conjunction with the Department of Environmental Quality and Health Division staff conduct a sanitary survey in the shaded area shown on Exhibit A; and

THAT the results of that survey along with a resolution initiating health hazard proceedings under ORS 222.905 be presented to the Board of Health in March, 1988.

Adopted this 3rd day of June, 1987.

Signed this 15th day of June, 1987.

BENTON COUNTY BOARD OF HEALTH

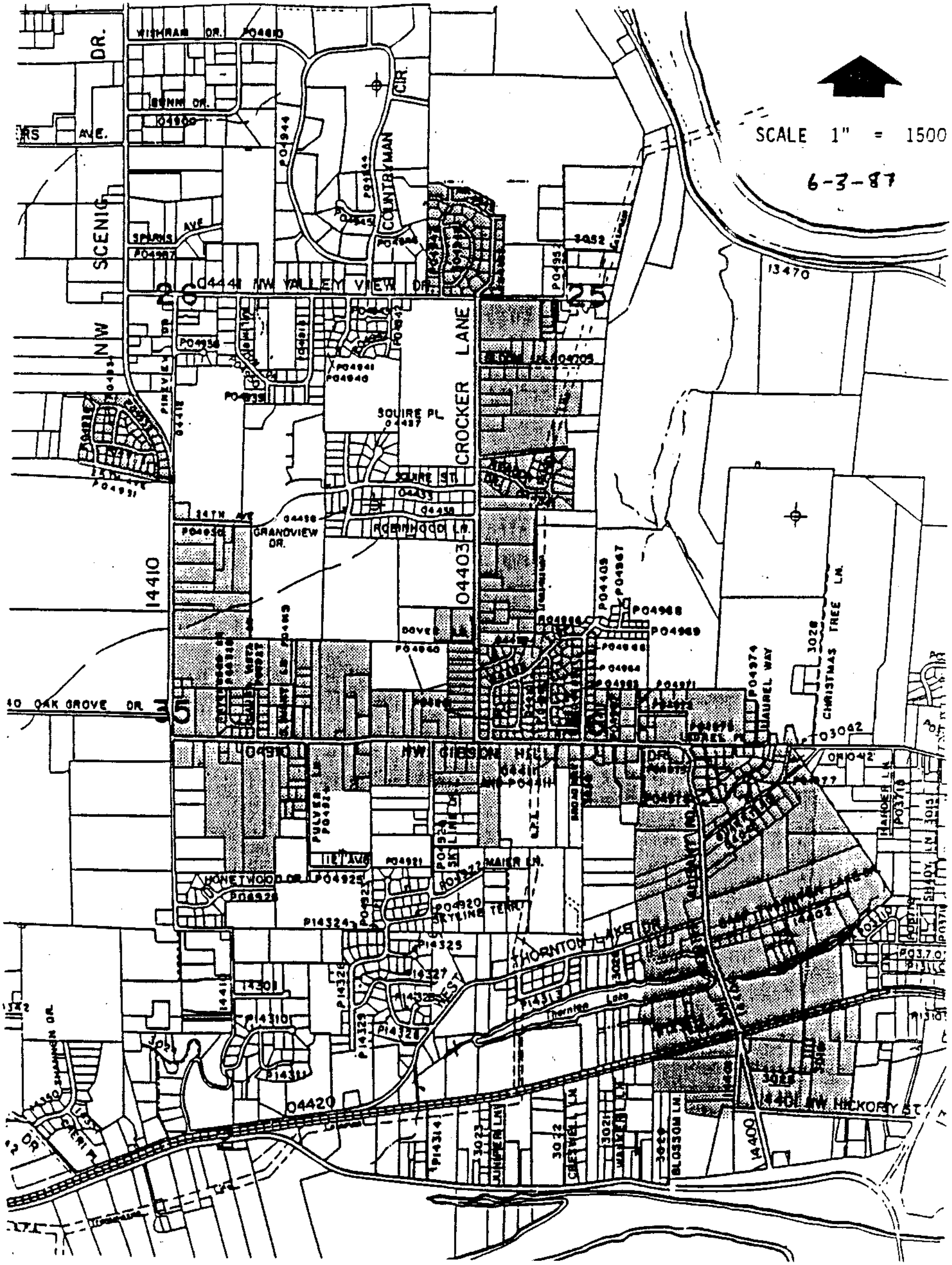
VOTE
SCHROCK yes
SIMERVILLE yes
CARR yes

Charlie L. Carr
Chairman

Dale D. Schrock
Member

Jeanette Simerville
Member

RE0130/F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6-3-87
WISHRAM DR.
COUNTRYMAN CIR.
SCENIC DR.
NW VALLEY VIEW DR.
CROCKER LANE
SQUIRE PL.
SQUIRE ST.
GRANDVIEW DR.
ROBINHOOD LN.
OAK GROVE DR.
NW GIBSON HILL DR.
HONETWOOD DR.
THORNTON LAKE DR.
CHRISTMAS TREE LN.
LAUREL WAY
NW HICKORY ST
JUNIPER LN
BLOSSOM LN.
14410
04403
14400
13470
04420
25
5

SURVEY METHODOLOGY

The survey boundary was developed on the basis of earlier surveys and the history of known septic tank problems, complaints, and attempted repairs. The Department of Environmental Quality (DEQ) and Oregon State Health Division (OSHD) participated in the determination of the boundary and committed a total of seven sanitarians to assist three Benton County sanitarians with the survey.

In mid-January 1988, a letter was mailed to all known property owners in the area announcing that the survey had been scheduled to begin on February 1, 1988. A meeting of the Albany Benton County Intergovernmental Advisory Committee was held on January 21, 1988 to review the survey plan. Public participation was invited.

On February 1, 1988, five two-member teams began the house to house survey which required two weeks to complete. Occupants were interviewed and sewage systems were evaluated. Tracer dye, surface water samples, and photographs were used to document systems suspected of having problems.

The feasibility of on-site repairs was evaluated on each lot with a failing or marginal system. Repair evaluations were cursory in nature and based on general drainage conditions and the amount of room available.

Five additional parcels were surveyed due to their proximity to the proposed boundary. They have been included in the results.

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WEATHER CONSIDERATIONS

Sanitary surveys of septic tank systems are normally done during the winter months because failed systems can be difficult to detect during the drier times of the year. Normal rainfall is desirable so that typical winter time conditions can be observed and documented. This is especially important in North Albany where a high seasonal water table in poorly drained soils is the primary cause of failure.

Figure 2 shows that cumulative rainfall is behind the 30 year average for the crop year. Although December and January were about average, Figure 3 shows that the week prior to the survey and the first week of the survey were unusually dry.

FIGURE 2: CUMULATIVE RAINFALL BY MONTH

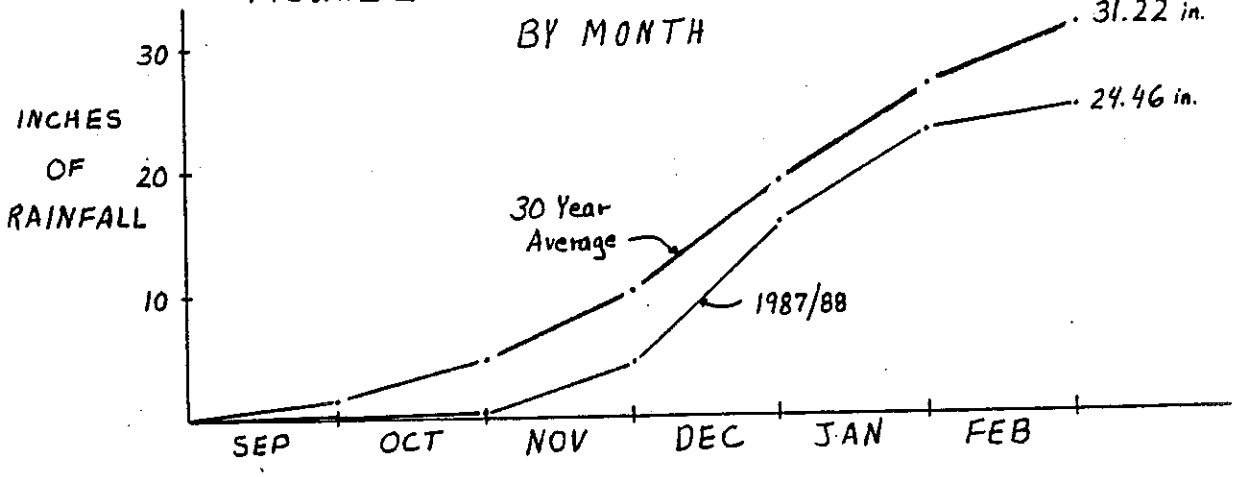
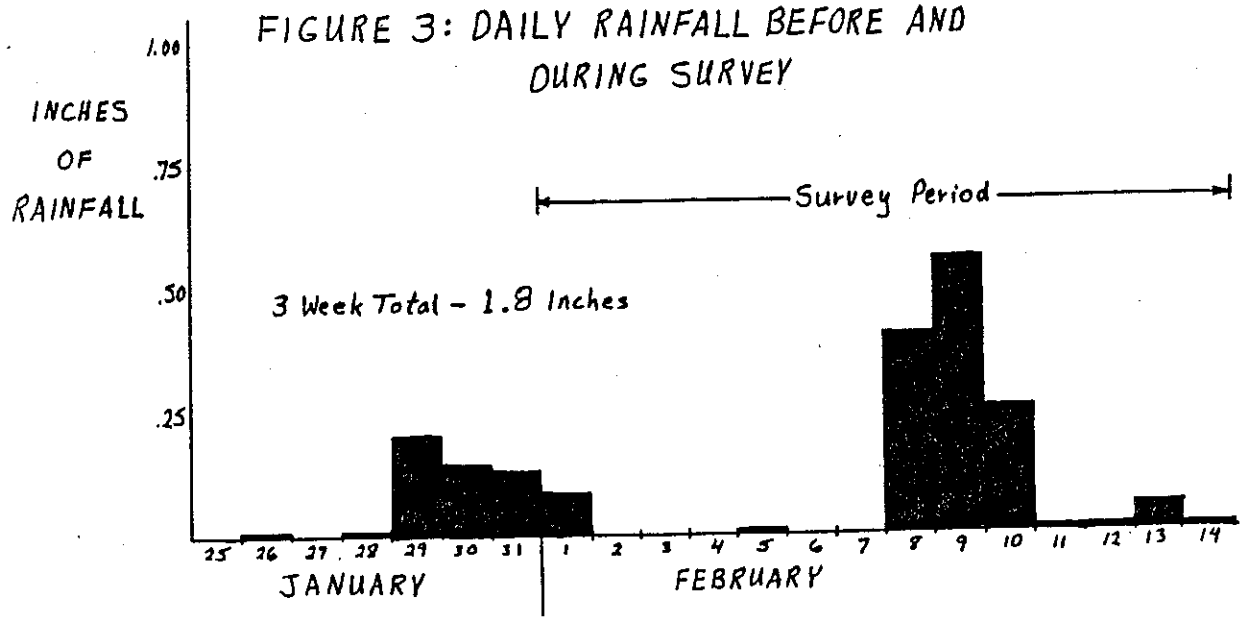


FIGURE 3: DAILY RAINFALL BEFORE AND DURING SURVEY



SURFACE WATER SAMPLING

PURPOSE

Microbiological analysis of surface water was done to aid in determining the status of individual sewage disposal systems. Samples were generally collected on a lot by lot basis where dye testing was not possible or was inconclusive. Sampling was not done on an area-wide basis to assess overall impacts on surface water drainage systems.

METHOD

Sample points included ponded water, seeps, and discharges in or immediately below drainfields. Roof drain and tile drain discharges suspected of carrying sewage were also sampled. All samples were packed with ice and rushed to the Oregon State Health Division laboratory for testing within six hours of collection.

Fecal coliform and Enterococci bacteria were selected as indicator organisms. These bacteria are normally found in the intestines of humans and animals. Because fecal coliform readily die off in the environment, and Enterococci are more persistent; their relative numbers is an indication of the proximity to the source of contamination.

RESULTS

The membrane filter method was used with growth specific media to culture the bacteria. Results are expressed as the number of colonies per 100 milliliters (ml) of water.

The DEQ standards for surface water quality were adopted as a guide for interpreting the results. Counts above 200 colonies per 100 ml for fecal coliform and 33 colonies for Enterococci indicate poor quality or contaminated water. Counts of less than the DEQ standards were interpreted as representing no indication of septic failure. Counts of greater than 1000 for fecal coliform and 100 for enterococci were generally interpreted as direct evidence of failure.

A total of 80 samples was submitted for analysis. The results are displayed in Table 1.

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TABLE 1: SURFACE WATER SAMPLE RESULTS

UNIT #	SAMPLE #	LOCATIONS	FECAL COL.	ENTERO
3	542	Spring discharge.	<100	60
5	550	Roadside ditch below drainfield.	<100	<20
11	535	Sewage discharge along north property line.	>500,000	>100,000
26	545	Sewage discharge along S.E. property line.	1,160	98,000
33	534	Spring drainage ditch below drainfield area.	460	<200
38	530	Seepage from bank below drainfield.	leaked	
39	544	Seepage area into roadside ditch below drainfield.	> 10,000	>800
57	572	Ponded area along property line.	117,000	100
69	573	Ponded area over drainfield in rear yard.	134,000	5000
78	565	Pipe discharge to roadside ditch in front yard.	6,200	<20
79	570	Seep discharge on hillslope below drainfield.	200	20
80	568	Seep discharge below drain-field.	200	280
86	614	Ponded sewage over south ends of drainfield.	>100,000	4,820
90	611	Spring discharge at base of terrace below drainfield.	1,200	640
91	601	Spring discharge below drainfield.	14,000	>100,000
94	604	Ponded waters over drainfield.	4,600	560
95	546	Ponded sewage over drainfield.	68,200	1520

TABLE 1: SURFACE WATER SAMPLE RESULTS

UNIT #	SAMPLE #	LOCATIONS	FECAL COL.	ENTERO
96	608	Seep zone below drainfield.	>100,000	1220
98	629	Seep zone immediately below drainfield.	4,800	80
105	600	End of open trench at end of drainfield.	4,000	1060
112	627	Ponded sewage on top of drainfield.	>100,000	400
114	630	Ponded waters on top of drainfield.	<200	380
120	538	Wet area West of home.	<20	900
120	531	At clay tile N.W. of house.	2,700	3,600
115	584	45' west of cross fence along S. property line.	1600	20
128	579	N.E. corner of property, at garden.	<200	20
132	532	Seep 85' north of home.	1,360	15,000
133	587	Seep 60' north of house.	4,200	3,460
135	557	At seep upgradient to pasture. Next to chicken house.	0	20
136	558	70'east of shop.	0	200
145	551	Water seep N.E. of house down slope of capfill.	200	580
151	559	Liquid on surface of ground N.E. of house.	7,000	1,600
158	591	Standing water over drain-field.	1,400	780
159	603	Ponding water over drain-drainfield.	54,800	1,020
160	626	Rain drain discharge 10' below drainfield.	240	4
179	580	Ditch in S.W. corner.	>200	720
183	620	W. of woodshed.	5,400	140

TABLE 1: SURFACE WATER SAMPLE RESULTS

UNIT #	SAMPLE #	LOCATIONS	FECAL COL.	ENTERO
184	613	Standing water in fenced corral.	20,000	320
186	589	Standing water South of house.	<200	<5
242	562	Ditch & curtain drain outlet.	200	<5
209	564	Ditch west of unit.	<200	780
210	607	Tile discharge S.W. corner.	<200	40
213	563	Marshy area west of unit.	1,000	2,500
214	618	S.W. corner in ditch.	3,000	1,280
219	541	Culvert on unit.	<200	20
225	554	Standing water S.E.	<200	320
225	553	S.W. corner ponding water.	<200	20
226	560	Sewage on surface.	40,000	320
226	555	Discharge @ 4'ads pipe.	<200	1,640
231	609	Ponding water.	<200	420
232	561	Ditch.	<200	<5
236	602	N.W. corner.	600	900
237	595	Drainfield area.	4,400	660
238	606	S.W. corner.	400	40
242	562	Ditch & curtain drain outlet.	200	<5
255	592	Tile discharge into ditch.	400	480
256	581	Tile discharge into ditch.	200	220
261	588	Standing water over drain-field.	<200	400
272	543	Curtain Drain discharge.	<200	140
272	556	Middle of drainfield.	<200	20
274	622	Drainage between house and truck barn.	<200	60

TABLE 1: SURFACE WATER SAMPLE RESULTS

UNIT #	SAMPLE #	LOCATIONS	FECAL COL.	ENTERO
274	638	Drainage east of truck barn.	<200	20
275	585	Liquid on ground surface West of house.	34,600	580
283	636	Ponded water 80'N.W. of house	<200	20
314	540	Roadside ditch at unit.	<200	<5
327	647	Pond area behind log berm. West end of property.	<200	140
327	648	West end of property. Behind storage shed.	400	3,120
381	647	Drainage ditch next to middle school parking lot.	<200	20
395	645	From ponded area East side of house.	5,600	20
405	567	Wentworth.	>100,000	680
409	597	Landes - ponded water in ditch.	200	<20
409	569	Suspected drainfield area.	<200	400
413	577	Soggy area at base of bank.	4,400	20
414	549	Hand dug ditch at unit.	>20,000	1,480
415	536	Ditch between unit 415 & 416.	<20	<100
430	548	Ditch between unit 430 at SW property corner.	<20	<100
433	547	Ditch near drainfield.	2,000	20
434	576	Open pit at end of drainfield	800	6,880
463	596	Possible discharge from 463 onto property to East.	1,600	100
464	571	Seep on adjacent lot below unit 464.	200	20

CLASSIFICATION OF SYSTEM FUNCTIONING

Sewage systems can be classified in several categories once they are evaluated and compared to standards. For the purpose of this study, systems are classified into the following categories.

1. **Satisfactory System** - No Evidence of failure:
   No observed sewage discharging onto the ground surface; occupant indicated system functions satisfactorily in all seasons; tracing dye was not observed discharging from the drainfield area; the drainfield was not or only slightly saturated; and overall the system appeared to be functioning properly under its present use.

2. **Marginal System** - Indirect evidence of failure:
   A system that indicated signs of moderate to heavy soil saturation and lush vegetation in the drainfield area, but did not have verifiable sewage discharging on the ground surface; tracer dye was not observed; occupant indicated some occasional problems with functioning of the system; microbiological analysis of suspect water indicated elevated levels of fecal coliform (200-1000 colonies per 100 ml) and Enterococci (33 to 100 colonies per 100 ml).

3. **Failing System** - Direct evidence of failure:
   A system that exhibited confirmed sewage on the ground surface in or near the drainfield area or had an outfall of liquid to a drainage way or onto the adjacent property. A failing system was confirmed by any one of the following: tracer dye was observed coming from the system; a water sample indicated the presence of sewage as per the following criteria (fecal coliform bacteria greater than 1000 colonies per 100 ml; Enterococci bacteria greater than 33 colonies per 100 ml); the system had, as described by the occupant, periodic discharge of sewage on the ground surface or a chronic back-up of wastewater into the plumbing fixtures.

3/16/88

SURVEY RESULTS

Not counting the 125 lots in the Riverview Heights S - division, there are 495 parcels within the surveyed ea. Of those parcels, 153 are unimproved or do not conta sewage disposal systems. The 342 developed parcels c ntain mostly single family dwellings, but also include a mobile home park, a church, two schools, one or two offices, and several duplexes. Surveys were completed on 306, or 89 percent of the parcels.

Several of the parcels surveyed contained more than one septic system. Four additional systems were surveyed, so the results are based on a total of 310 surveyed systems. The data is summarized in Tables 2 and 3.

TABLE 2: Classification of Sewage Systems

	Number	Percentage
Satisfactory Systems	188	61
Failing Systems	91	29
Marginal Systems	31	10
Total	310	100

TABLE 3: Sewage System Failure Rate

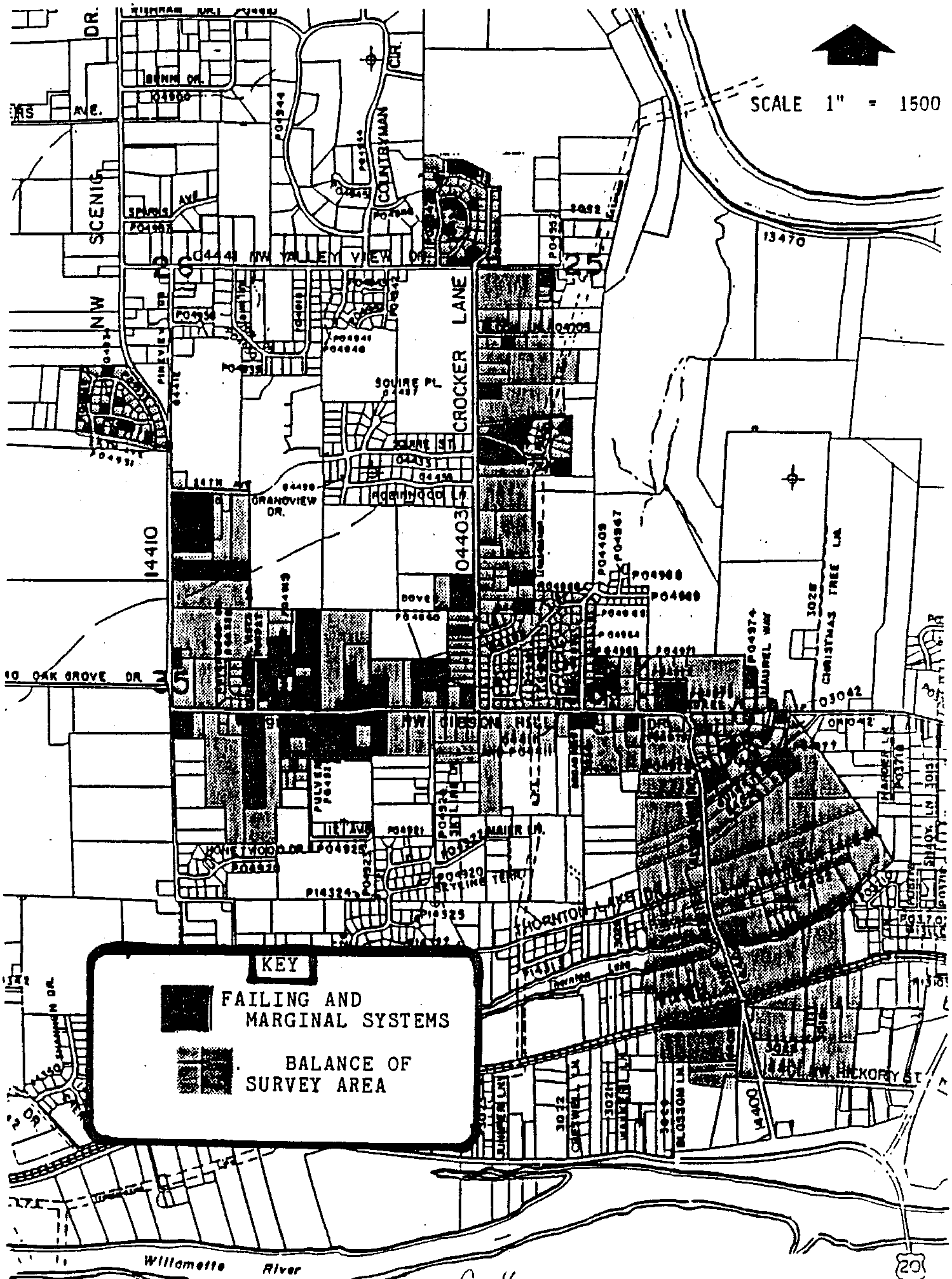
$$\text{Failure Rate} = \frac{\text{Failing + Marginal Systems}}{\text{Units Surveyed}}$$

Failure Rate = 122/310 = 39%

Raw or inadequately treated sewage was observed flowing onto the ground surface, into roadside ditches, across streets and driveways, through children's play areas, and in water meter boxes. In some cases, sewage was piped directly to ditches or pumped from under houses out into the street. It was judged that no adequate on-site repair options were available for more than one-half of the failing systems due to excessive soil saturation or lack of space.

The distribution of the failing and marginal sewage disposal systems is illustrated on **MAP 2.**

3/16/88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COUNTRYMAN CR.
NW VALLEY VIEW DR.
CROCKER LANE
SQUIRE PL.
SQUIRE ST.
ROBINHOOD LN.
GRANDVIEW DR.
14TH AVE
14410
04403
OAK GROVE DR.
NW GIBSON HILL DR.
HONEYWOOD DR.
THORNTON LAKE DR.
NW HICKORY ST.
CHRISTMAS TREE LN.
LAUREL WAY
14400
13470
Willamette River
20
KEY
FAILING AND MARGINAL SYSTEMS
BALANCE OF SURVEY AREA

C-16

PUBLIC HEALTH CONCERNS

Raw or inadequately treated sewage may contain communicable or contagious disease-producing organisms which cause physical suffering and/or illness. When sewage containing such organisms is permitted to discharge onto the surface of the ground, there is a possibility of transmission to humans, either by direct contact with the sewage or through the intervening contact of the sewage by vectors (pets, insects) and subsequent infection by the disease-producing organisms. Unsanitary hand-washing practices can then lead to further disease transmission. Some diseases that can be spread from the contaminated environment include hepatitis, shigellosis, salmonellosis, cholera, and giardiasis.

In the North Albany survey area, the possibility of transmitting the disease through direct or indirect contact with raw or inadequately treated sewage occurs due to:

1. Normal day to day activities being carried on in and around the residential living units.

2. Children playing in the area and going to and from schools.

3. Domestic animals, such as dogs, found in the subject area are possible vectors of disease organisms both inside and outside the area.

4. The potential exists for the transmission of disease to areas outside the subject area. Persons from outside the area may be exposed by passing through or visiting in the area. Residents and their domestic animals may spread disease causing organisms by visiting facilities and people outside the area.

5. Insects such as flies and mosquitoes are found in areas where standing water and sewage is present on the surface of the ground. Insects are possible vectors for the transmission of disease organisms both inside and outside the area.

6. There are some domestic wells in use in the area. Sewage flowing on the surface of the ground could enter poorly constructed wells and be ingested by persons drinking from these wells.

3/16/88

CONCLUSIONS

There are serious conditions present in the survey area which could be conducive to the spread of communicable or contagious disease-producing organisms and which present a reasonably clear possibility that the public generally is being exposed to hazardous conditions. The specific cause of these conditions is inadequate installations for the treatment and disposal of sewage. This includes the Riverview Heights treatment plant which consistently fails to comply with state and federal water pollution control standards.

Based upon the survey results, it is our conclusion that the only permanent area-wide solution to the problem is extension of city sewer services into the area.

3/16/88

ATTACHMENT D

NEIL GOLDSCHMIDT
GOVERNOR

Department of Human Resources
HEALTH DIVISION
1400 SW 5th AVENUE, PORTLAND, OREGON 97201 VOICE:
TDD-NONVOICE: (503) 229-5497

May 16, 1989

Pam Fultz, Chairperson
Albany-Benton County Intergovernmental Committee
c/o Benton County Commission
1800 NW 5th
Corvallis, Oregon 97330

Dear Ms. Fultz:

I have reached a decision in the North Albany case, and have found that a public health hazard does exist in the area. Attached is a copy of my findings arising from the hearings held under ORS 222.840-222.915. I have ordered a stay of proceedings (as provided for in ORS 222.883-885) for ninety days following publication of the notice.

The stay in proceedings anticipates that the ABC committee will develop a plan for service to the area that can address the legitimate needs and concerns of all parties. I was most impressed with the organizational meeting held May 9, and look forward to your proposal.

If I can be of assistance to you or the committee, please contact me at 229-5032.

Sincerely,

Kristine M. Gebbie
Assistant Director, Human Resources
Administrator, Health Division

KMG:ran

cc: Sen. Mae Yih
Rep. Carolyn Oakley
Jim Blair, Benton County Public Works
Steve Bryant, City of Albany
Jeff Condit, Benton County
Dick Dalke, North Albany Service District
Tom Engle, Benton County Health Dept.
Mary Halliburton, DEQ
Bob Rindy, DLCD
David St. Louis, DEQ
Ed Sullivan, KASA
Bob Wilson, Benton County Health Dept.

BEFORE THE STATE HEALTH DIVISION
OF THE DEPARTMENT OF HUMAN RESOURCES
OF THE STATE OF OREGON

In the Matter of the Proposed Annexation of a Certain Territory Commonly known as the North Albany Area to the City of Albany, Benton County Oregon Pursuant to the Provisions of ORS 222.840 to 222.915 Due to Conditions Causing a Danger to Public Health	)	NOTICE OF STAY OF PROCEEDINGS AND OPPORTUNITY TO PETITION FOR CONSIDERATION OF AN ALTERNATIVE PLAN

Notice is hereby given that the Administrator has made findings relative to the within matter pursuant to ORS 222.880. In summary the findings are to the effect that a danger to public health exists in the territory proposed for annexation because of inadequate installations for the disposal of sewage in the territory.

Pursuant to ORS 222.883 and ORS 222.885, the written proceeding is stayed for a period of 90 days commencing upon publication of this notice in the Albany Democrat Herald for the purpose of allowing opportunity to petition for consideration of an alternative plan to annexation of the territory to the City of Albany.

A copy of the Administrator's findings and above referenced statutes may be obtained by writing the Health Division, Room 611, State Office Building, 1400 S.W. Fifth Avenue, Portland, Oregon 97201, or by calling 229-6302.

Dated this 16 day of May, 1989.

Kristine M. Gebbie
Assistant Director, Human Resources
Administrator, State Health Division

BEFORE THE STATE HEALTH DIVISION

OF THE DEPARTMENT OF HUMAN RESOURCES

OF THE STATE OF OREGON

In the matter of the Proposed Annexation of a Certain Territory Commonly known as the North Albany Area to the City of Albany, Benton County, Oregon, Pursuant to the Provisions of ORS 222.840 to 222.915 Due to Conditions Causing a Danger to Public Health	ADMINISTRATOR'S FINDINGS OF FACT, OPINION, FINDING OF ULTIMATE FACT, CONCLUSIONS OF LAW AND STAY OF PROCEEDINGS

This matter came for hearing on June 29 and 30, 1988 and August 5, 1988 in the cafeteria of North Albany Elementary School, a place near the area proposed for annexation. Samuel J. Nicholls served as the Hearings Officer. Leonard W. Pearlman, Assistant Attorney General, appeared as counsel for the Health Division. Members of the public attended in person. Evidence and testimony in favor and in opposition of the proposed annexation was presented. Thereafter, closing arguments were made on September 15, 1988 with counsel present in the law offices of the Hearings Officer at 1250 Benjamin Franklin Plaza, One S.W. Columbia, Portland, Oregon, and the public participating by speaker telephone from the Adult and Family Services Division office, 1400 Queen Avenue, Albany, Oregon. Thereafter, the record was held open for letters from the public until October 10, 1988. The Hearings Officer considered the evidence and made his Findings of Fact, Conclusions of Law and Recommendation. The matter then came before the Administrator following publication of the Notice of Issuance

of Findings and Recommendations pursuant to ORS 222.875 and OAR 333-12-043. A petition for receipt of oral arguments on the Hearings Officer's findings was received pursuant to these provisions and oral and written arguments were received by the Administrator at the Employment Building auditorium in Salem on April 11, 1989. These Findings and Recommendations and subsequent arguments having been received and considered, the Administrator now adopts the Hearings Officer's Findings of Fact, Ultimate Finding of Fact, Conclusions of Law and Opinion as hereinafter amended, and now makes the following Findings of Fact, Ultimate Finding of Fact and Conclusion of Law.

FINDINGS OF FACT

1.

By order of the Oregon State Health Division dated May 24, 1988, a hearing was ordered in this matter for the following purpose: to determine whether a danger to public health exists due to conditions existing in the territory proposed to be annexed, described in an amended resolution of the Board of Commissioners of Benton County, acting as the Benton County Board of Health, dated June 1, 1988.

2.

Notice of said order and resolution was given by the Health Division by publication once each week for two successive weeks in the Albany Democrat-Herald, a newspaper of general circulation within the City of Albany, Oregon, and the territory proposed to be annexed, and by posting copies of the order and resolution in

each of four public places within the territory proposed to be annexed.

3.

A community collection system for 123 lots in the area proposed to be annexed exists (the Riverview Heights Treatment Plant); the remaining units depend upon individual sub-surface sewage disposal facilities, primarily septic tanks and drainfields.

4.

There are two primary components to a septic tank and drainfield system. The first is the septic tank itself, which is a water-tight box which serves as a settling basin to settle out solids. The second component is a drainfield, which is a series of underground pipes through which the sewage effluent passes into the surrounding soil.

5.

Treatment of raw sewage occurs in the soil of the drainfield, where micro-organisms, in the presence of oxygen, break down pathogenic or disease causing organisms which may be present in human sewage.

6.

Properly constructed and functioning sub-surface disposal systems do not discharge sewage effluent onto the ground surface. Sewage must be retained in the soil to be adequately treated bacteriologically and to be rendered non-septic. Sewage effluent rising or discharging onto the ground surface from a sub-surface sewage disposal facility is inadequately treated.

7.

Limiting factors to the effective use of a sub-surface drainage system are the soil type of the drainfield and the level of the water table. Both factors affect the amount of oxygen in the soil, which is necessary for adequate bacteriological treatment of the effluent. Presence of excess water in the drainfield limits the amount of oxygen available to the microorganisms which break down the pathogenic organisms in the sewage and render them non-septic.

8.

Untreated sewage being discharged onto the ground may be detected by a very strong characteristic odor and appearance. In addition, untreated sewage rising to the surface may be detected by finding saturated conditions or standing water in the area of a drainfield which does not appear on adjacent areas, especially when combined with a lush green growth of vegetation over the drainfield area.

9.

One method used to detect an improperly functioning sub-surface sewage disposal system is to introduce a fluorescent tracer dye into the toilet of a particular system, flush water through the system, and watch to see if the hydraulic action of the system carries that dye to the surface of the ground. If the dye appears on the ground at all, the system is not functioning properly. If the dye appears on the surface within a short period of time, virtually no treatment is being provided to the sewage discharged into that particular system.

10.

Pathogens, or disease-causing agents, are found in the fecal material of mammals. Microbiological testing for the presence of the following organisms is performed to investigate the presence of inadequately treated sewage: fecal coliform and enterococci. These organisms are not themselves pathogens, but are indicators of the presence of fecal matter which may contain pathogens.

1. Fecal coliform organisms, if present in substantial numbers, show that the contamination is from a mammalian fecal source, and the danger of transmission of disease is therefore immediate and serious. The presence of 200 fecal coliform organisms per 100 milliliters has been adopted by the United States Environmental Protection Agency as a national standard to indicate unacceptable levels of pollution in surface water. The presence of fecal coliform organisms in suspected discharge from a sub-surface septic system indicates the presence of inadequately treated sewage.

2. Enterococci organisms are primarily found in and do not reproduce outside of the intestinal tracts of mammals. They are a grouping of species of fecal strep organisms that are not found in horses or cattle; their presence therefore indicates recent contamination and selects against horses and cattle as a possible source of "background" contamination. When found in association with discharge from a drainfield in substantial numbers, they are a reliable indicator of the presence of inadequately treated human sewage. The presence of 33 enterococcus organisms per 100

milliliters has been adopted by the United States Environmental Protection Agency as an acceptable standard. Presence of enterococcus organisms in surface water above this threshold number can be correlated to the actual occurrence of disease. The field investigator uses observations as to the likely sources of these organisms in interpreting their sanitary significance.

11.

Two methods are used to test samples for the presence of fecal coliform and fecal streptococcus organisms. The first is the membrane filter test. When using this method, a selected volume of the sample is poured through a membrane filter, which strains out microorganisms. That filter is then placed in a medium, a culture is permitted to grow, and the number of organisms on the membrane can be physically counted with the aid of a microscope. Different volumes may be used, so that the microbiologist will be certain that the number of organisms present on the culture plate can be physically counted. Following the count, mathematical calculations are performed so that test results are reported in the number of colonies of a particular organism per 100 milliliters per sample. The membrane filter technique is the only method employed to test for enterococci organisms.

The second method is the multiple tube test, in which the number of microorganisms is reported in terms of MPN, or most probable number. The MPN is a statistical count of what would most probably be the number of colonies of the specific organism present per 100 milliliters of sample.

12.

Raw or inadequately treated sewage may contain communicable or contagious disease-producing organisms which cause physical suffering or illness. Such condition can arise when an infected person's feces are deposited into the sewage. When sewage containing such organisms is permitted to discharge on the surface of the ground or into drainage ditches along the roads in the area or into streams draining the area, there is a possibility of transmission of disease to humans, either by direct contact of sewage or through the intervening contact of the sewage by vectors.

13.

The following conditions, caused by the inadequate installations for the disposal of sewage, existed on properties within the area proposed for annexation, and without evidence to the contrary, are presumed to continue to exist:

1. On February 2, 1988, on tax map 10-4-36DC, tax lot 601 (1350 North Albany Road), saturated conditions existed throughout the drainfield, following a rainfall. The owner indicates that the property is saturated during the winter months; the drainfield has been repaired in the past because of mole activity and poor drainage.

2. On February 9, 1988, on tax map 11-4-1AC, tax lot 100 (830-864 North Albany Road), several systems serve a mobile home park. A drainfield is located at the rear of the park in a low area, serving the west side of the park. In this area a liquid with the characteristic odor and appearance of sewage was present

on the ground surface. A bacteriological sample taken on that date showed the presence of 400 fecal coliform colonies and 3,120 enterococcus colonies per 100 milliliters.

3. On February 3, 1988, on tax map 10-3-31CC, tax lot 1300 (615 E. Thornton Lake Drive), liquid with the characteristic odor and appearance of sewage was standing over the septic tank. Sewage from that property occasionally discharges onto the neighboring property to the east.

4. On February 2, 1988, on tax map 11-4-1AA, tax lot 1700 (750 E. Thornton Lake Drive), liquid with the characteristic odor and appearance of sewage was discharging to the ground surface in the back yard of the house. The owner confirms that the system is failing and had been failing for some time.

5. On February 2, 1988, on tax map 11-4-1AA, tax lot 1600 (740 E. Thornton Lake Drive), liquid with the characteristic odor and appearance of sewage was discharging to the ground surface at the base of the hill behind the property. Green dye introduced into the system at 3:05 p.m. on that date was discharging to the ground surface at 9:45 a.m. the next day.

6. On February 9, 1988, on tax map 10-4-36DA, tax lot 4700 (730 Quarry Road), saturated conditions existed throughout the drainfield area, indicating sewage at or near the ground surface.

7. On February 9, 1988, on tax map 10-4-36DA, tax lot 5000 (714 Quarry Road), liquid with the characteristic odor and appearance of sewage was discharging to the ground surface in the front yard. Green dye introduced into the system at 3:00 p.m. on

that date was present on the ground surface at 12:45 p.m. on February 11, 1988. The drainfield on the property is often saturated by runoff from the nearby hillside, preventing the subsurface sewage disposal system from operating properly. A bacteriological sample drawn from the standing effluent on February 10, 1988 showed the presence of 5,600 fecal coliform colonies and 20 enterococcus colonies per 100 milliliters.

8. On February 9, 1988, on tax map 10-4-36DA, tax lot 4900 (722 Quarry Road), saturated soil conditions existed throughout the drainfield area, indicating sewage at or near the ground surface.

9. On February 9, 1988, on tax map 10-4-36DA, tax lot 5100 (706 Quarry Road), liquid with the characteristic odor and appearance of sewage was discharging to the ground surface in the back yard of the property. Green dye introduced into the system at 3:15 p.m. on that date was present on the ground surface at 10:00 a.m. the next day.

10. On February 9, 1988, on tax map 10-4-36DA, tax lot 401 (1320 North Albany Road), a lush growth of grass and saturated soil conditions were observed over the drainfield, indicating sewage at or near the ground surface.

11. On February 2, 1988, on tax map 11-4-1AA, tax lot 301 (1035 North Albany Road), liquid with the characteristic odor and appearance of sewage was standing in a pit outside the restroom facility of an office building on the property. Green dye introduced into the system at 9:50 a.m. on February 3, 1988 was observed in the pit at 2:45 p.m.

12. On February 1, 1988, on tax lot 4400 of T10S, R4W, Sec 25BC (2495 Woodcrest Avenue N.W.), water was standing on the ground surface immediately downslope from the drainfield. Green dye introduced into the system at 9:20 a.m. on that day was present in that surface water at 9:20 a.m. on the following day.

13. On February 1, 1988, on tax lot 4300 of T10S, R4W, Sec 25BC (2433 Woodcrest Avenue N.W.), an intermittent spring discharges approximately 35 feet downslope from the drainfield. A bacteriological sample taken of the discharge water on February 2, 1988 showed the presence of 60 enterococcus colonies per 100 milliliters.

14. On February 1, 1988, on tax lot 1600 of T10S, R4W, Sec 25BC (3480 Kingston Way N.W.), a lush, dark green growth of grass was present over each individual sewage disposal line of the drainfield system, extending downslope to a roadside ditch, indicating sewage at or near the ground surface.

15. On February 1, 1988, on tax lot 1200 of T10S, R4W, Sec 25 BC (3360 Kingston Way N.W.), effluent with the characteristic odor and appearance of sewage was discharging from the northeast corner of the property and onto adjoining tax lot 1400. Green dye introduced into the system at 11:30 a.m. on that date was present in the discharging effluent within 3-1/2 hours.

16. On February 1, 1988, on tax lot 900 of T10S, R4W, Sec 25BC (3230 Kingston Way N.W.), effluent with the characteristic odor and appearance of sewage was discharging to the ground surface near the northwest corner of the property and draining onto

adjoining tax lot 1000. A bacteriological sample taken of the discharge on that date indicated the presence of more than 500,000 fecal coliform colonies and more than 100,000 enterococcus colonies per 100 milliliters.

17. On February 1, 1988, on tax lot 1901 of T10S, R4W, Sec 25BD (3080 Crocker Lane, N.W.), a discharge was seeping to the ground surface above the south ends of the lower two drainfield lines, then flowing across the driveway of the residence.

18. Green dye was introduced into the septic system of tax lot 3900 of T10S R4W, Sec 25BC (3040 Crocker Lane N.W.), at 2:45 p.m. on February 1, 1988, was discharging into the drainage ditch at the base of the property's driveway at 10:35 a.m. the next day.

19. On February 1, 1988, on tax lot 3700 of T10S, R4W, Sec 25 BC (3057 Crest Loop N.W.), liquid with the characteristic odor and appearance of sewage was discharging to the ground surface near the southeast corner of the back yard. A bacteriological sample taken of the surface discharge on that date, indicated the presence of 1,160 fecal coliform colonies and 98,000 enterococcus colonies per 100 milliliters.

20. On tax lot 3100 of T10S, R4W, Sec 25BC (3331 Crest Loop N.W.), a spring discharges near the northeast corner of the property, downslope from the home's sewage disposal field. A bacteriological sample of the spring discharge taken on February 2, 1988 showing the presence of 460 enterococcus colonies per 100 milliliters, indicating contamination of the spring by septic effluent.

21. On February 2, 1988, on tax lot 2700 of T10S, R4W, Sec 25BC (3342 Crest Loop N.W.), a liquid seep zone on the bank downslope from the drainfield area in the front yard had the characteristic odor and appearance of sewage.

22. On February 2, 1988, on tax lot 2600 of T10S, R4W, Sec 25BC (3276 Crest Loop N.W.), liquid with the characteristic odor and appearance of sewage was discharging into the roadside ditch at the northeast corner of the property, approximately 20 feet downslope from the drainfield. A bacteriological sample of the roadside ditch water taken on that day indicated the presence of more than 10,000 fecal coliform colonies and more than 800 enterococcus colonies per 100 milliliters.

23. On February 2, 1988, on tax lot 2000 of T10S, R4W, Sec 25BC (3175 Kingston Way N.W.), the ground area over the drainfield was saturated, indicating sewage at or near the ground surface.

24. On February 8, 1988, on tax lot 102 of T10S, R4W, Sec 25CA (1890 Valley View Drive N.W.), liquid with the characteristic odor and appearance of sewage was ponded adjacent to the south center property line. Green dye was introduced into the septic system of the property at 8:50 a.m. on that day, and was observed in the ponded area at 11:50 a.m. on the next day. A bacteriological sample of the ponded liquid taken on that day showed the presence of 117,000 fecal coliform colonies per 100 milliliters.

25. On February 4, 1988, on tax lot 800 of T10S, R4W, Sec 25CA (2030 Bloom Lane N.W.), liquid with the characteristic odor

and appearance of sewage was standing over the drainfield area. On February 8, 1988, a bacteriological sample was taken from the standing liquid and showed the presence of 134,000 fecal coliform colonies and 5,000 enterococcus colonies per 100 milliliters.

26. On February 4, 1988, on tax lot 1400 of T10S, R4W, Sec 25 (2667 Crocker Lane N.W.), liquid with the characteristic odor and appearance of sewage was discharging to the ground surface at the lower eastern boundary of the property. Green dye introduced into the system at 11:40 a.m. on that day appeared in the discharge at 9:20 a.m. the next day.

27. On February 4, 1988, on tax lot 2200 of T10S, R4W, Sec 25CD (2125 Meadow Drive N.W.), green dye was introduced into the septic system; it was observed at 9:50 a.m. on February 8, 1988, discharging into a roadside ditch from a drainage pipe located on the west side of the residence driveway.

28. On February 4, 1988, on tax lot 2100 of T10S, R4W, Sec 25CD (2031 Meadow Wood Drive N.W.), the drainfield lines were overgrown with a lush, green grass growth not found in the surrounding area; on an adjacent, downslope bank to the east of the drainfield area, a further lush growth was present at a seep zone. On February 8, 1988, a bacteriological sample taken of the liquid in the seep zone indicated the presence of 200 fecal coliform colonies and 200 enterococcus colonies per 100 milliliters.

29. On February 4, 1988, on tax lot 2000 of T10S, R4W, Sec 25CD (1957 Meadow Wood Drive N.W.), effluent was discharging to the ground surface approximately 15 feet downslope from the drainfield

area from a spring discharge intercepting the drainfield. A bacteriological sample was taken of the effluent on February 8, 1988 indicated the presence of 200 fecal coliform colonies and 280 enterococcus colonies per 100 milliliters.

30. On February 8, 1988, on tax lot 1400 of T10S, R4W, Sec 25CD (1820 Meadow Wood Drive N.W.), ponded liquid with the characteristic odor and appearance of sewage was present over the drainfield area. A bacteriological sample taken from the ponded liquid on February 9, 1988 showed the presence of 100,000 fecal coliform colonies and 4,820 enterococcus colonies per 100 milliliters.

31. On February 8, 1988, on tax lot 1000 of T10S, R4W, Sec 25CD (1868 Meadow Wood Drive N.W.), liquid was discharging to the ground surface at the base of a steep terrace escarpment downslope from the drainfield. A bacteriological sample of the discharge taken on that date showed the presence of 1,200 fecal coliform colonies and 640 enterococcus colonies per 100 milliliters.

32. The drainfield serving the residence on tax lot 900 of T10S, R4W, Sec 25CD (1870 Meadow Wood Drive N.W.), is located on adjacent tax lot 800. A spring discharging from the drainfield area flows into a creek adjacent to a steep bank drop. Green dye introduced into the system on February 8, 1988 at 12:15 p.m. was observed in the creek at 10 a.m. on February 10, 1988. A bacteriological sample of the spring discharge taken on February 9, 1988, showed the presence of 14,000 fecal coliform colonies and more than 100,000 enterococcus colonies per 100 milliliters.

33. On February 8, 1988, on tax lot 600 of T10S, R4W, Sec 25CD (1960 Meadow Wood Drive N.W.), saturated conditions existed throughout the drainfield area. Green dye introduced into the system on February 9, 1988 at 9:25 a.m. was observed in the drainfield area on February 11, 1988 at 9:30 a.m. On February 9, 1988 a bacteriological sample was taken from surface water standing over the drainfield and showed the presence of 4,600 fecal coliform colonies and 560 enterococcus colonies per 100 milliliters.

34. On February 8, 1988, on tax lot 500 of T10S, R4W, Sec 25CD (2070 Meadow Wood Drive N.W.), liquid with the characteristic odor and appearance of sewage was present on the ground surface to the east of the residence. A bacteriological sample taken from that liquid on February 9, 1988 showed the presence of 68,200 fecal coliform colonies and 1,520 enterococcus colonies per 100 milliliters.

35. On February 8, 1988, on tax lot 400 of T10S, R4W, Sec 25CD (2130 Meadow Wood Drive N.W.), liquid with the characteristic odor and appearance of sewage was present on the ground surface. A bacteriological sample taken on February 9, 1988 from the liquid showed the presence of more than 100,000 fecal coliform colonies and 1,220 enterococcus colonies per 100 milliliters.

36. On February 8, 1988, on tax lot 300 of T10S, R4W, Sec 25CD (2250 Meadow Wood Drive N.W.), liquid with the characteristic odor and appearance of sewage was discharging to the ground surface into a shallow trench, and then to a small creek adjacent to the property. Green dye introduced into the septic system on the

property at 2:15 p.m. on that date was present in the discharging effluent at 10:10 a.m. the next day.

37. On February 9, 1988, on tax lot 200 of T10S, R4W, Sec 25CD (2553 Crocker Lane N.W.), lush vegetation was observed over the drainfield area, and liquid was seeping from the drainfield to a creek adjacent to the property. A bacteriological sample taken from the seep on February 10, 1988 showed the presence of 4,800 fecal coliform colonies per 100 milliliters.

38. On February 9, 1988, on tax lot 900 of T10S, R4W, Sec 36BB (2177 Crocker Lane N.W.), liquid with the characteristic odor and appearance of sewage was discharging onto the ground surface. A bacteriological sample taken from the liquid on February 10, 1988 showed the presence of 4,000 fecal coliform colonies and 1,060 enterococcus colonies per 100 milliliters.

39. On February 9, 1988, on tax lot 12601 of T10S, R4W, Sec 36BD (2025 Crocker Lane N.W.), liquid with the characteristic odor and appearance of sewage was standing over the drainfield. Green dye introduced into the septic system of the property at 2:20 p.m. on February 10, 1988 was on the surface at 9:45 a.m. the next day. A bacteriological sample taken from the standing water on February 10, 1988 showed the presence of more than 100,000 fecal coliform colonies and 400 enterococcus colonies per 100 milliliters.

40. On February 9, 1988, on tax lot 1400 of T10S, R4W, Sec 36BB (2030 Crocker Lane N.W.), liquid was standing over the area of the drainfield. A bacteriological sample taken from that liquid

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on February 10, 1988 showed the presence of 380 enterococcus colonies per 100 milliliters.

41. On February 2, 1988, on tax lot 103 of T10S, R4W, Sec 36BC (1932 Crocker Lane N.W.), liquid with the characteristic odor and appearance of sewage was standing at the border of the lawn and the landscaping, less than three feet from a disposal trench. Green dye introduced into the septic system on the property at 10:39 a.m. on that day was in the liquid at 9:00 a.m. the next day.

42. On February 1, 1988, on tax lot 900 of T10S, R4W, Sec 36BC (2335 Gibson Hill Drive N.W.), liquid was discharging from a pipe leading from the drainfield to a trench. A bacteriological sample taken on that date from this liquid showed the presence of 2,700 fecal coliform colonies and 3,600 enterococcus colonies per 100 milliliters.

43. On February 1, 1988, on tax lot 701 of T10S, R4W, Sec 36BC (2483 Gibson Hill Drive N.W.), liquid with the characteristic odor and appearance of sewage was standing on the ground surface about 150 feet northwest of the residence. Green dye introduced into the septic system at 2:25 p.m. on that day appeared on the ground at 9:20 a.m. the next day.

44. On tax lot 601 of T10S R4W, Sec 36BC (2549 Gibson Hill Drive N.W.), saturated conditions prevailed in an area 110 feet north of the residence, which had the characteristic odor and appearance of sewage. Green dye introduced into the septic system of the property on February 1, 1988 at 3:00 p.m. appeared in the saturated area at 9:10 a.m. on February 5, 1988.

45. On February 1, 1988, on tax lot 500 of T10S, R4W, Sec 36 BC (2673 Gibson Hill Drive N.W.), standing liquid with the characteristic odor and appearance of sewage was on the ground surface. Green dye introduced into the septic system of the property at 3:18 p.m. on that day appeared in the standing liquid at 11:30 a.m. on February 3, 1988. A bacteriological sample taken from the liquid on February 2, 1988 showed the presence of 15,000 fecal coliform colonies and 1,360 enterococcus colonies per 100 milliliters.

46. On February 3, 1988, on tax lot 1302 of T10S, R4W, Sec 35AD (2711 Gibson Hill Drive N.W.), liquid with the characteristic odor and appearance of sewage was in a disposal trench adjacent to the drainfield. A bacteriological sample taken from the liquid in the trench on February 8, 1988 showed the presence of 4,200 fecal coliform colonies and 3,460 enterococcus colonies per 100 milliliters.

47. On February 2, 1988, on tax lot 1500 of T10S, R4W, Sec 35AD (2737 Gibson Hill Drive N.W.), standing water was present in surface depressions. Green dye introduced into the septic system of the property at 1:45 p.m. on that day appeared in the standing water at 9:41 a.m. the next day.

48. On February 2, 1988, on tax lot 1400 of T10S, R4W, Sec 35AD (2787 Gibson Hill Drive N.W.), liquid with the characteristic odor and appearance of sewage was flowing from a pipe into a ditch located on the northeast corner of the property. Green dye introduced into the septic system of the property at 3:15 p.m. on

that day was discharging from the pipe at 9:45 a.m. on February 4, 1988. A bacteriological sample taken from the ditch on February 2, 1988 showed 5,400 fecal coliform colonies and 200 enterococcus colonies per 100 milliliters.

49. On February 2, 1988, on tax lot 1200 of T10S, R4W, Sec 35AD (2857 Gibson Hill Drive N.W.), liquid with the characteristic odor and appearance of sewage was flowing from the drainfield area onto the neighboring property. Green dye introduced into the septic system of the property at 3:30 p.m. on that day was in the discharge at 9:55 a.m. the next day.

50. On February 8, 1988, on tax lot 600 of T10S, R4W, Sec 35AD (2889 Gibson Hill Drive N.W.), liquid with the characteristic odor and appearance of sewage was in the pasture area near the west property line. Green dye introduced into the septic system of the property at 2:27 p.m. on that day was in the described area at 9:55 a.m. the next day.

51. On February 4, 1988, on tax lot 500 of T10S, R4W, Sec 35AD, also known as 2909 Gibson Hill Drive N.W., liquid with the characteristic odor and appearance of sewage was flowing into a ditch located approximately 120 feet north of the residence. This ditch drains into the roadside ditch on Sunny Lane. Green dye introduced into the septic system of the property at 9:55 a.m. on that day appeared in the ditch at 9:46 a.m. on February 8, 1988.

52. On February 4, 1988, on tax lot 800 of T10S, R4W, Sec 35AD (1835 Sunny Lane N.W.), liquid with the characteristic odor and appearance of sewage was to the northeast of the house. Green

dye was introduced into the septic system of the property at 3:00 p.m. on that day, appeared in the same area at 9:55 a.m. on February 8, 1988.

53. On February 3, 1988, on tax lot 900 of T10S, R4W, Sec 35AD (1873 Sunny Lane N.W.), liquid was flowing through a drainage ditch leading from the drainfield. Green dye introduced into the septic system of the property at 2:30 p.m. on that day appeared on the ground surface at 10:10 a.m. the next day.

54. On tax lot 1000 of T10S, R4W, Sec 35AD (1889 Sunny Lane N.W.), saturated soil conditions prevail downslope of the drainfield, near an intermittent stream. Green dye introduced into the septic system of the property on February 5, 1988 at 9:47 a.m. was seeping into the stream at 10:15 a.m. on February 8, 1988.

55. On February 4, 1988, on tax lot 1100 of T10S, R4W, Sec 35AD (1919 Sunny Lane N.W.), liquid was standing in the area of and downslope from the drainfield. A bacteriological sample of the liquid taken on that date showed the presence of 200 fecal coliform colonies and 500 enterococcus colonies per 100 milliliters.

56. On February 4, 1988, on tax lot 101 of T10S, R4W, Sec 35AD (1874 Sunny Lane N.W.), liquid with the characteristic odor and appearance of sewage was standing on the ground surface and flowing toward a drainage ditch on Sunny Lane. Green dye introduced into the septic system of the property at 4:30 p.m. on that day appeared in the standing liquid at 10:26 a.m. on February 8, 1988.

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57. On February 4, 1988, on tax lot 200 of T10S, R4W, Sec 35AD (1812 Sunny Lane N.W.), liquid with the characteristic odor and appearance of sewage was standing near the septic tank location. Green dye introduced into the septic system of the property at 1:05 p.m. on that day appeared in the liquid one minute later.

58. On tax lot 400 of T10S, R4W, Sec 35 AD (2947-2949 Gibson Hill Drive N.W.), a duplex is served by one septic system. Green dye introduced into the septic system of the property via the western residential unit on February 4, 1988 at 12:40 p.m. appeared along the west side of the duplex at 11:56 a.m. on February 8, 1988.

59. On February 8, 1988, on tax lot 301 of T10S, R4W, Sec 35Ad (2983 Gibson Hill Drive N.W.), liquid with the characteristic odor and appearance of sewage stood on the ground surface and downslope of two disposal trenches serving the residence. A bacteriological sample taken on that day from the liquid showed the presence of 7,000 fecal coliform colonies and 1,600 enterococcus colonies per 100 milliliters.

60. On tax lot 301 of T10S, R4W, Sec 35DA (2880 Gibson Hill Drive, N.W.), a lush grass growth covered the area leading from the drainfield to a drainage ditch on Gibson Hill Road. Green dye introduced into the septic system of the property on February 2, 1988 at 4:00 p.m. appeared in the ditch at 12:20 p.m. the next day.

61. On February 9, 1988, on tax lot 202 of T10S, R4W, Sec 35DA,(2746 Gibson Hill Drive N.W.), liquid with the characteristic

odor and appearance of sewage was seeping from the drainfield area. Green dye introduced into the septic system of the property at 4:10 p.m. on that day appeared in the roadside ditch at 9:35 a.m. the next day.

62. On tax lot 100 of T10S, R4W, Sec 35DA (2706 Gibson Hill Drive N.W.), a curtain drain from the drainfield discharges into a roadside ditch on the south side of Gibson Hill Drive. A bacteriological sample taken on February 4, 1988 of the discharging liquid showed the presence of less than 200 fecal coliform colonies and 140 enterococcus colonies per 100 milliliters.

63. On February 8, 1988, on tax lot 202 of T10S, R4W, Sec 35DA (2714 Gibson Hill Drive N.W.), liquid was discharging into the ditch from a pipe leading from the drainfield off the northeast corner of the residence. A bacteriological sample of the discharging liquid taken on that day showed the presence of less than 200 fecal coliform colonies and 60 enterococcus colonies per 100 milliliters.

64. On February 8, 1988, on tax lot 200 of T10S, R4W, Sec 36CB (2652 Gibson Hill Drive N.W.), liquid with the characteristic odor and appearance of sewage was standing on the ground surface west of the residence. A bacteriological sample taken on that day from the liquid showed the presence of 34,600 fecal coliform colonies and 500 enterococcus colonies per 100 milliliters.

65. On February 9, 1988, on tax lot 101 of T10S, R4W, Sec 36CA (1612 Gibson Hill Drive N.W.), saturated conditions prevailed at the ends of three disposal trenches.

66. On February 4, 1988, on tax lot 3000 of 10-4-35AC (1821 Laura Vista Drive N.W.), saturated conditions prevailed over the drainfield. A black pipe was discharging liquid with the characteristic odor and appearance of gray waste water onto the driveway.

67. On February 8, 1988, on tax lot 2900 of 10-4-35AC (1805 Laura Vista Drive, N.W.), liquid with the characteristic odor and appearance of sewage was standing on the ground surface around the septic tank. Green dye introduced into the system at 2:20 p.m. on that day appeared on the ground surface at 11:40 a.m the next day, as well as in the street gutter at a tile discharge pipe and in the water meter box in the front yard.

68. On February 8, 1988, on tax lot 2800 of 10-4-35AC (1783 Laura Vista Drive N.W.), liquid with the characteristic odor and appearance of sewage was discharging from a drain tile into the street gutter. Green dye introduced into the septic system of the property at 1:45 p.m. on February 10, 1988 appeared in the gutter at 11:15 a.m. on February 16, 1988.

69. On February 8, 1988, on tax lot 2700 of 10-4-35AC (1737 Laura Vista Drive N.W.), liquid with the characteristic odor and appearance of sewage was standing on the ground surface over the drainfield. Green dye introduced into the septic system of the property at 11:37 a.m. on that day appeared on the ground surface at 11:37 a.m. the next day.

70. On February 8, 1988, on tax lot 2600 of 10-4-35AC (1709 Laura Vista Drive N.W.), liquid with the characteristic odor and

appearance of sewage was standing on the ground surface over the drainfield area. Green dye introduced into the septic system of the property at 11:28 a.m. on that day appeared on the ground surface at 1:55 p.m. on February 10, 1988.

71. On February 4, 1988, on tax lot 2100 of 10-4-35AC (1820 Laura Vista Drive N.W.), liquid with the characteristic odor and appearance of sewage was standing on the ground surface above the drainfield area. A bacteriological sample taken on that day from the liquid showed the presence of 1,400 fecal coliform colonies and 780 enterococcus colonies per 100 milliliters.

72. On February 4, 1988, on tax lot 2200 of 10-4-35AC (1804 Laura Vista Drive N.W.), liquid with the characteristic odor and appearance of sewage was standing several inches deep on the ground surface over the drainfield. Green dye introduced into the system at 11:42 a.m. on that day appeared in the drainfield area at 11:50 a.m. the next day. The liquid is pumped to a drainage ditch which drains into the roadside ditch on Scenic Drive. A bacteriological sample taken on February 4, 1988 from the liquid showed the presence of 54,800 fecal coliform colonies and 1,020 enterococcus colonies per 100 milliliters.

73. On February 8, 1988, on tax lot 2300 of 10-4-35AC (1780 Laura Vista Drive N.W.), a tile drain was discharging into an open ditch approximately 10 feet north of the drainfield. A bacteriological sample taken on that day from the discharging liquid showed the presence of 240 fecal coliform colonies per 100 milliliters.

74. On February 4, 1988, on tax lot 1500 of 10-4-35AC (1650 Laura Vista Drive N.W.), liquid with the characteristic odor and appearance of sewage saturated the drainfield area. Green dye introduced into the septic system of the property at 2:55 p.m. on that day appeared on the ground surface at 10:00 a.m. on February 8, 1988.

75. On February 3, 1988, on tax lot 400 of 10-4-35AC (1819 Scenic Drive N.W.), saturated soils prevailed throughout the drainfield area, indicating the presence of sewage at or near the ground surface.

76. On February 3, 1988, on tax lot 300 of 10-4-35AC (1857 Scenic Drive N.W.), saturated soils prevailed in the drainfield area, indicating the presence of sewage at or near the ground surface. The owners stated that the septic system drains slowly and occasionally backs up during periods of heavy rain.

77. On February 3, 1988, on tax lot 900 of 10-4-35AB (2117 Scenic Drive N.W.), liquid with the characteristic odor and appearance of sewage was standing on the ground surface in the drainfield area. A bacteriological sample taken from the liquid on February 8, 1988 showed the presence of 5,400 fecal coliform colonies and 140 enterococcus colonies per 100 milliliters.

78. On February 2, 1988, on tax lot 800 of 10-4-35AB (2153 Scenic Drive N.W.), liquid with the characteristic odor and appearance of sewage was standing on the ground surface over the drainfield. A bacteriological sample taken on February 9, 1988

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showed the presence of 20,000 fecal coliform colonies and 320 enterococcus colonies per 100 milliliters.

79. On February 2, 1988, on tax lot 600 of 10-4-35AB (2267 Scenic Drive N.W.), saturated soils and standing liquid prevailed on the ground surface above the drainfield, indicating the presence of sewage at or near the ground surface.

80. On February 2, 1988, on tax lot 500 of 10-4-35AB (2309 Scenic Drive N.W.), liquid with the characteristic odor and appearance of sewage was standing over the drainfield area. Green dye introduced into the septic system of the property at 2:50 p.m. on that day appeared in the drainfield area at 9:41 a.m. on February 9, 1988.

81. On tax lot 400 of 10-4-35AB (2391 Scenic Drive N.W.), a drain pipe leading from the septic tank discharges into the roadside ditch. At 2:40 p.m. on February 2, 1988, green dye was introduced into the septic system of the property; the dye appeared in the ditch on February 9, 1988 at 9:35 a.m.

82. On February 1, 1988, on tax lot 4600 of 10-4-26CD (2741 Oak Grove Loop N.W.), liquid with the characteristic odor and appearance of sewage was standing on the ground surface over and downslope from the drainfield area. Green dye introduced into the septic system of the property at 10:55 a.m. on that day was observed in the liquid 3-1/2 hours later.

83. On February 1, 1988, on tax lot 600 of 10-4-26CD (2682 Quince Street N.W.), a tile drain pipe was discharging liquid to the ground surface. A bacteriological sample of the discharging

liquid showed the presence of 40 enterococcus colonies per 100 milliliters.

84. On February 1, 1988, on tax lot 1000 of 10-4-26CD (2508 Quince Street N.W.), a drain pipe leading from the drainfield was discharging liquid in the bank of the roadside ditch on the south property line. A bacteriological sample taken from the liquid on February 9, 1988 showed the presence of 3,000 fecal coliform colonies and 1,280 enterococcus colonies per 100 milliliters.

85. On February 1, 1988, on tax lot 3300 of 10-4-26CD (3861 26th Avenue N.W.), liquid with the characteristic odor and appearance of sewage was standing on the ground surface over the drainfield and running onto the road. Green dye introduced into the septic system of the property at 3:45 p.m. on that day appeared on the surface of N.W. Poplar Street and 26th Avenue at 9:40 a.m. the next day.

86. On February 1, 1988, on tax lot 3500 of 10-4-26CD (2691 Poplar Street N.W.), liquid with the characteristic odor and appearance of sewage was standing on the ground surface under the blackberry bushes on the south property line. Green dye introduced into the septic system of the property at 3:55 p.m. on that day appeared on the ground surface under the blackberry bushes at 9:50 a.m. the next day. A bacteriological sample of the surface liquid taken on February 3, 1988 showed the presence of 40,000 fecal coliform colonies and 320 enterococcus colonies per 100 milliliters.

87. On February 9, 1988, on tax lot 2200 of 10-4-26CD (3756 26th Avenue N.W.), liquid with the characteristic odor and

appearance of sewage was standing over the drainfield. A bacteriological sample of the liquid taken on that date showed the presence of 4,400 fecal coliform colonies and 660 enterococcus colonies per 100 milliliters.

88. On February 2, 1988, on tax lot 2100 of 10-4-26CD (3700 26th Avenue N.W.), liquid was standing on the ground surface in the southwest corner of the property near a shed. A bacteriological sample taken from the liquid on February 9, 1988, showed the presence of 400 fecal coliform colonies and 40 enterococcus colonies per 100 milliliters.

89. On tax lot 1800 of 10-4-26CD (3633 25th Avenue N.W.), a curtain drain leads from the drainfield, which is located in the vacant lot to the west of tax lot 1800. On February 2, 1988, this drain was discharging into the roadside ditch located on the north side of 25th Avenue. A bacteriological sample taken from the discharge on February 3, 1988 showed the presence of 200 fecal coliform colonies per 100 milliliters.

90. On February 3, 1988, on tax lot 1300 of 10-4-26CD (3791 25th Avenue N.W.), liquid with the characteristic odor and appearance of sewage was seeping from the ground, downslope from the drainfield into the roadside ditch on the north side of 25th Avenue. Green dye introduced into the septic system of the property at 11:25 a.m. on that day appeared in the ditch at 9:30 a.m. the next day.

91. On February 2, 1988, on tax lot 1100 of 10-4-26CD (3873 25th Avenue N.W.), saturated soils prevailed over the drainfield

area in the front yard of the residence. The occupant stated that the fixtures drain slowly and back up during rainy winter months.

92. On February 3, 1988, on tax lot 800 of 10-4-35DB (3450 Gibson Hill Drive N.W.), liquid with the characteristic odor and appearance of sewage was standing on the ground surface over the septic tank, and in open trenches in the back yard of the property. The owners stated that the toilet facilities are unusable because they will not drain, and that they have made plans to have a portable chemical toilet installed on the property. A white plastic pipe was discharging gray water waste onto the driveway on that day.

93. On tax lot 300 of 10-4-35DB (3178 Gibson Hill Drive N.W.), a drain pipe leads from the septic tank and terminates in the roadside ditch on the south side of Gibson Hill Drive. A bacteriological sample taken on February 9, 1988 from the effluent showed the presence of 400 fecal coliform colonies and 480 enterococcus colonies per 100 milliliters.

94. On tax lot 200 of 10-4-35DB (3118 Gibson Hill Drive N.W.), a tile drain discharge pipe leads from the saturated drainfield area to the roadside ditch on the south side of Gibson Hill Drive. A bacteriological sample taken on February 9, 1988 from the tile drain pipe showed the presence of 200 fecal coliform colonies and 220 enterococcus colonies per 100 milliliters.

95. On February 4, 1988, on tax lot 600 of 10-4-35DA (2986 Gibson Hill Drive N.W.), liquid with the characteristic odor and appearance of sewage filled the water meter boxes which serve the

residence. Green dye introduced into the septic system of the property at 10:20 a.m. on that day appeared in both water meter boxes and was seeping from the bank of the ditch on the south side of Gibson Hill Drive.

96. On February 4, 1988, on tax lot 500 of 10-4-35DA (2930 Gibson Hill Drive N.W.), liquid with the characteristic odor and appearance of sewage was flowing from a tile drain pipe into the roadside ditch on the south side of Gibson Hill Drive at the northwest corner of the property. Liquid with the characteristic odor and appearance of sewage was also seeping from a tile drain pipe into the same ditch approximately 20 feet east of the first drain pipe. Green dye introduced into the septic system of the property at 11:50 a.m. on that day discharged from the two drain pipes three hours later.

97. On February 4, 1988, on tax lot 400 of 10-4-35DA (2912 Gibson Hill Drive N.W.), liquid with the characteristic odor and appearance of sewage was standing on the ground surface around the septic tank. Green dye introduced into the septic system of the property at 11:25 a.m. on that day appeared in the standing liquid at 9:25 a.m. the next day.

98. On February 4, 1988, on tax lot 700 of 10-4-35DA (1568 Pulver Lane N.W.), liquid was standing in several places and saturated soils prevailed over the drainfield. A bacteriological sample taken on February 9, 1988 from the standing liquid in the drainfield area showed the presence of 400 enterococcus colonies per 100 milliliters.

99. On February 4, 1988, on tax lot 900 of 10-4-35DA (1512 Pulver Lane N.W.), liquid with the characteristic odor and appearance of sewage was standing in several places in the drainfield area. Green dye introduced into the septic system of the property at 10:05 a.m. on February 8, 1988 appeared in the standing liquid at 11:22 a.m. on February 9, 1988.

100. On February 4, 1988,, on tax lot 1100 of 10-4-35DA (2939 Pulver Lane N.W.), saturated soils prevailed on the ground surface at the ends of two drain lines.

101. On tax lot 501 of T10S R4W, Sec 36 DB (1450 Gibson Hill Drive N.W.), two individual disposal lines lead from the drainfield to the roadside ditch in front of the property. Green dye introduced into the septic system of the property on February 10, 1988 at 3:35 p.m. appeared in the roadside ditch at 10:05 a.m. the next day.

102. On February 8, 1988, on tax lot 301 of T10S, R4W, Sec 36DB (1282 Gibson Hill Drive N.W.), liquid with the characteristic odor and appearance of sewage was surfacing in the drainfield area below the home. Green dye introduced into the septic system of the property at 3:30 p.m. on that day appeared in the surfacing liquid at 2:50 p.m. the next day.

103. On February 2, 1988, on tax lot 400 of T10S, R4W, Sec 36DA (625 Quarry Road N.W.), liquid with the characteristic odor and appearance of sewage was seeping out of the bank below the home onto the ground surface. Green dye introduced into the septic

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system of the property at 4:10 p.m. on that day appeared on the ground surface at 1:40 p.m. the next day.

104. On February 10, 1988, on tax lot 600, T10S, R4W, Sec 36DA (735 Quarry Road N.W.), liquid with the characteristic odor and appearance of sewage was seeping out of the bank below the home. A bacteriological sample taken on that day of the liquid showed the presence of greater than 100,000 fecal coliform colonies and 680 enterococcus colonies per 100 milliliters.

105. On tax lot 501 of T10S, R4W, Sec 36DA (1543 Laurel Oaks Drive N.W.), the owner indicated that liquid with an odor of sewage often surfaces at the corner of the garden. Green dye introduced into the septic system of the property on February 3, 1988 at 12:15 p.m. appeared in the drainfield area the next day. The dye also appeared in the discharge from a drain pipe coming from the drainfield area toward Quarry Road.

106. On February 2, 1988, on tax lot 1000 of T10S, R4W, Sec 36DA (1551 Laurel Oaks Drive N.W.), saturated conditions prevailed throughout the drainfield area that had the characteristic odor and appearance of sewage. A bacteriological sample taken on February 3, 1988 of the liquid in the drainfield area showed the presence of 400 enterococcus colonies per 100 milliliters.

107. On February 2, 1988 on tax lot 2200 of T10S, R4W, Sec 36DA (1526 Laurel Oaks Drive N.W.), liquid with the characteristic odor and appearance of sewage was flowing away from the septic tank in an open trench. A bacteriological sample taken on that day from the liquid showed the presence of greater than 20,000 fecal

coliform colonies and 1,480 enterococcus colonies per 100 milliliters. On February 10, 1988 at 3:35 p.m., green dye introduced into the septic system of the property, appeared in the septic tank discharge at 12:20 p.m. the next day.

108. On February 2, 1988, on tax lot 1300 of T10S, R4W, Sec 36DA (758 Laurel Place N.W.), liquid with the characteristic odor and appearance of sewage was discharging onto the ground surface of the drainfield. Green dye introduced into the septic system of the property at 3:20 p.m. on that day appeared on the ground surface at 1:30 p.m. the next day.

109. On tax lot 3700 of T10S, R4W, Sec 36DA (815 Quarry Road N.W.), drain lines lead from the septic tank to the ditch on Quarry Road. A bacteriological sample taken on February 1, 1988 from the standing liquid in the ditch below the drainfield showed the presence of 2,000 fecal coliform colonies per 100 milliliters. A further survey of the water in the ditch was conducted on June 2, 1988, and the only liquid in the ditch was from the seepage out of the cut bank below the property's drainfield area.

110. On February 1, 1988, on tax lot 3200 of T10S, R4W, Sec 36DA (1550 Laurel Heights Drive N.W.), liquid was seeping from the base of a cut bank downslope from the drainfield. Green dye introduced into the septic system of the property at 11:20 a.m. on that day appeared in the seeping liquid at 2:00 p.m.

111. On February 8, 1988, on tax lot 200 of T10S, R4W, Sec 36AD (733 Laurel Place N.W.), a lush grass growth on the bank directly below the drainfield, indicated the seepage of improperly

treated sewage. Green dye introduced into the septic system of the property at 3:50 p.m. on that day appeared on the ground surface at 9:20 a.m. the next day.

112. On February 4, 1988, on tax lot 600 of T10S, R4W, Sec 36AD (1636 Laurel Way N.W.), liquid with the characteristic odor and appearance of sewage was discharging onto the ground surface directly across the street from the property. Green dye introduced into the septic system of the property at 9:20 a.m. on that day appeared in the liquid discharge 5-1/2 hours later.

113. On tax lot 700 of T10S, R4W, Sec 36AD (1648 Laurel Way N.W.), the owner indicated that the sewage disposal system for the property had not operated properly for about 10 years. The owner further indicated that the household laundry is done at a laundromat because the system backs up if too much water is used.

114. On February 4, 1988, on tax lot 2100 of T10S, R4W, Sec 36AC (1033 Gibson Hill Drive N.W.), liquid with the characteristic odor and appearance of sewage was discharging onto the ground surface. Green dye introduced into the system at 12:00 p.m. on that day appeared on the ground surface at 9:20 a.m. on February 8, 1988.

115. On February 9, 1988, on tax lot 1001 of T10S, R4W, Sec 36AC (1775 Park Terrace N.W.), liquid with the characteristic odor and appearance of sewage was seeping into the roadside ditch on Gibson Way. A bacteriological sample taken on February 10, 1988 from the seeping liquid showed the presence of 1,600 fecal coliform colonies and 100 enterococcus colonies per 100 milliliters.

116. On February 10, 1988, on tax lot 1100 of T10S, R4W, Sec 36AC (1733 Park Terrace N.W.), liquid was standing throughout the drainfield area. A bacteriological sample taken on that day from the standing liquid showed the presence of 200 fecal coliform colonies and 20 enterococcus colonies per 100 milliliters.

117. On February 9, 1988, on tax lot 1200 of T10S, R4W, Sec 36AC (1746 Park Terrace N.W.), liquid was standing over the drainfield. Green dye introduced into the septic system of the property at 3:00 p.m. on that day appeared in the standing liquid at 11:30 a.m. the next day.

118. On tax lot 801 of T10S, R4W, Sec 36AC (1798 Park Terrace N.W.), the owner stated that he had had problems with sewage surfacing in the yard of the residence, most noticeably in May and June when he mows the grass.

The following test results are of surface water samples from various locations showing impacts from failing disposal systems on surface water as it flows through and out of the area proposed for annexation. Most of the drainage out of the area originates from within the area. The results show contamination which can be correlated with locations of failing subsurface sewage disposal systems serving homes in the area. The drainage ways from which the samples cited in findings 119-129 were taken eventually discharge to Crocker Creek and Bowers Slough or into Thornton Lake. Without evidence to the contrary, these conditions are presumed to continue to exist:

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119. On February 21, 1984, a bacteriological sample taken from the roadside ditch along the east side of Crocker Lane (Site No. 1 on Exhibit 10), showed the presence of 2,400 fecal coliform colonies per 100 milliliters.

120. On February 4, 1987, a bacteriological sample taken of the surface water present in a roadside ditch at the northeast end of Sunny Lane (Site No. 2 on Exhibit 10), showed the presence of 1,280 fecal coliform colonies per 100 milliliters.

121. On February 4, 1987, a bacteriological sample taken of the surface water in the roadside ditch on the east side of Crocker Lane in front of 2177 Crocker Lane (site No. 3 on Exhibit 10) showed the presence of 3,000 or more fecal coliform colonies per 100 milliliters.

122. On February 21, 1987, a bacteriological sample taken of the surface water located at the west side of the bridge of North Albany Road (site No. 5 on Exhibit 10) showed the presence of 2,400 fecal coliform colonies per 100 milliliters.

123. On February 21, 1984, a bacteriological sample taken of the surface water located at the west side of North Albany Road, 100 feet north of the Thornton Lake Bridge, on the south side of the culvert (site No. 6 on Exhibit 10), showed the presence of 4,600 fecal coliform colonies per 100 milliliters.

124. On February 14, 1984, a bacteriological sample taken from surface water in the north culvert on the east side of Scenic Hill Drive, approximately 40 feet south of the intersection of Scenic Hill Drive and Gibson Hill Road (site No. 7 on Exhibit 10),

showed the present of 1,700 fecal coliform colonies per 100 milliliters.

125. On February 14, 1984, a bacteriological sample taken from the drainage culvert west of Oakgrove School on Oakgrove Road (site No. 8 on Exhibit 10), a site outside the area proposed for annexation, showed the presence of 4,700 fecal coliform colonies per 100 milliliters.

126. On February 14, 1984, a bacteriological sample taken from surface water present 150 yards south of the intersection of Metge Road and Oakgrove Road, on the north side of Oakgrove Road (site No. 9 on Exhibit 10), a site outside the area proposed for annexation, showed the presence of 1,100 fecal coliform colonies per 100 milliliters.

127. On February 14, 1984, a bacteriological sample taken of surface water in the culvert on the southwest side of the intersection of Scenic and 25th Streets (site No. 10 on Exhibit 10) showed the presence of 1,100 fecal coliform colonies per 100 milliliters.

128. On February 14, 1984, a bacteriological sample of surface water taken from a ditch on the northwest side of the intersection of 25th and Happy Streets (site No. 11 on Exhibit 10) showed the presence of 3,100 fecal coliform colonies per 100 milliliters. On February 21, 1984, a bacteriological sample taken at the same location showed the presence of 11,000 fecal coliform colonies per 100 milliliters.

129. On February 14, 1984, a bacteriological sample of surface water taken from Crocker Creek along the gravel road to the

east of the area proposed for annexation (site No. 12 on Exhibit 10) showed the presence of 1,300 fecal coliform colonies per 100 milliliters.

14.

The Riverview Heights Treatment Plant (RHTP) operates under a National Pollutant Elimination Discharge Permit issued by the U.S. Environmental Protection Agency; performance of the RHTP under the permit is monitored by the Oregon Department of Environmental Quality. The permit establishes standards for discharge of treated effluent measured by three criteria: (1) BOD, or biochemical oxygen demand, which is an indicator of the strength of the sewage - the higher the BOD number, the more contaminated the sewage; (2) TSS, or total suspended solids - a high TSS count indicates that treatment of the sewage is ineffective because inadequate breakdown and settlement of solids interferes with disinfection by chlorination; and (3) the presence of fecal coliform organisms, the significance of which is discussed above.

The RHTP is permitted to discharge a monthly average of 20 milligrams per liter BOD (and a weekly average of 30 milligrams per liter BOD) from June 1 through October 31 of each year, and a monthly average of 30 milligrams per liter BOD (and a weekly average of 45 milligrams per liter BOD) during the rest of the year. The RHTP is permitted to discharge a monthly average of 20 milligrams per liter TSS (and a weekly average of 30 milligrams per liter TSS) from June 1 through October 31 of each year, and a monthly average of 30 milligrams per liter TSS (and a weekly

average of 45 milligrams per liter TSS) during the rest of the year. The RHTP is permitted to discharge a monthly average of 100 fecal coliform organisms per 100 milliliters (and a weekly average of 200 fecal coliform organisms per 100 milliliters) year-round.

During the period January 1987 through May 1988, the RHTP discharged sewage effluent in violation of its permitted monthly standards:

1. For BOD, during June, September, October and November, 1987, and February 1988;
2. For TSS, during June through December, 1987, and February, March and May, 1988;

and in violation of its permitted weekly standards:

1. For BOD, on three occasions;
2. For TSS, on 12 occasions;
3. For fecal coliform, on two occasions.

The RHTP spray-irrigates and discharges inadequately treated sewage effluent onto a hillside, from which it flows into Crocker Creek. Bacteriological samples taken March 24, 1987 from runoff at the northeast corner of the irrigation site showed 2200 fecal coliform and 250 enterococcus colonies per 100 milliliters. Another sample of the runoff from the northwest corner of the site showed 2500 fecal coliform and 100 enterococcus colonies per 100 milliliters.

RHTP is subjected to hydraulic overload caused by excessive inflow and infiltration of non-sewage surface runoff water into the plant's collection lines. The resulting flows overwhelm the RHTP's

ability to treat and disinfect the sewage, ultimately resulting in the discharge of inadequately treated sewage into the environment.

15.

In the area proposed for annexation, the possibility of contracting disease through direct or indirect contact with raw or inadequately treated sewage occurs due to:

1. Normal daily activities carried on in and around the residential living units in the area.

2. Children playing in the area are exposed to contaminated surface water.

3. Domestic animals found in the subject area are possible vectors of pathogens to residents within and without the area.

4. Other vectors, such as insects, rodents, or other pests, could transmit pathogens to persons within and outside the area.

5. Persons using bicycles located in the subject are exposed to contaminated surface water running across roads and driveways.

6. Persons fishing, boating, playing and swimming in Crocker Creek, Bowers Slough and Thornton Lake are exposed to contaminated surface water.

16.

Persons living within the territory proposed for annexation who contract diseases as discussed above could, in turn, carry diseases so contracted to persons living outside the subject territory, either by direct personal contact or by contaminating food to be consumed by persons outside the territory. In addition, persons from outside the territory are exposed to the conditions

discussed above by virtue of the passage of contaminated water through drainage ditches along the roads in the area and then to streams that carry the contaminated water outside of the area.

17.

The area proposed for annexation is contiguous to the City of Albany, Oregon, and are within the urban growth boundaries of that city. Albany is an incorporated city.

OPINION

I. Introduction

As the transcript, legal memoranda and exhibits indicate, this was a vigorously contested proceeding. Given the volume of evidence and complexity of legal issues presented, an introduction to the structure of this opinion is in order. Some of the residents of the area proposed for annexation formed two non-profit corporations which participated in the proceedings. The first, "Stop Annexation - Not Sewers" (hereinafter, "SANS"), was represented by attorney Michael Farthing at the June 29, 1988 hearing and by attorney Dale A. Riddle at the June 30, 1988. Both are members of the law firm Gleaves, Swearingen, Larsen & Potter, Eugene, Oregon. The second, called "Kingston Against City Annexation" (hereinafter, "KACA"), was represented by attorneys Edward Sullivan and Richard Wyman, of the law firm Mitchell, Lang & Smith, Portland, Oregon. Other, non-represented individuals attended the hearing and presented testimony. SANS delegated its representation to Mr. Sullivan during the August 5, 1988 hearing, and for the September 15, 1988 closing argument. After closing arguments were held on

September 15, 1988, Mr. Sullivan's law firm withdrew as counsel for KACA. To facilitate analysis of the record, the opinion portion of these findings is divided into the following sections: a list of the witnesses and their backgrounds; a list of the exhibits; rulings made on evidentiary objections during the hearing; a summary of the arguments presented in opposition to the proposed annexation; and finally, analysis of the major arguments presented.

Five memoranda of law were submitted. For ease of reference in the opinion, the memorandum filed by the Health Division ("Division") on August 4, 1988 will be referred to as "HD Memo I;" the Division memorandum submitted on September 8, 1988 will be referred to as "HD Memo II;" and the Division memorandum submitted on September 14, 1988 will be referred to as "HD Memo III." KACA's memorandum submitted on August 2, 1988 will be referred to as "KACA Memo I;" and KACA's memorandum submitted on September 9, 1988 will be referred to as "KACA Memo II."

II. WITNESSES

A. Called by Division

1. Richard Dalke, Benton County Project and Utility Manager. Dalke manages the functions of water and sewer service districts in Benton County, including the Riverview Heights sewage treatment plant. He is a registered civil engineer and a licensed land surveyor.

2. Robert N. Wilson, Benton County supervising sanitarian. Wilson is the manager of the Benton County Environmental Health Division. Wilson has been a registered sanitarian for 16 years.

3. Ronald A. Hall, Oregon Health Division. Hall is the manager of the Health Hazard Studies Program in the Office of Environmental Health, and is a registered sanitarian.

4. Gary W. Messer, Oregon Department of Environmental Quality. Messer is the supervisor of the Water, Solid Waste and Air Quality Programs in the Willamette Valley Region. Messer has been a registered sanitarian for 21 years.

5. Sherman O. Olson, Jr., Oregon Department of Environmental Quality. Olson is an Environmental Specialist III (on-site specialist) in the Sewage Disposal Section of the Water Quality Division of DEQ. Olson is a registered sanitarian.

6. Ronald E. Smith, Benton County. Smith is a registered sanitarian.

7. Dr. Elizabeth Sazie. Dr. Sazie is the Benton County Health Officer.

B. Called by Participants

1. Diana Coulter. Coulter is a microbiologist with the Public Health Laboratory, Portland, Oregon.

2. Beth Myers. Myers is the owner/operator of Water Labs in Salem, Oregon, which is certified by the Health Division to conduct microbiological tests for water quality.

3. Dave St. Louis, Department of Environmental Quality. St. Louis is the Willamette Region Manager of air quality, water quality, solid waste, and other programs of the DEQ.

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4. Dan Bartlett, County Administrative Officer for Benton County. Bartlett is also the chief executive officer and the budget officer for the North Albany Sanitary District.

5. William Barrons, Albany City Manager.

6. Carol Steele. Steele is a resident of the area proposed for annexation and circulated the petition which was admitted to the record as Exhibit 41.

7. Jan Amling, a resident of the area. Amling circulated the petition which was offered as Exhibit 30.

8. Mr. Harris, a resident of the area.

9. Mike Gray, a resident of the area.

10. Dorothy Henry, a resident of the area.

11. Harold Swanson, who lives on property which is adjacent to the area proposed for annexation.

12. Jim Boatwright, a resident of the area.

13. Clyde Hashagen, a resident of the North Albany area, but not of the area proposed for annexation.

14. Jerry Niblock, a resident of the North Albany area, but not of the area proposed for annexation.

III. EXHIBITS

A. Offered by the Health Division

No.	Description
1	Letter to Kristine Gebbie, administrator of the Oregon Health Division from the office of the Benton County Board of Commissioners, with the Amended Resolution of the Benton County Board of Commissioners, acting as the

Benton County Board of Health, initiating the health hazard annexation procedure. Admitted without objection.

2 An affidavit of publication of the order for public hearing in the Albany Democrat-Herald. Admitted without objection.

3 Affidavit of posting the order for public hearing submitted by Robert N. Wilson, registered sanitarian. Admitted without objection.

4 Certified copies of the tax assessor's maps of the area. Admitted without objection.

5 Large map of the area with the tax map boundaries outlined and numbered in red. Admitted without objection.

6 Large map of the area with a color code indicating "satisfactory," "failing" and "indirectly failing" subsurface sewage systems. Admitted without objection.

7 Certified copies of the Benton County Assessor's tax rolls for the tax maps of the area. Admitted without objection.

8a-e Written narratives of the North Albany sanitary survey, read into the record by witnesses Hall, Messer, Olson, Smith and Wilson. All admitted without objection.

8a Narrative of Hall - Area 1 on Exhibit 6.

8b Narrative of Messer - Area 4 on Exhibit 6.

8c Narrative of Olson - Area 2 on Exhibit 6.

8d Narrative of Smith - Area 3 on Exhibit 6.

8e Narrative of Wilson - Area 5 on Exhibit 6.

9		Slides taken at various locations in the area during the sanitary survey, and presented during the narrative testimony of the witnesses listed for Exhibit 8. All admitted without objection.
		9-1-1 through 9-1-13: Shown during Hall's narrative.
		9-2-1 through 9-2-45: Shown during Olson's narrative.
		9-3-1 through 9-3-67: Shown during Smith's narrative.
		9-4-1 through 9-4-48: Shown during Messer's narrative.
		9-5-1 through 9-5-36: Shown during Wilson's narrative.
10		A large map of the area indicating Albany's urban growth boundary, the boundary of the sanitary survey, the Albany city limits, drainage systems in the area, and the results of tests of surface water samples in 1984 and 1987. Admitted, save for information regarding the test of Site #4 and the test taken on February 24, 1988 at Site #1.
11a-d		Lab test results from bacteriological tests run on surface waste samples taken in February 1984 and February 1987. Admitted; see evidentiary rulings 12 and 13.
12a		Water discharge permit issued to the North Albany County Service District by the Oregon Department of Environmental Quality. Admitted without objection.
12b		Monthly reports from Riverview Heights to DEQ for January 1987 through May 1988, together with a summary sheet of tests exceeding permitted standards of discharge. Admitted without objection.

13 Excerpt from Benton County Comprehensive Plan. Admitted without objection.

14 Certified copies of extract of original Board of Health Administrative Order number HB 1371960, dated March 25, 1960 and the Board of Health Administrative Order number 70-1955, dated January 19, 1955. Admitted without objection. (Transcript, Day 3, page 185.)

15 through 20 - Unused exhibit numbers.

B. Offered by SANS and KACA

21 Letter to Kristine Gebbie and Steve Boedigheimer from attorney Edward J. Sullivan, dated June 21, 1988. Admitted without objection.

22 Copy of speed message to Pam Silburnagel, Council of Governments from Ron Hall dated 03/07/85. Admitted over the objection of the Division.

23 Interoffice memo from Jim Buckley of the Health Division Annexation Program to Keith Putman, Health Division Administrator, et al, dated April 26, 1977, regarding results of the 1977 sanitary survey. On objection by the Division, it was initially not admitted into the record, as it lacked proper foundation. It is received only as an offer of proof. (Transcript, Day 1, Pages 111-112.) It was later admitted during the testimony of St. Louis, over the objection of relevance by the Division, because of intervening rulings on other evidence. (Transcript, Day 3, Page 100.) See Evidentiary Ruling 17.

24 Draft summary of testimony of Gary Messer, registered sanitarian on the North Albany sanitary survey. Admitted without objection.

25 Final order of the Environmental Quality Commission, case number EQ6-WVR-87-02, in the matter of sewerage facility construction by North Albany County Service District dated May 25, 1987. Admitted. (See Evidentiary Ruling 10.)

26 Letter to Fred Hansen, director of DEQ, from Charline Carr, chairman of the Benton County Board of Commissioners, dated June 30, 1987. Admitted. (See Evidentiary Ruling 10.)

27 Interoffice memo from Al Hose to Dave St. Louis, dated September 15, 1987. Admitted over the objection of the Division.

28 Exhibit not offered.

29 Letter to Benton County Board of Commissioners from Tom Holman, mayor of the City of Albany, dated May 28, 1987. Admitted over the objection of the Division.

30 Petition for sewerage improvement project, Benton County, Oregon, signed by Janice E. Amling, dated May 14, 1987. Admitted over the objection of the Division.

31 Copies of quality control form relating to equipment used by Drebler Health Lab in testing samples. Admitted without objection.

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32a Excerpt from a publication entitled "Microbiological Methods for Monitoring the Environment," published by the EPA. Admitted without objection.

32b Excerpt from a publication entitled "Water Microbiology Laboratory and Field Procedures," published by Millipore. Admitted without objection.

32c Excerpt from the publication "Standard Methods for the Examination of Water and Wastewater," 16th Edition. Admitted without objection.

33 Map of the area divided into sections for a sanitary survey performed in 1977 by Benton County and the Department of Environmental Quality. Admitted over the continuing objection of the Division.

34 Letter to Assistant Attorney General Michael Huston from Fred Hansen, director of Oregon DEQ, dated December 3, 1985. Admitted without objection.

35 Letter to Fred Hansen, director of DEQ, from Assistant Attorney General Arnold Silver, dated March 30, 1986. Admitted without objection.

36 Interoffice memo to Fred Hansen, director of DEQ, from Dave St. Louis, dated August 19, 1985, regarding background on North Albany sewage problem. Admitted over the continuing objection of the Division.

37 Letter to the Benton County Board of Commissioners from Keith Putman, administrator of the Oregon Health Division, dated May 13, 1977. Admitted over the

objection of the Division.

38 Interoffice memo to Mary Halliburton, Water Quality Division, from Dave St. Louis, dated December 22, 1985. Admitted over the continuing objection of the Division.

39 Notice of election to be held on June 24, 1986 regarding annexation of the North Albany area into the City of Albany, dated April 24, 1986. Admitted over the continuing objection of the Division.

40 Notice of election to be held on November 16, 1986 concerning a general obligation bond for indebtedness for sewer construction by the North Albany County Service District. Admitted over the continuing objection of the Division.

41 Petition to the Benton County Board of Commissioners to initiate annexation proceedings pursuant to ORS 222.840 to 222.915 bearing signatures obtained in May of 1987. Admitted over the continuing objection of the Division.

42 Order by the North Albany County Service District dated August 6, 1986. Admitted over the continuing objection of the Division.

43 Letter to David St. Louis, Oregon DEQ, from Dan Bartlett, Benton County Administrative Officer, dated June 12, 1986. Admitted over the continuing objection of the Division.

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44 North Albany Sewer Service Plan adopted by the Albany-Benton County Intergovernmental Advisory Committee. Admitted over the continuing objection of the Division.

45 North Albany Utility Construction District Plan and Report published by the Benton County Board of Commissioners dated October 1984. Admitted over the continuing objection of the Division.

C. Offered by Participants by Mail

A large number of letters was received by the Hearings Officer from residents of the area proposed for annexation and from residents of nearby areas. Some were obviously sent in response to flyers circulated in the area. Copies of the flyers were provided by Mr. Sullivan following a request by the Hearings Officer.

46 Four flyers distributed by SANS and KACA.

47 27 letters from residents opposed to the annexation.

48 1 letter from a resident in favor of the annexation.

IV. EVIDENTIARY ISSUES.

There was great debate between the parties regarding the scope of the hearing. The statute is clear that,

> "the hearing shall be for the sole purpose of determining whether a danger to public health exists due to conditions in the affected territory." ORS 22.875(1).

One of the few evidentiary issues on which the parties agreed is that the duty of the Hearings Officer is to

> "ensure that the record developed at the hearing shows a full and fair inquiry into the facts necessary for consideration of all issues properly before the presiding officer in the case." ORS 183.415(10).

From here, however, opinions diverged sharply. The Division placed emphasis on the statutory language "issues properly before the presiding officer" (HD Memo I, page 1), while the participants placed emphasis on the language "full and fair inquiry into the facts necessary for consideration of all issues" (KACA Memo I, page 3, lines 20-21). At the heart of the controversy is whether evidence and arguments concerning the historical and political background of unsuccessful attempts to relieve a perceived health hazard in the area should be admissible, or whether the scope of the hearing should be strictly limited to consideration of scientific evidence of a danger to the public health. The Hearings Officer concluded that the political issues might be construed as a "condition" contributing to a danger to public health.

What follows is a listing of the significant evidentiary objections and rulings made, in the order that they were presented:

1. The parties stipulated that the amended resolution may serve as the basis for this proceeding, despite the fact that it pre-dates the order for hearing. The amended resolution was drafted because of changes in technical language. (Transcript, Day 1, page 15).

2. KACA objected to introduction of the results of microbiological testing on the basis of insufficient foundation. This objection was overruled based on the "reasonably prudent person" standard, ORS 183.450(1). (Transcript, Day 1, page 64.)

3. The participants objected to testimony of Mr. Hall regarding microbiological test results on the basis that he is

incompetent to testify, because he was not present during testing. This objection was overruled, for the same reason. (Transcript, Day 1, page 64.)

4. The participants objected to the testimony of Mr. Hall concerning reports given by residents of the conditions of their septic systems during the sanitary survey. This objection was overruled, based on the "reasonably prudent person" standard, and on the basis of Higley v. Edwards, 67 Or App 488, 499 (1983). In addition, the Hearings Officer deems homeowner admissions of failing septic tank systems to be particularly trustworthy, as, in the context of these proceedings, such a statement is tantamount to an admission against interest. (Transcript, Day 1, page 70.)

5. KACA moved to strike as non-responsive an answer given by Hall regarding the number of dilutions run in a microbiological test. The motion was denied, as the answer was at least partially responsive and informative. (Transcript, Day 1, pages 90-91.)

6. The Division objected to a line of questioning during cross-examination of Hall by KACA concerning objective standards for defining a danger to public health. The objection was overruled and the Hearings Officer permitted a brief series of questions on the issue. (Transcript, Day 1, pages 100-107.)

7. The participants moved for the admission of Exhibit 23. The objection of the Division to the admission of the document for lack of foundation was sustained. It was not admitted to the record, but was received as an offer of proof. (Transcript, Day 1, pages 109-113.)

8. The Hearings Officer made a sua sponte objection to a question during the cross-examination of Hall by KACA regarding other annexation scenarios unrelated to this proceeding, as irrelevant. (Transcript, Day 1, page 120.)

9. The Division objected to a line of questioning of Hall by SANS regarding the political process involved when a petition seeking commencement of annexation proceedings is presented to a County, particularly on drawing a boundary of an area to be proposed for annexation. The objection was sustained as beyond the scope of the proceeding. (Transcript, Day 1, pages 123-126.)

10. The Division objected to the offer by KACA of Exhibits 25 and 26. Exhibit 25 is a final order from the Environmental Quality Commission; Exhibit 26 is a letter to Fred Hansen from Charline Carr, Chairman of the Benton County Board of Commissioners, indicating that in lieu of complying with the order of the Environmental Quality Commission, the health hazard annexation proceeding was being contemplated. The Division objected to the admission of these documents on the grounds of irrelevancy. The objection was sustained, and Exhibits 25 and 26 were not admitted to the record, but were received as an offer of proof. (Transcript, Day 1, pages 187-190.) This evidentiary objection was later overruled by the Hearings Officer during cross-examination of Dalke, on the grounds that consideration of "political" conditions may be contemplated by the statute, and to develop the broadest possible record. (Transcript, Day 2, pages 358-359.) Later in the hearing, this issue was raised again,

during the examination of St. Louis. At this point, the Division made a continuing objection to all further evidence on "political" conditions in the area. (Transcript, Day 3, page 72.)

11. When the Division recalled Hall to clarify an answer given the previous day regarding dilution of samples during lab testing, KACA objected on the grounds that Hall was not competent to testify on the issue of microbiology or lab testing procedures. This objection was overruled because it related to a question asked during cross-examination by KACA, and because Hall testified that he has some knowledge in the field. Hall's lack of standing as an expert in these areas goes to the weight of the evidence, but his testimony is admissible. (Transcript, Day 2, pages 210-211.)

12. Exhibits 11a-d and $11a_1$ were received over the objection of the participants. However, only the portions of Exhibits 11b through c which are highlighted in yellow were admitted, save for those highlighted samples in 11b taken on February 24, 1987, marked as sample and bottle numbers (4) and (8) on Exhibit 10. KACA objected to admission of this evidence on the grounds that a person (Mr. Swenson, the supervisor of Mr. Smith) participated in the collection of this evidence, but was not available for cross-examination. The two samples indicated above, taken solely by Mr. Swenson were excluded for that reason. The remaining samples on 11b and c were taken by Mr. Smith himself, or in conjunction with Mr. Swenson; therefore the proper foundation for this evidence had been laid, and it was admitted. (Transcript, Day 2, pages 305-309, 335-336 and 373.)

13. KACA objected to the admission of Exhibit 10 because it is based on Exhibits 11b and 11c. The Exhibit was admitted over this objection, save for the exclusion of test site 4 and the sample taken on February 24, 1987 at sample site 1. (Transcript, Day 2, page 336.)

14. KACA objected to the testimony of Mr. Dalke regarding the performance of the Riverview Heights Treatment Plant, on the basis of relevancy. KACA argued that because the plant is located outside the area proposed for annexation, its operation is not at issue in this proceeding. The Division responded that the plant treats sewage from within the area (tax map 10-4-36BD, referred to during the hearing as the "red splotch" in the center of Exhibit 6), that it affects the public health within the area. On this argument, the Hearings Officer concluded that the treatment of sewage originating inside the area, though treatment occurs outside, is a condition within the affected territory, and within the scope of the hearing. ORS 222.875(1). KACA also supported its objection with the argument that only inadequate sub-surface sewage treatment is to be investigated during the hearing and not a sewage treatment plant, citing the notice of the hearing and the order of the Benton County Board of Health. (Transcript, Day 2, page 341.) The Division responded that the Division, once a resolution is received, has a duty to investigate conditions in the area, and the treatment at Riverview Heights of sewage originating in the area is such a condition. The Hearings Officer concurred, and permitted

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Mr. Dalke to testify concerning the operation of Riverview Heights. (Transcript, Day 2, pages 341-344.)

15. During cross-examination of Dalke, the Division objected to a question by KACA, regarding the steps taken to upgrade the plant. This objection was overruled, as the treatment of sewage originating in the area is relevant to this proceeding.

16. On motion of the Division, and in the absence of any objection, the Hearings Officer took judicial notice of Oregon Administrative Rule 340-71-460(6), which imposes a moratorium on the issuance of subsurface sewage disposal system construction permits, or of approved site evaluation reports, in the areas known as Kingston Heights and Princeton Heights in the area proposed for annexation. (Transcript, Day 3, page 7.)

17. The Division objected to admission of Exhibit 23, which is a memorandum to Keith Putman, Administrator of the Health Division, et al, from Jim Buckley, dated April 26, 1987. This memorandum concerned a resolution from the Benton County Board of Health dated April 7, 1986, seeking investigation of the North Albany area to determine if sufficient evidence existed to require a forced annexation to the City of Albany. Based on the 1977 survey, the Division had apparently found lack of substantial evidence which would warrant a health hazard annexation proceeding. The earlier ruling of the Hearings Officer accepting Exhibit 23, only as an offer of proof, was overruled, and the exhibit was admitted to the record. It was noted that the boundaries of the 1977 survey and those surveys taken later were different, and Mr.

Pearlman noted that the testing sampling and survey may well have been done in a different manner than was the 1984 and 1987 surveys. These issues, however, go merely to the weight of the evidence. Exhibit 37, relating to Exhibit 23, was admitted over the same objection by the Division. (Transcript, Day 3, page 100-101.)

V. SUMMARY OF ARGUMENTS PRESENTED IN OPPOSITION TO ANNEXATION

For ease of reference, all opponents of the proposed annexation shall be referred to as "participants." The arguments of participants fall into three general categories: employees of the division and other governmental agencies, in bad faith, are using this ORS Chapter 222 proceeding as a subterfuge to force annexation on the unwilling residents of the area, and have drawn the area boundaries in a manner which subverts the statutory requirement of contiguity; microbiological test results should not be admitted to the record; and there is no danger to the public health as a matter of law. These issues are discussed below in their respective order.

VI. NO BAD FAITH EXISTS ON THE PART OF GOVERNMENTAL AGENCIES

A. Introduction.

The participants make two related arguments concerning the alleged bad faith of various governmental agencies. It is the position of the participants that the boundary of the area has been drawn as a subterfuge to defeat the requirement of contiguity found in ORS 222.111 and 222.855. Further, it is their position that this proceeding is a subterfuge designed to force the annexation of the area to the City of Albany, against the will of its

residents. As the issues surrounding these arguments are related, they will be considered together

B. Background.

It is required by statute that an area proposed for annexation pursuant to a health hazard abatement proceeding under ORS 222.840, et seq, be contiguous to the city to which it is to be annexed.

> ". . . The boundaries of any city may be extended by the annexation of territory that is not within a city and that is contiguous to the city or separated from it only by a public right of way or a stream, bay, lake or other body of water. Such territory may lie either wholly or partially within or without the same county in which the city lies." ORS 222.111(1).

Prior to the initiation of this proceeding, two elections held in the area were defeated by the voters. The first, held on April 24, 1986, sought annexation of the North Albany area, of which the area proposed for annexation is a part, to the City of Albany. The second election, held on November 16, 1986, sought approval for a general obligation bond for sewer construction by the North Albany County Service District. This process would have required annexation of the North Albany area to the City of Albany, as the City refused to permit hookup to its waste treatment facility without waivers of remonstrance to the annexation of the area to be served.

Various governmental agencies have been seeking a solution to the problem of improper disposal of sewage and/or the contamination of surface water in the North Albany area since at least the late 1970's. The Division conducted a sanitary survey in 1977 in response to a request from the Benton County Commissioners.

Another sanitary survey was conducted by the Oregon Department of Environmental Quality and Benton County in 1979. A moratorium on issuance of septic system construction permits has been in place in the Kingston Heights and Princeton Heights districts of the area proposed for annexation since at least 1976. The Riverview Heights Treatment Plant, which serves a portion of the area, has long been in need of repair, as discussed elsewhere in this opinion.

C. Boundary Drawn by Benton County.

The area proposed for annexation, as required by the statute, was described by the Benton County Board of Commissioners, acting as the Benton County Board of Health, in their amended resolution which commenced these proceedings, dated June 1, 1988.

It is the position of the participants that this boundary was drawn by political artifice, and includes the southeastern portion of the area (Area 1 on Exhibit 6), merely to meet the statutory requirement of contiguity to the City of Albany. The participants take the position that the "cherry stem" shaped boundary is a "subterfuge" to permit a Chapter 222 annexation. That Area 1 would not have been the subject of an annexation proceeding on the basis of a perceived health hazard in that area was supported by the testimony of Hall (Transcript, Day 1, page 128). Bartlett testified that the boundary was drawn considering the following factors: patterns of septic system failures; the viability of design of a sewage collection system to alleviate those failures; the need to provide a contiguous boundary connection to the City of Albany; the desire of the school district (which owns property

in the area) to be included in the area; compatibility with previous trunk line planning; and a desire not to subdivide existing parcels. (Transcript, Day 3, pages 145-147.) Also, the participants point out that Kingston Heights and Princeton Heights (which are Area 3 and 4, respectively, on Exhibit 6) were not the original focus of the authorities seeking a solution to the perceived problem.

The focus of the early efforts to resolve the perceived problem was in what became known as "Area IIA." It received that title from its designation on a map of the area (admitted as Exhibit 33) used in the 1979 sanitary survey, and may be described generally as tax map 10-4-36BD (referred to during the hearing as the "red splotch" on Exhibit 6), tax map 10-4-36BC, tax map 10-4-35AD and the eastern portion of tax map 10-4-35AC. This area is roughly rectangular, running easterly and westerly in the central part of the area proposed for annexation, and includes portions of Area 2 and Area 3 of the 1988 sanitary survey, as labeled on Exhibit 6. It should be noted that the 1977 survey and the later surveys did not encompass the identical areas. Because many of the witnesses described this central section as "Area IIA" during their testimony, this opinion refers to it in the same manner, despite the labels on Exhibit 6. Tax map 10-4-36BD is also known as the Riverview Heights area, and is served by the Riverview Heights Treatment Plant, which is located to the northeast, outside of the area proposed for annexation.

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The Division's first response to these allegations is that they are beyond the scope of this proceeding. The statutory mandate of the Division is to investigate conditions in the entire area described by the governing body (in this case the Benton County Board of Health), and then ordering a hearing, if it finds that evidence of a danger to public health exists. ORS 222.860 and 222.870. The Division is not empowered under the statute to modify the boundary of the study area, save for a procedure available after a finding that a health hazard exists, which can result in the exclusion from annexation of some areas. ORS 222.880(3).

The Hearings Officer believes that the position of the Division is correct, as the language of the statute regarding the purpose of the hearing is clear. Further, it has been decided that parcel-by-parcel or sector-by-sector analysis of a described study area is not permitted. Kelly v. Silver, 25 Or App 441, 453, 549 P2d 1134 (1976). Also, even if consideration on a sector-by-sector basis were permitted, the evidence in the record supports a finding that a danger to public health exists in Area 1, Kingston Heights and Princeton Heights, by virtue of many failing septic tank systems in those areas. The moratorium on issuance of septic system construction permits in Kingston Heights and Princeton Heights also supports this position. Although the density of failures is greater in Area IIA than in Area I (where roughly 15% of the surveyed systems failed), the difference is merely one of degree, and it is well within the discretion of the Administrator to find a health hazard on the basis of the documented failures in Area I.

The Division's second response is that the legal authority cited by the participants is inapposite. An opinion of the Attorney General of Oregon appearing at 41 Op Atty Gen 1985 (1980) is cited as holding that "subterfuge" may serve as a basis for denying a Chapter 222 annexation petition. The Division is correct in its contention that that opinion does not so hold. Rather, the opinion states that where the boundary, as drawn, is not contiguous to the city to which the area is annexed, the Division should not proceed with annexation.

The participants' other citation of authority is particularly inappropriate: Wild v. People ex rel Stephens, 227 Ill 56, 81 NE 707 (1907). Wild is distinguishable from this annexation proceeding in several significant respects. First, it did not, as stated by participants (KACA Memo I, page 6, lines 25-26) involve annexation pursuant to a statute similar to ORS 222; rather, the essential elements for annexation in that case were minimum population density, a petition by a specified number of residents and a vote of the residents of the area. Second, it was not, as stated by participants (KACA Memo I, page 6, lines 21-23) cited with approval in 41 Op Atty Gen 1985; rather, the Attorney General remarked in dicta that in cases disallowing annexations involving point-to-point boundary contiguity, there is usually another policy at work - like the transparent subterfuge in Wild. Third, Wild did not, as stated by participants (KACA Memo I, page 7, lines 2-5) involve the annexation of a body of land connected by a long 50-foot strip; rather, the court objected to the annexation of a

series of long strips connected only at the corners, contiguous only in the same way that black squares on a checkerboard are contiguous. Finally, Wild involved only one policy consideration: the subterfuge of the fathers of the Village of Weston; the policy considerations in the drawing of the boundary in this case, which include the presence of a significant health hazard and the orderly and efficient alleviation of that hazard, weigh in favor of permitting the annexation.

D. No Evidence of Bad Faith.

To substantiate their position that the initiation of this proceeding and the drawing of the boundary of the area were performed in bad faith, the participants presented evidence regarding the political history of attempts to solve the perceived problem and the actions of various government officials. Over the vigorous objections of the Division, this evidence was admitted, in order to provide the broadest possible record for consideration of the Hearings Officer and the Administrator.

This debate over the scope of the hearing centers on the word "conditions" contained in the statutory language regarding the purpose of the hearing. ORS 222.875. The Division took the position that "conditions" meant solely the physical or scientific conditions of the area. The participants argued that "conditions" should also include "political" conditions, which might justify dismissal of this proceeding.

After careful review of the exhibits and testimony presented, no evidence of any bad faith on the part of any governmental

official was shown. Rather, the record shows a period of more than ten years during which the combined efforts of state, county and city officials were unsuccessful in resolving a problem perceived by those officials and many area residents to be quite serious.

Given that the scientific evidence clearly shows a danger to the public health (as discussed elsewhere in this opinion), the issue then becomes whether the "political" conditions in the area proposed for annexation are such that continuing the instant health hazard annexation process would be improper. One can only conclude that they do not. The failure to proceed with this annexation would leave the area in its present stalemated condition. After the efforts of more than a decade, the hazard to the public health continues, without prospect of resolution. Stated simply, the "political" conditions in the area contribute to the hazard to the public health, rather than justify termination of these proceedings.

E. Alternatives to this Proceeding.

Participants argue that various alternatives are available to solve the problem, and that these proceedings are improper in the face of those alternatives. Participants suggest that the Division should abandon these proceedings and institute proceedings under ORS 431.705 in their place. Nothing in ORS 222.840-915 provides authority to terminate these proceedings unless no health hazard is found to exist. Further, the Division has no authority to legislate new proceedings under ORS 431.705 as suggested. An exhaustive discussion of the merits of these alternatives

(including district formation under ORS 431.705, et seq; local improvement district under ORS 451.490, et seq; and repair or improvement of the Riverview Heights Treatment Plant) would not be productive, nor is it required by the statute. Nothing in ORS Chapter 222 requires that the health hazard annexation proceeding be the proceeding of last resort.

It is interesting to note, however, that ORS 431.710 reads, in part:

> "ORS 431.705 to 431.760 shall not apply if the affected territory could be subject to an annexation proceeding under ORS 222.840 to 222.915 . . ."

Participants argue that annexation under ORS 222 is harsh and to be avoided, as it accomplishes annexation without a vote of the residents of the area to be annexed, and "the privilege of voting on annexations is a matter, once granted, which is constitutionally protected." (Participant's Memo II, page 13.) The participants all but argue that this annexation proceeding is unconstitutional. Oregon courts have held, however, that proceedings under ORS 222.840 et seq, are constitutional. Trueblood v. Health Division, 28 Or App 433, 559 P2d 931 (1977); and Kelly, supra. This is so, despite an adverse economic impact on residents, which is among the complaints of the participants. Trueblood, 28 Or App at 440. The evidence shows that the proposed annexation to the city is consistent with the acknowledged comprehensive plans of the City of Albany and Benton County and existing intergovernmental agreements adopted pursuant to Oregon's land use planning goals and regulations.

It is also important to note that the statutory scheme of ORS Chapter 222 does provide procedural protection (in addition to the instant contested-case hearing) from what the participants perceive as a heavy-handed result. Certain portions of the area proposed for annexation can be excluded by reduction of the area boundaries, provided that the conditions of ORS 222.880(3) are met.

In addition, an alternative plan can be presented by petition under the provisions of ORS 222.885. The availability of an opportunity to file for consideration of an alternative plan provides, within the context of these proceedings, an opportunity for consideration of legitimate alternatives to annexation such as service of the subject area by the North Albany Service District as suggested by the participants. The alternative plan provision also meets the participants' argument that a single septic tank failure in a large parcel of land might permit a city to annex the entire parcel without a vote. (See KACA Memo II, page 13, lines 1-6.)

F. Conclusion.

Despite considerable rhetoric and apparent perception by some members of the public, no evidence of bad faith of any governmental official was presented at the hearing. Rather than serving as a reason to terminate these proceedings or to find the absence of a danger to the public health, the "political" conditions raised as issues by the participants merely evidence a stalemate in a long-standing struggle to solve the problem, and serve as a reason to proceed with the annexation and a possible formal consideration of the merits of an alternative plan.

VII. THE MICROBIOLOGICAL TEST RESULTS ARE ADMISSIBLE.

The admissibility and weight of evidence relating to microbiological test results on sample of surface water taken in the area proposed for annexation were vigorously contested.

A. OAR 333-24-065.

The participants argue for the exclusion of the microbiological test results found in Exhibits 11a and b, on the ground that the tests were not performed (by the Division's Public Health Laboratory) in accordance with the requirements of OAR 333-24-065. The participants cite the following portion of the rule:

> "(2) All tests shall be carried out in accordance with those described in the latest edition of the Standard Methods of Water Analysis, published by the American Public Health Association."

The evidence of Myers was that the procedures and requirements set forth in the latest (16th) edition of Standard Methods (Exhibit 32c) were violated during the analysis of the samples in the following particulars: a failure to test three different volumes of samples, rather than just one to establish fecal coliform density when using the membrane filter test; failure to dilute samples sufficiently, so as to obtain counts of fecal coliform colonies of 20 to 60, per membrane; using a "nine tube test" (three tubes for each of three dilutions) rather than a "fifteen tube test" (five tubes for each of three dilutions) when using the multiple tube or MPN method; failure to document the chain of custody during sample collection, transfer and analysis; and inadequate documentation of times of incubation and reading of samples.

The Division argues that OAR 333-24-065 is inapplicable, as it was adopted under the authority of a statute which has since been repealed. (HD Memo III, page 1, citing Division Exhibit 14.) Although this argument is not precisely accurate, an examination of the context of the rule shows that it does not bar the admission of laboratory results obtained without following the procedures of Standard Method, 16th Edition, to the letter. The original rule now codified as OAR 333-24-065 was adopted in 1955 in Board of Health Administrative Order 70-1955. It was superseded in 1960 by Board of Health Administrative Order number HB 137-1960. From its face, HB 137-1960 was promulgated under the statutory authority of ORS 433.335. That statute was amended in 1969 and renumbered as ORS 438.450. ORS Chapter 438 deals with clinical laboratories, which are facilities testing materials derived from the human body, as opposed to a laboratory certified for testing drinking water or waste water samples. From the face of the complete rule and from the face of its statutory authority, it is apparent that compliance with the rule (and thus the procedures in the latest edition of Standard Methods) is not an evidentiary rule concerning the consideration of test results by any trier of fact, but rather a licensing requirement for laboratories. Thus, it is not even a licensing requirement for laboratories testing samples of suspected sewage effluent, but rather for clinical laboratories testing samples of materials

> ". . . derived from the human body, for the purpose of diagnosis, prevention of disease or treatment by patients by physicians, dentists and other persons who are authorized by license to diagnose or treat humans." ORS 438.010(1).

Thus, violations of lab testing procedures do not bar the admission of the laboratory test results contained in Exhibits 11a and b; the objections to testing procedures raised by the participants bears on the weight, but not the admissibility, of that evidence. For that reason, the legal arguments and citations offered by the parties regarding the construction of the administrative rules (KACA Memo II, pages 5-7 and 11-12) require no further analysis.

When considering the weight to be given the microbiological test evidence in view of possible violations of testing procedures, it is important to assess the extent to which the violations noted would affect the reliability of the test results as they are relied upon by the field investigator submitting the samples. The stated purpose for which the samples are taken and submitted to the laboratory is to determine whether or not the sample contains fecal coliform and enterococci bacteria in quantities sufficient to indicate the presence of sewage (Transcript, Day 1, pages 44-53, and Day 3, page 13).

As discussed in Finding of Fact 10, the presence of 200 fecal coliform or 33 enterococci colonies per 100 milliliters indicate an unacceptable level of pollution. These levels of bacteria when found in the area of a drainfield indicate that the sewage disposal system is inadequately treating and disposing of sewage effluent.

The alleged violations of Standard Methods noted and an analysis of their impact on the reliability of the samples for their stated purpose follows:

1. The failure to test three different volumes of samples rather than just one to determine fecal coliform densities when using the membrane filter test.

It was noted (Transcript, Day 3, page 66) that the procedures in Standard Methods refer to the test for fecal coliform, not the test for the enterococci organisms.

This objection would apply only to samples run at the Health Division's Public Health Laboratory in 1987 and 1988 using the membrane filter technique. Those samples run at the DEQ laboratory in 1984 and 1987 did run three dilutions.

The purpose of running three dilutions is to capture the number of bacteria colonies in an optimal range for counting (i.e., 20-60). Standard Methods would allow for counting up to 200 colonies. Testimony from Myers (Transcript, Day 3, pages 36 and 40) indicates that the primary reason for this limitation on countable colonies is to assure the reproducibility of results; i.e., everyone could count bacteria colonies in that range. A review of the sample results indicates that the laboratory technician counted up to 500 colonies, creating doubt as to the ability of the technician to actually count such a large number. Assuming that the technician had been able to count 200 accurately (as allowed under Standard Methods), one can only assume that there were more than 200 colonies represented in the 500 figure. Using the calculations indicated by Ms. Coulter, multiplying the 200 colonies by 20 (five milliliters being 1/20 of 100 milliliters) gives a minimum of 4000 colonies per 100 milliliters, a clear

indication of the presence of sewage. Using 60 yields a result of 1200 (60 x 20), still clearly indicative of contamination. The testimony of Hall (Transcript, Day 1, pages 90-92) indicates that multiple dilutions are of no value to the field investigator in determining whether or not a subsurface sewage disposal system is failing.

The participants' own expert testified that the failure to obtain optimum plate counts would not affect the reliability of a determination as to whether or not the sample contained sewage effluent (Transcript, Day 3, pages 55-57 and 64). That opinion was confirmed by the Division's microbiologist (Day 3, pages 60-61).

The tests for enterococci organisms confirm the presence of inadequately treated sewage throughout the study area, supporting the fecal coliform test results and the interpretation thereof.

2. Use of a "nine tube" MPN test (three tubes per dilution rather than five).

This objection would apply to surface water sampling conducted in 1987, where the MPN test was employed. Standard Methods changed from recommending a nine tube test to a fifteen tube test in the 1985 edition. While testimony (Transcript, Day 3, pages 62-63) indicated that the use of the nine tube test would not affect the reliability of the test in determining whether or not a sample contained sewage effluent, the fact that no such tests are in evidence makes this objection irrelevant.

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3. Lack of incubation records.

Standard Methods requires a 22 to 24 hour incubation period for samples. Myers testified (Transcript, Day 3, pages 42-43) that her laboratory maintains a log of the times that samples are placed in the incubator. The fact that such logs were apparently not kept at the Health Division laboratory was noted. By innuendo, the inference is that the Public Health Laboratory may not have properly monitored the incubation period of samples.

No evidence was presented indicating that Standard Methods requires a log, apparently leaving it to laboratories to develop internal procedures to assure that the mechanical process is properly carried out.

Testing of suspected sewage samples was described as a routine part of the Health Division's laboratory's work. The state's microbiologist was a recognized expert in the field. She was the agent who inspected and certified other laboratories in the state to conduct the tests in question. The lab reports indicate that only one batch of samples was received any given day, all in the afternoon. These factors in the aggregate overcome the doubts as to whether internal lab procedures could be relied on to assure the simple mechanical task of removing a set of samples from incubation within a two hour "window."

4. Inadequate chain of custody.

Participants question the reliability of the lab results on the basis of a failure to employ a formal chain of custody procedure in the transport of the sample. Participants cite as

authority for this proposition a publication by a Dr. Imholtz which was not recognized as an authority by witnesses questioned and which was not offered in evidence. The Division (Transcript, Day 1 pages 115-117) has no rule requiring use of chain of custody procedures nor was it shown that Standard Methods requires one to be used. Testimony (Transcript, Day 2, pages 310-311) showed that samples were collected by registered sanitarians, immediately transported to a field office where they were put into an iced container which was sealed and driven to Salem and placed on the state mail shuttle and send directly to the lab. A follow-up phone call was then made to ensure that the samples were received by the lab. While this is not a formal chain of custody as might be required in a criminal trial in a courtroom, there is no obligation that an administrative agency must go to such lengths. No evidence was offered that would indicate that samples had been tampered with or that this method of transport was unreliable or would in any way adversely affect the outcome of the lab analysis.

The lab test evidence was used by experts in the field in combination with other indicators to determine whether septic systems were failing: the telltale odor and appearance of the effluent as sewage; a lush grass growth in the area of the effluent, when located over a drainfield or downslope from a drainfield; the location of the ground water table on the particular site; information provided by the resident; the soil type of the particular drainfield area; and the lot sizes. When combined with these factors, the reliability of the tests as

indicators of failing septic systems is of a high degree and strongly supports a finding that a danger to public health exists in the area.

B. OAR 333-12-041.

Participants also argue that, because insufficient evidence of proper foundation for laboratory test results was presented by the Division, that these proceedings should be dismissed. (KACA Memo II, page 5, fn 6.) By letter dated June 21, 1988, attorney Sullivan requested of the Division production of evidence concerning the handling, testing and reporting procedures connected with these proceedings. (Exhibit 21.) In addition, there were lengthy and numerous depositions conducted by participants which afforded participants access to foundation material. (Participants made no objection or complaint during the course of the hearing that they were not afforded sufficient discovery opportunities through those depositions.) It is the conclusion of the Hearings Officer that the testimony of Hall regarding sampling, transport and testing procedures was sufficient to satisfy the requirements of OAR 333-12-041(2).

VIII. A DANGER TO THE PUBLIC HEALTH EXISTS.

A. Physical Evidence.

Participants have taken the astonishing position that there is no danger to public health in the area proposed for annexation. (KACA Memo II, page 12.) The physical conditions present in the area proposed for annexation which are detailed in Findings of Fact 13 and 14 show, beyond peradventure of doubt, that a danger to

public health exists. Without restating those findings in detail, the following examples highlight the severity of conditions in the area. Green dye flushed into the septic systems appeared on the ground surface on a great number of occasions, indicating the presence of inadequately treated sewage on the ground surface; in some of the worst cases, the dye appeared on the ground surface within one minute of introduction (Finding 13 (57)) and within less than five hours (Finding 13 (82), (96), (110), and (112)). On at least three parcels, liquid with the characteristic odor and appearance of sewage filled water meter boxes (Finding 13 (67) and (95)). This creates a danger to public health, as testi-mony was received that a sudden loss of pressure in the domestic water supply pipe could create a condition where the untreated sewage would invade the water supply system by being drawn into the pipe or meter through vacuum pressure. In at least two cases, effluent with the odor and appearance of sewage was discharging from one lot onto an adjoining lot (Finding 13 (15) and (16)). In some cases, liquid with the odor and appearance of sewage, or gray water waste, was flowing across driveways of the residences (Finding 13 (66) and (92)). Sewage was standing in a pit outside the restroom facility of an office building (Finding 13 (11)). Untreated effluent was flowing directly into a stream (Finding 13 (54)). Widespread contamination by septic system effluent of water bodies draining the area (Finding 13 (119-129)) was shown. The combination of failures proved by dye testing, visual and olfactory observation of sewage on the ground surface, admis-sion by residents of failing

systems, microbiological tests showing elevated counts of fecal coliform and enterococcus organisms, reports of saturated drainfields, and lush grass growth over drainfields, but not present over adjacent areas, all point to an obvious condition of untreated sewage being present on the ground surface near the homes of area residents, resulting in a serious danger to the public health. The discharge by the Riverview Heights Treatment Plant of partially treated effluent from the area into Crocker Creek is also especially troubling.

In contrast to the foregoing, except for the challenges to the test procedures, the participants offered no contrary evidence such as reports of repairs to septic systems reported by the Division as failing, results of microbiological test results showing that indicated organisms from surface water samples were within acceptable limits, testimony from residents reported by the Division to have admitted septic system failures that such was not the case, testimony that the chain of evidence of the microbiological samples was, indeed, broken, or testimony disputing dye test results or observations of saturated conditions, etc. The absence of any such evidence is notable.

B. Absence of Administrative Rules.

The participants also contend that the absence of rules adopted by the Division defining the term "danger to public health" vitiate any conclusion that one exists. (KACA Memo II, page 4, fn 5.) Following analysis of the legal authority cited by both sides on the issue of whether rule making is necessary (HD Memo III, page

2), it can only be concluded that rule making is not required of the Division. The statutory standard contained in the stated purpose of the proceeding concerns an issue of scientific fact on whether a "reasonably clear possibility that the public generally is being exposed to disease-caused physical suffering or illness" exists. One case cited by the Division is particularly helpful. In Spray v. Board of Medical Examiners, 50 Or App 311, 624 P2d 125, opinion modified, 51 Or App 773 (1971), the facts of the case turned on the appropriateness of provision of medical treatment. That standard of care, like the possibility of exposure to disease or illness, necessarily involved proof through expert testimony. The court in Spray notes the impossibility of creating by rule standards for determination of scientific value judgments which will vary given the specific situation in each case. The court in Spray distinguished Megdal v. Board of Dental Examiners, 288 Or 293, 605 P2d 273 (1980) (which required promulgation of rules establishing standards, and was cited by the participants), stating that Megdal involved a much broader standard - a moral judgment of "unprofessional conduct" - that was not adequately defined in the statute being considered. The Hearings Officer concludes that the statutory scope of the hearing is sufficiently specific to give guidance to decision-making on a case-by-case basis.

C. Absence of Actual Illness.

Participants contend that the failure of the Division to cite or prove even a single instance of illness caused by the health hazard means that one does not exist. (KACA Memo II, page 2, fn

2.) That is not the proper test, however. Rather, the reasonably clear possibility of disease-caused suffering or illness is the standard by which these conditions must be judged.

> "'Danger to public health' means a condition which is conducive to the propagation of communicable or contagious disease-producing organisms and which presents a reasonably clear possibility that the public generally is being exposed to disease-caused physical suffering or illness . . ." ORS 222.850(5).

The Oregon Court of Appeals has already considered and rejected a challenge on these grounds to a Chapter 222 annexation proceeding. Trueblood, supra, 28 Or App at 443.

The testimony of Dr. Sazie, the Benton County Health Officer, firmly supports a finding that a danger to public health exists in the area proposed for annexation. (Transcript, Day 2, pages 378-379.)

ULTIMATE FINDING OF FACT

The improper and inadequate installations for the disposal or treatment of sewage or other contaminated or putrefying wastes, as described in paragraphs 13 and 14, constitute conditions which are conducive to the propagation of communicable or contagious disease-producing organisms and which present a reasonably clear possibility that the public generally is being exposed to disease-caused physical suffering or illness.

CONCLUSION OF LAW

The conditions described above constitute a "danger to public health" under ORS 222.840 through 222.915.

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STAY OF PROCEEDINGS

Pursuant to the provisions of ORS 222.883 and ORS 222.885, the Administrator hereby stays these proceedings to provide affected parties the opportunity to petition for consideration of an alternative plan to annexation. Said proceedings are stayed for a period of 90 days commencing upon publication of a Notice of Stay of Proceedings and Opportunity to Petition for Consideration of an Alternative Plan in the Democrat-Herald newspaper in Albany.

DATED this 16 day of May, 1989.

Kristine Gebbie
Administrator, Health Division
Assistant Administrator
Department of Human Resources

NEIL GOLDSCHMIDT
GOVERNOR

Department of Human Resources
HEALTH DIVISION
1400 SW 5th AVENUE, PORTLAND, OREGON 97201
(503) 229-6302
TDD-NONVOICE: (503) 229-5497

August 11, 1989

To: List below

From: Ronald Hall

Subject: N. Albany HHA Proceeding

Pursuant to a request from the Albany-Benton County Committee, find enclosed a copy of a Notice of Extension of Stay of Proceedings.

I understand that we can expect the AG's opinion to be released shortly, at which time copies will be provided.

Please call me at 229-6302 if you have any questions.

RH:sw

encl.

cc: Sen. Mae Yih
Rep. Carolyn Oakley
Jim Blair, Benton County Public Works
Steve Bryant, City of Albany
Jeff Condit, Benton County
Dick Dalke, N. Albany Service District
Tom Engle, Benton County Health Dept.
Mary Halliburton, DEQ
Bob Rindy, DLCD
Garry Messer, Salem DEQ
Bob Wilson, Benton Co. H.D.
Len Pearlman
Kelly Fish, KASA

D-83

In the Matter of the Proposed Annexation of a Certain Territory Commonly known as the North Albany Area to the City of Albany, Benton County, Oregon Pursuant to the Provisions of ORS 222.840 to 222.915 Due to Conditions Causing a Danger to Public Health	Notice of Extension of Stay of Proceedings

On May 16, 1989, the undersigned issued Findings of Fact, Opinion, Finding of Ultimate Fact, Conclusions of Law and Stay of Proceedings in the above stated matter.

Said Proceedings were stayed for a period of 90 days pursuant to ORS 222.884-.885 to allow for consideration and submission of an alternative plan.

The Health Division and Department of Environmental Quality have subsequently asked for an Attorney General's opinion requesting a clarification of the applicability of land use planning laws to health hazard abatement proceedings.

The Division has now been advised by the Albany-Benton County Committee that the Attorney General's opinion is essential for consideration of possible alternative plans and the Division is further advised of the Committee's desire for an extension of the Stay of Proceedings pending receipt of the opinion.

In consideration of the foregoing, said proceedings are hereby further stayed for an additional 90 days commencing upon publication of this Notice of Extension of Stay of Proceedings in the Democrat-Herald newspaper in Albany.

Dated this 10 day of August

Kristine M. Gebbie
Assistant Director, Human Resources
Administrator, Health Division

NEIL GOLDSCHMIDT
GOVERNOR

Department of Environmental Quality
WILLAMETTE VALLEY REGION
750 FRONT ST. NE, SUITE 120, SALEM, OR 97310 PHONE (503) 378-8240

May 18, 1988

Mr. Jim Blair, Public Works Director
North Albany County Sanitary District
360 SW Avery
Corvallis, OR 97333

RE: WQ-Notice of Inadequate Sewage System
Riverview Heights Subdivision Sewage Treatment Plant
NPDES Permit No. 3728-J;
File No. 61407
North Albany, Benton County

In preparation for the pending North Albany Health Hazard Annexation Hearing, the State Health Division has requested our opinion on the adequacy of the Riverview Heights Sewage Treatment Plant.

Review of the District's self-monitoring data over the past year shows the plant has not operated in compliance with treatment and/or disinfection requirements for eight out of twelve months (February 1987 through February 1988 period). Of particular concern is the consistent high levels of Total Suspended Solids (TSS) not removed in the treatment process that is land irrigated with the final effluent for disposal. The permit requires TSS levels to not exceed 20 to 30 mg/l on a monthly average depending on the time of year. On average these standards are being exceeded by a factor of over 2; and during the summer periods when vector concerns are highest, by a factor of between 3 and 4. At these levels, disinfection efficiency becomes highly questionable. Disinfection is largely a chemical surface contact process; however, when sewage microorganisms are enclosed within solids particles, adequate contact cannot occur. This occurrence was brought out in our Notice of Violation to the District last year. In March, 1987, we documented a significant fecal bacteria contaminated runoff from the land disposal areas into adjacent waterways. For that month, and even on the same day we documented the problem, the District's records indicated the plant's discharge was in compliance with all permit standards. As our samplings showed, even though the District was working under the assumption that no major problems existed, the runoff from the irrigation area was significantly contaminated with sewage bacteria.

This correspondence is not aimed toward any deficiencies being caused by the plant's operators. In fact, we believe their work has been commendable considering the substandard facilities they have to work with. The basic problems are that:

1. The Riverview Heights Subdivision has an inadequate sewage collection system (infiltrates high volumes of groundwaters during winter that wash out effective plant operations).

2. The treatment plant is inadequate to accommodate and/or treat the sewage flows it receives, and

3. The land irrigation system is inadequate to assimilate the flows it receives during the winter rainy season which results in runoff to adjacent surface waters.

In consideration of the above, the State Health Division is being notified by copy of this letter that the Department's official position is:

1. The Riverview Heights Subdivision Sewage Treatment Plant is inadequate to consistently protect the health or to serve the environmental needs of the area.

2. The Sewage Treatment Plant, and its land irrigation/disposal system, should be terminated as soon as practicable to eliminate the existing potentials for an adverse public health incident to occur.

Besides this letter, we are also providing the State Health Division with copies of our past correspondence on the plant's deficiencies, notices of violation, and monitoring records which show violations of the permit limitations.

No actions are required of the District in relation to this correspondence. The primary purpose is to communicate to the District and to the State Health Division our position on the Riverview Heights Sewage Treatment Plant in regard to the upcoming North Albany Health Hazard Annexation proceedings. If you have questions, please feel free to contact either me or Gary Messer at 378-8240 in Salem.

Sincerely,

Gary Messer RS
FOR:

David St. Louis, P.E.
Region Manager

DSL/sd
23/JimBlair

cc: Ms. Kristine Gebbie, Administrator, Oregon Health Division, w/att
cc: DEQ Sewage Systems Section
cc: Enforcement Section

ATTACHMENT F

DAVE FROHNMAYER
ATTORNEY GENERAL

JAMES E. MOUNTAIN, JR.
DEPUTY ATTORNEY GENERAL

DEPARTMENT OF JUSTICE

GENERAL COUNSEL DIVISION
Justice Building
Salem, Oregon 97310
Telephone: (503) 378-6986

October 3, 1989

Lydia Taylor, Administrator
Water Quality Division
Department of Environmental Quality
811 Southwest Sixth Avenue
Portland, OR 97204

Re: Opinion Request OP-6326

Dear Ms. Taylor:

You have asked several questions regarding the respective responsibilities of the Oregon State Health Division (Health Division) and the Environmental Quality Commission (EQC) pursuant to ORS 222.850 to 222.915, and the effect, if any, of Oregon's land use laws on those responsibilities.

Questions and Short Answers

1. In making a finding concerning the existence of a health hazard and in evaluating a jurisdiction's plan to remove or alleviate a declared health hazard, must the Health Division, pursuant to ORS 197.180(1), comply with:

a) The acknowledged comprehensive plan for the Albany urban area jointly adopted by the City of Albany and Benton County, which establishes Albany as the preferred provider of urban services within the urban growth boundary (UGB);[1]

ANSWER: No.

b) The Health Division's state agency coordination program "certified" by the Land Conservation and Development Commission (LCDC)?[2]

ANSWER: No.

2. In reviewing an alternative plan, must the EQC, pursuant to ORS 197.180(1), comply with:

a) The acknowledged comprehensive plan for the Albany urban area jointly adopted by the City of Albany and Benton County, which establishes Albany as the preferred provider of urban services within the UGB;

ANSWER: No.

b) The Department of Environmental Quality's state agency coordination agreement "certified" by LCDC? (See Footnote 2.)

ANSWER: No.

3. In reviewing an alternative plan, to what extent is the EQC required or authorized to consider any comments or objections received from the City of Albany, Benton County, North Albany Service District, the Department of Land Conservation and Development, residents in the affected health hazard area or other interested parties?

ANSWER: The EQC is not statutorily required to consider any of these, but may do so as discussed below.

4. Does ORS 431.710 apply to the North Albany area, given that the area is within the North Albany County Service District and is subject to annexation under ORS 222.840 through 222.915? If not, is the reason that the North Albany area is within the Albany UGB and ultimately subject to annexation to the city?

ANSWER: ORS 431.710 does not apply to the pending proceeding involving the North Albany area for the reasons discussed below.

5. In the event that voters residing in the health hazard area elect to have the needed sewage services provided by the district, may the EQC approve such a plan even though such a plan would violate the acknowledged comprehensive plan for the area?

ANSWER: Provided that provision for such sewage services is part of a petition and alternative plan submitted to the EQC, the EQC may approve such a plan whether or not it complies with the local acknowledged comprehensive plan.

Discussion

1. Summary of Health Hazard Abatement Procedures and Applicable Facts

The Health Hazard Abatement Law, ORS 222.840 to 222.915, provides a procedure for annexation to a city without vote or consent as a remedy for dangers to public health arising from failing sewer or water systems. These provisions apply to territory within the urban growth boundary of a city and otherwise eligible for annexation in accordance with ORS 222.111: that is, contiguous to the city. ORS 222.855.[3]

A city council or the governing body of any district with jurisdiction over the affected territory may adopt a resolution proposing annexation to a city without vote or consent in the affected territory. The annexation proposal must describe the boundaries of the affected territory and describe the conditions alleged to be causing a danger to public health.[4] ORS 222.860(1), (2).[5] Affected territory means "an area within the urban growth boundary of a city and which is otherwise eligible for annexation to that city and in which there exists an actual or alleged danger to public health." ORS 222.850(1).

The applicable local board of health must verify the dangerous health conditions alleged in the proposal. The city council or governing body then must send the verification, together with a certified copy of the resolution, to the Health Division. ORS 222.860(3), (4).[6] The Health Division must ascertain whether conditions dangerous to public health exist in the affected territory. ORS 222.860(4).

If, after review and investigation, the Health Division finds substantial evidence that a danger to public health exists in the affected territory, it must hold a hearing within or near the affected territory. ORS 222.870(1).[7] The hearing is for "the sole purpose of determining whether a danger to public health exists due to conditions in the affected territory." ORS 222.875(1) (emphasis added). The procedure for the conduct of the hearing is set out in ORS 222.875.[8] The assistant director reviews the findings and recommendations resulting from the hearing. ORS 222.880.[9] If the assistant director determines that a danger to public health exists, he or she shall file a certified copy of the findings with the city and, except where the condition causing the danger to public health is impure or inadequate domestic water, with the EQC. ORS 222.880(2).

ORS 222.880(3) through (5) provide a process by which the assistant director may reduce the boundaries of the affected territory. Where specified conditions are met, the boundary may

be reduced to that part of the territory that presents a danger to public health. ORS 222.880(3).

At any time after the assistant director, under ORS 222.880(2), finds that conditions dangerous to public health exist, the division may order further proceedings on the findings halted to allow a city, district or persons affected by the findings to develop and propose an alternative plan to annexation for the removal and alleviation of the conditions dangerous to public health. ORS 222.883.[10] The process for submitting such a plan and the required contents are set out in ORS 222.885.[11] The Health Division reviews alternative plans in cases where the health danger is caused by impure or inadequate domestic water. In all other cases the EQC reviews the plans. Under ORS 222.890, the reviewing agency determines whether annexation or the alternative plan is the preferable alternative for the alleviation or removal of the conditions dangerous to public health.

If the alternative plan is selected, the proponents have six months to provide further information so that the reviewing authority can certify that plan. ORS 222.890.[12] If the requirements of the alternative plan are not met, or if it is rejected, the procedure for annexation to the city resumes. ORS 222.890(3).

Your questions arise from attempts to remedy sewage disposal problems in the North Albany area. The Health Division received a resolution from the Benton County Board of Commissioners, acting as the Benton County Board of Health. The resolution described an area in which a danger to public health allegedly exists, and proposed annexation of the affected territory to the City of Albany pursuant to ORS 222.840 to 222.915.

The matter came before the Benton County Board of Health by petition of residents within the affected territory described in the proceedings as the "North Albany" area. The North Albany area is in Benton County but within the City of Albany's urban growth boundary. It was found to be contiguous to the City of Albany. This area is also within the North Albany County Service District formed pursuant to ORS chapter 451 to provide sewer service to a small area within the district's boundaries. The urban growth boundary generally coincides with the service district's boundary.

The Health Division conducted the investigation and hearing required by ORS 222.870 and 222.875 and found that a danger to public health exists. Subsequently, the Health Division's administrator, pursuant to ORS 222.880, also found that a danger to public health exists. ORS 222.875(2). Before submitting its findings to the EQC, the Health Division suspended the proceedings to have these questions answered and to permit submission of an alternative plan. See ORS

222.883. Absent such a submission, the procedure would be to have the EQC review the facilities available from the City of Albany and have the city proceed with annexation under ORS 222.897 and 222.898.

No alternative plan has yet been submitted, and the details of any potential alternative plan are unknown. Previous votes for annexation to the City of Albany have been unsuccessful, and the city has not agreed to extend services without annexation or to allow the district to provide service.

The City of Albany and Benton County have an urban management agreement for the provision of services to the area. Benton County's comprehensive plan contains a policy that the City of Albany shall be the preferred provider of urban services within the UGB. The City of Albany's comprehensive plan also has policies about providing services, which incorporate elements of the management agreement.

2. Health Division and EQC Duty to Comply with Local Comprehensive Plan

Under ORS 197.180(1), unless otherwise expressly provided state agencies must "carry out their planning duties, powers and responsibilities and take actions that are authorized by law with respect to programs affecting land use" in a manner compatible with acknowledged comprehensive plans. (Emphasis added.) Your first question requires us to examine the application of this statute to the Health Division's determination under ORS 222.880 whether a danger to public health exists, and to the division's review under ORS 222.897 and 222.898 of a city's plan to alleviate the conditions causing the danger to public health. Because the first part of your second question, concerning the application of ORS 197.180(1) to the EQC's review of an alternative plan under ORS 222.890, involves the same analysis, we also address that question here.

The key issue underlying these questions is whether the determinations under ORS 222.880, 222.890, 222.897 and 222.898 constitute actions "with respect to programs affecting land use" within the meaning of ORS 197.180(1). Two Oregon Supreme Court cases bear on the questions presented here. In West Side Sanitary Dist. v. LCDC (#26780), 289 Or 393, 614 P2d 1141 (1980) (West Side I), the court held that a Health Division order under ORS 222.880 finding a danger to public health is not an action "with respect to programs affecting land use" to which the legislature intended ORS 197.180(1) to apply. The court reasoned:

> "The 'program' required of the Health Division by ORS 222.870 and 222.880 involves a single fact-finding procedure. When the Health Division must determine whether a danger to public health exists in a territory, it is concerned with current public

> health conditions and not with future land use implications. Statewide planning goals are of no assistance in determining whether a health hazard exists in a territory."

289 Or at 398.

The court used similar reasoning in West Side Sanitary Dist. v. LCDC (#26779), 289 Or 409, 614 P2d 1148 (1980) (West Side III). There, the court held that the EQC's certification, pursuant to ORS 222.898, of a city's plans for removing a health hazard is not an action "with respect to programs affecting land use" to which ORS 197.180(1) applies. The court stated:

> "The 'program' followed by EQC and required by ORS 222.898 involves only fact finding procedures. ORS 222.898 contemplates that the EQC has before it only the city's plans for removing the health hazard. ORS 222.898(2) requires EQC to approve the city's plans if the plans are 'adequate' to remove or alleviate the health hazard. ORS 222.898(3) requires EQC to disapprove the city's plans if they are 'inadequate.' But then ORS 222.898(3) also requires the city to revise its plans. Finally, ORS 222.898(4) requires EQC to terminate city annexation proceedings if EQC determines that the health hazard 'cannot be removed or alleviated' by facilities ordinarily provided by incorporated cities. A finding by EQC whether the city's plans are 'adequate' or 'inadequate' to remove or alleviate a health hazard does not depend upon statewide land use planning goals.
>
> "We are of the opinion that the legislature did not intend application of ORS 222.898, by either EQC or the Health Division, to involve a consideration of land use planning goals. ORS 222.898 is directed toward solving a health problem efficiently and adequately. If the city does not present an adequate plan, ORS 222.898(3) requires the city to revise its proposals. If the city plan is adequate, then city annexation is mandated by the statute. EQC has no discretion to apply land use planning goals in its evaluation under ORS 222.898 of whether the city plan is adequate to solve the health problem. [Emphasis added.]"

289 Or at 414-15 (emphasis in original except as noted).

West Side I and West Side III thus directly answer your questions concerning the Health Division's application of

ORS 222.880, 222.897 and 222.898. Under those cases, the Health Division's actions under those statutes (and, therefore, the EQC's actions under ORS 222.897 and 222.898, where the EQC is the appropriate reviewing agency) are not actions "with respect to programs affecting land use" under ORS 197.180(1). Hence, those actions are not subject to local comprehensive plans.

Since the West Side decisions, ORS 197.180(1), 222.850 and 222.855 have been amended. As we will explain, however, those amendments did not affect the continuing validity of West Side I and West Side III.

In 1987, the legislature amended ORS 197.180(1) to provide specifically that state agencies must take actions with respect to programs affecting land use in a manner compatible with, inter alia, local comprehensive plans, "unless expressly exempted by another statute from any of the requirements of this section." Or Laws 1987, ch 555, § 1. This amendment is irrelevant to the issues presented in West Side I and West Side III. Those decisions turned on the court's conclusions that the agencies' actions did not meet the threshold for application of ORS 197.180(1): They were not actions "with respect to programs affecting land use." Because the amendment operates only where agency actions initially meet that test, it has no effect here.

Nor does the 1981 amendment to ORS 222.855 affect the West Side analysis. Before 1981, the mandatory annexation procedures could apply to territory contiguous to city boundaries. In 1981, the legislature amended ORS 222.855 further to limit the applicability of the Health Hazard Abatement Law to territory "which is within the urban growth boundary of a city." Or Laws 1981, ch 888, § 7. This amendment ensured that land use planning issues would be resolved at the local government level during the establishment or amendment of an urban growth boundary. The legislative history confirms that the amendment was designed to "extract health hazard issues from land use concerns." Testimony of Senator Hannon, Conference Committee (HB 3218), July 21, 1981, Cassette 1-A at 8. This amendment thus supports, rather than undermines, the rationale of the West Side decisions.

The 1983 amendment to ORS 222.850 similarly left the West Side decisions intact. That amendment merely added a definition of "affected territory" to ORS 222.850. See Or Laws 1983, ch 407, § 4. That definition, limiting affected territory (that is, territory subject to mandatory annexation under the Health Hazard Abatement Law) to areas contiguous to a city boundary and within the city's urban growth boundary, is consistent with the 1981 amendment to ORS 222.855 discussed above.

In sum, West Side I and West Side III are still good law, and answer your questions about the Health Division's duty to comply with local comprehensive plans when acting under ORS 222.880, 222.897 and 222.898. The remaining question is how their logic applies to EQC review of alternative plans under ORS 222.890. In West Side III, the court expressly left that question unanswered. See 289 Or at 415 n 2.

Under the West Side opinions, the analysis of whether an action is one "with respect to programs affecting land use" focuses on the nature of the decision the agency must make. These opinions rested on the fact that the particular statutory directive was aimed at abating a health hazard, not at land use policies (e.g., whether a health hazard exists) before the agency. See West Side I, supra, 289 Or at 398; West Side III, supra, 289 Or at 414-15; see generally City of Ashland v. Bear Creek Valley San., 59 Or App 199, 205, 650 P2d 975 (1982) (also noting that West Side cases merely "established narrow exemptions to land use review for two statutorily limited determinations that do not involve land use considerations," 59 Or App at 205). Examination of these factors persuades us that the EQC's review of an alternative plan under ORS 222.890 is not an action "with respect to programs affecting land use."

When the EQC (or the Health Division, when the danger to public health is caused by impure or inadequate domestic water) reviews an alternative plan under ORS 222.890, it

> "shall consider whether, in its judgment, the plan contains a preferable alternative for the alleviation or removal of the conditions dangerous to public health. If it determines that annexation to the city provides the best and most expeditious method of removing or alleviating the dangerous conditions, the alternative plan shall be rejected and further proceedings on the finding filed under ORS 222.880 shall resume."

ORS 222.890(1) (emphasis added). Nothing in this statute suggests that the EQC has the duty or authority to consider land use requirements in its review of the alternative plan. Rather, review under ORS 222.890 encompasses only an analysis of the plan's engineering specifications, proposed financing, and timetable for completion, see ORS 222.885(1), and a comparison of the alternative plan with the city's plan. When read together with ORS 222.897 and 222.898, this statute indicates that the EQC is not bound by local comprehensive plans.

As we already have stated, in West Side III the Oregon Supreme Court held that the EQC's review under ORS 222.897 and 222.898 of a city's plan for alleviating a health hazard does not include land use issues. Under ORS 222.890, the EQC reviews an alternative plan to determine whether it is "preferable" to the city's plan. If land use requirements cannot control the EQC's review of a city's plan, we do not believe the legislature could have intended those requirements to be a determinative basis for comparing the city's plan to an alternative plan. We conclude, therefore, that the EQC's review of an alternative plan under ORS 222.890 is not an action "with respect to programs affecting land use" under ORS 197.180(1). Consequently, in conducting that review the EQC need not comply with acknowledged comprehensive plans. This analysis should not be read to suggest a total exclusion of land use considerations from the EQC's review. The West Side opinions may be too wooden in their inference that there is no overlap between land use and health hazard considerations. It is conceivable that EQC may find certain "land use" considerations, such as the location and configuration of sewer facilities, to be pertinent to its statutory judgment. We conclude only that the EQC's judgment must ultimately be directed toward eliminating the health hazard, not toward compliance with land use policies.

You have asked us only to address questions about the Health Division's and EQC's duty, when acting under the Health Hazard Abatement Law, to comply with local comprehensive plans. We express no opinion on whether local governments must comply with their acknowledged comprehensive plans during the health hazard annexation process.

3. Health Division's Duty to Comply With Coordination Program

We next address the effect of the Health Division's agency coordination agreement approved by the Land Conservation and Development Commission (LCDC) on March 30, 1983. The coordination agreement refers to annexations under ORS 222.850 to 222.915 as a "land use" program, but imposes no obligations on the Health Division pursuant to ORS 197.180.[13]

The Health Division's agreement recognizes that health hazard annexations apply only to areas within a city's urban growth boundary. The agreement states that compliance with comprehensive plans or statewide planning goal is determined by local governments as urban growth boundaries are adopted or amended. Land use compatibility issues are, therefore, the responsibility of the local government at the time a UGB is established or amended. The Health Division thus has recognized

the UGB as the geo-political boundary that determines the division's jurisdiction in a mandatory health hazard annexation. This view is consistent with the Health Hazard Abatement Law.

This aspect of the Health Division's coordination agreement contrasts with the agreement's requirements for other division programs, such as siting recreational or organization parks. For those programs, the Health Division has rules requiring written determinations from local governments assuring compatibility with comprehensive plans.

In sum, nothing in the coordination agreement compels the Health Division's decisions under ORS 222.880, 222.897 and 222.898 to be compatible with comprehensive plans or to comply with the statewide planning goals.

4. EQC Duty to Comply with DEQ Coordination Agreement

The DEQ State Agency Coordination Program, approved on March 30, 1983, by LCDC, lists agency rules and programs affecting land use. That document does not refer to the Health Hazard Abatement Law. (See attachments 1 and 2 of the agreement.) The program does refer to the Health Division as a coordinating agency for health hazards (attachments 3 and 4), but only for those hazards subject to ORS chapter 431 (providing for mandatory annexation to a service district, except where the affected area is within a UGB and contiguous to a city, see ORS 431.710(1)). For that program and others EQC is subject to ORS 197.180(1). Because the agreement is silent about actions under ORS 222.890 and 222.898, no obligations stem from that agreement concerning such actions.

5. EQC Duty to Consider Comments and Objections

In your third question you ask whether, in reviewing an alternative plan, the EQC may or must consider any comments or objections received from the City of Albany, Benton County, the North Albany Service District, the Department of Land Conservation and Development, residents in the affected area or other interested persons. For the following reasons, we conclude that the law does not require the EQC to consider such comments or objections. If it wishes, however, the EQC may consider such comments or objections. As part of our answer we also address how the EQC's consideration of those materials may affect its legal duties concerning the procedures it must follow in conducting its review under ORS 222.890.

Nothing in ORS 222.890 requires the EQC to conduct any type of hearing during its review of an alternative plan, or to consider any comments or objections it receives from interested cities, districts, agencies, or individuals. That statute

mandates only that the EQC review the contents of the alternative plan and exercise its expert judgment on whether, in comparison with the city's plan, the alternative plan "contains a preferable alternative for the alleviation or removal of the conditions dangerous to public health." ORS 222.890(1). The scope of the EQC's review of a final plan under ORS 222.890(3) is similar.

ORS 222.890 thus contrasts with ORS 222.870 and 222.875. Those statutes expressly require the Health Division to conduct a hearing in the affected territory to determine whether a danger to public health exists due to conditions in the affected territory. At that hearing, "[a]ny person who may be affected by the finding, including residents of the city, may be heard." ORS 222.875(1). Further, after the Health Division's publication of notice of issuance of findings, "any person who may be affected by the findings, including residents of the city, or the affected city, may petition the assistant director * * * to present written or oral arguments on the proposal." ORS 222.875(2). After receiving any such arguments, the assistant director "shall review the arguments" and findings and recommendations, and make a finding on whether a danger to public health exists. ORS 222.880(1). The silence of ORS 222.890 on such matters, juxtaposed with the express mandates in ORS 222.875 and 222.880 for a hearing and for receipt of arguments by affected persons, indicates the legislature's intent that no city, district, agency, or affected individual have any right to be heard before the EQC under ORS 222.890. See Smith v. Clackamas County, 252 Or 230, 233, 448 P2d 512 (1968), reh den (1969) (overruled on other grounds, Whipple v. Howser, 291 Or 475, 632 P2d 782 (1981)) (express inclusion, implied exclusion).

Although ORS 222.890 does not compel the EQC to accept and consider comments and objections to alternative plans, it also does not bar the EQC from considering such comments and objections. An EQC decision to do so, however, could wholly alter the nature of the proceeding before that agency. That potential effect derives from the Administrative Procedure Act, and particularly from ORS 183.310(2)(a)(D), which defines "contested case" to include a proceeding before an agency

> "Where the agency by rule or order provides for hearings substantially of the character required by ORS 183.415, 183.425, 183.450, 183.460 and 183.470."

As the Oregon Supreme Court explained in Oregon Env. Council v. Oregon State Bd. of Ed., 307 Or 30, 40, 761 P2d 1322 (1988):

> "An agency may oblige itself to contested case hearings if it identifies certain persons as parties separate from the general public, if it provides for a record of testimony and evidence from the parties

> that is subject to rebuttal and cross-examination, and if it binds itself to make a decision on the basis of evidence in the record. See ORS 183.415 to .470."

Under this rule, the EQC would not trigger a full contested case merely by accepting and considering any comments and objections submitted to it, without granting certain individuals or entities specific rights apart from the general public. Additionally, even if the EQC were to solicit the views of the city, a district, other state agencies, or interested persons, a contested case would not result so long as the proceeding did not otherwise take on substantially the character of a contested case.

In sum, a decision by the EQC to accept and consider comments and objections in its review under ORS 222.890 could carry substantial procedural consequences. Hence, before deciding whether to accept and consider such comments and objections, it would be prudent for the EQC first to determine the character of the proceeding it wishes to hold, and design its process accordingly. Even if the EQC decides to accept and consider comments and objections, its ultimate responsibility is to make a decision based on health hazard considerations, not on land use requirements.

6. Applicability of ORS 431.705 to 431.760

ORS 431.705 to 431.760 establish a process for mandatory annexation to a service district. That process, however, does not apply to the pending North Albany proceeding. ORS 431.710(1) provides, "ORS 431.705 to 431.760 shall not apply if the affected territory could be subject to an annexation proceeding under ORS 222.840 to 222.915." The North Albany area, which is contiguous to the City of Albany and within the city's UGB, is an area that "could be subject to annexation proceedings under ORS 222.840 to 222.915." See 222.111, 222.850(1), 222.855. Because the area subject to the pending North Albany proceeding falls squarely within this exclusion, the mandatory process in ORS chapter 431 is inapplicable.

7. Voter Selection of Sewage Services by District - Relevance of Comprehensive Plan

In the mandatory annexation process under the Health Hazard Abatement Law, the voters in the affected territory may present an alternative plan that states an intent either to be annexed to a district or have a district or city extend its services. ORS 222.885. The EQC may approve such an alternative plan if in its judgment such a plan provides the "best and most expeditious method" of removing or alleviating a health hazard. ORS 222.890(1).

As we discussed above, in reviewing an alternative plan under ORS 222.890 the EQC need not comply with an acknowledged comprehensive plan. If the alternative plan satisfies ORS 222.890(2), the EQC must certify it regardless of whether it violates an acknowledged comprehensive plan.

Conclusion

Neither the Health Division's nor the EQC's actions under the Health Hazard Abatement Law, ORS 222.840 to 222.915, are actions with respect to programs affecting land use. Accordingly, neither agency need comply with acknowledged local comprehensive plans. Nor does either agency's coordination agreement impose such a duty.

No statute requires the EQC, in its review of an alternative plan under ORS 222.890, to consider any comments or objections by a city, county, district, state agency, or interested person. The EQC, however, may choose to do so. Because of the potential procedural consequences that may accompany that choice, we advise the EQC to move cautiously in doing so.

Finally, the procedures for mandatory annexation to a service district, ORS 431.705 to 431.760, do not apply to the area subject to the pending proceeding under the Health Hazard Abatement Law.

Sincerely,

Donald C. Arnold
Chief Counsel
General Counsel Division

DCA:GIL:RDW:tmt
0486H

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[1] The "urban growth boundary" is the boundary line established by the land use process to separate urbanizable land from rural land. Statewide Planning Goal 14; 1000 Friends of Oregon v. Wasco County Court, 299 Or 344, 703 P2d 207 (1985).

[2] Neither the Health Division's nor DEQ's coordination program has been certified under the LCDC's amended state agency coordination rules. OAR chapter 660, division 30. In 1983 LCDC approved some state agency program agreements, but all agencies with programs affecting land use will be required to submit coordination programs for certification under the amended rule.

[3] ORS 222.855 provides:

"In addition to the procedures authorized in ORS 222.010 to 222.750, territory otherwise eligible for annexation in accordance with ORS 222.111 which is within the urban growth boundary of a city may be annexed by passage of an ordinance as provided in ORS 222.900 without any vote in such territory or any consent by the owners of land therein if it is found, as provided in ORS 222.840 to 222.915, that a danger to public health exists because of conditions within the territory and that such conditions can be removed or alleviated by sanitary, water or other facilities ordinarily provided by incorporated cities."

[4] A local board of health, boundary commission or "residents of territory otherwise eligible for annexation" under ORS 222.111 also may initiate annexation under ORS 222.905.

[5] ORS 222.860(1) and (2) provide:

"(1) The city council of any city shall adopt a resolution containing a proposal for annexation without vote or consent in the affected territory. The proposal may contain terms of annexation as provided in ORS 222.111 and shall:

"(a) Describe the boundaries of the affected territory; and

"(b) Describe the conditions alleged to be causing a danger to public health.

"(2) The governing body of any district having jurisdiction over the affected territory may adopt a resolution containing a proposal for annexation to the city without vote or consent in the affected territory. The proposal shall:

"(a) Describe the boundaries of the affected territory; and

"(b) Describe the conditions alleged to be causing a danger to public health."

[6] ORS 222.860(3) and (4) provide:

"The local board of health having jurisdiction shall verify the conditions alleged in the proposal to be causing a danger to public health, based upon its knowledge of those conditions.

"(4) The council or governing body shall cause a certified copy of the resolution together with verification by the local board of health having jurisdiction, to be forwarded to the division and request the division to ascertain whether conditions dangerous to public health exist in the affected territory."

[7] ORS 222.870(1) provides:

"Upon receipt of the certified copy of the resolution, and verification by the local board of health having jurisdiction, the division shall review and investigate conditions in the affected territory. If it finds substantial evidence that a danger to public health exists in the territory, it shall issue an order for a hearing to be held within the affected territory, or at a place near the affected territory if there is no suitable place within that territory at which to hold the hearing, not sooner than 30 days from the date of the order."

[8] ORS 222.875 provides:

"(1) The hearing shall be for the sole purpose of determining whether a danger to public health exists due to conditions in the affected territory. It may be conducted by one or more members of the division's staff to whom authority to conduct such a hearing is delegated. It shall proceed in accordance with rules which may be established by the division. Any person who may be affected by the finding, including residents of the city, may be heard. Within 60 days following the hearing, the person conducting the hearing shall prepare and submit to the division written findings of fact and recommendations based thereon. The division shall publish a notice of the issuance of such findings and recommendations in the newspaper utilized for the notice of hearing under ORS 222.870, advising of the opportunity for presentation of a petition under subsection (2) of this section.

"(2) Within 15 days after the publication of notice of issuance of findings in accordance with subsection (1) of this section any person who may be affected by the findings, including residents of the city, or the affected city, may petition the assistant director according to rules of the division to present

written or oral arguments on the proposal. If a petition is received the assistant director may set a time and place for receipt of argument."

[9] ORS 222.880(1) and (2) provide:

"(1) Within 30 days following the final hearing of any arguments received by petition under the provisions of ORS 222.875(2) the assistant director shall review the arguments and the findings and recommendations of the person conducting the hearing as provided in ORS 222.875(2). If the assistant director finds no danger to public health exists because of conditions within the affected territory, the assistant director shall issue an order terminating the proceedings under ORS 222.840 to 222.915 with reference to the affected territory.

"(2) If the assistant director finds that a danger to public health exists because of conditions within the affected territory, the assistant director shall file a certified copy of findings with the city and, except where the condition causing the danger to public health is impure or inadequate domestic water, with the commission."

[10] ORS 222.883 provides:

"At any time after the assistant director under ORS 222.880 finds that conditions dangerous to public health exist, the division may order further proceedings on the findings filed under ORS 222.880 halted in order to allow a city, district or persons affected by the findings to develop and propose an alternative plan to annexation for the removal or alleviation of the conditions dangerous to public health. Proceedings may be stayed under this section for not longer than 30 days."

[11] ORS 222.885 provides:

"(1) Within 60 days after the assistant director under ORS 222.880 finds that conditions dangerous to public health exist, a petition, signed by not less than 51 percent of the electors registered in the affected territory, may be filed with the division. Such petition shall suggest an alternative plan to annexation to the city for removal or alleviation of the conditions dangerous to public health. The petition shall state the intent of the residents to

seek annexation to an existing district authorized by law to provide facilities within the affected territory necessary to remove or alleviate the dangerous conditions or to seek, with the approval of the city or district, extraterritorial extension of a city's or district's sewer or water lines. The petition shall be accompanied by a proposed plan which shall state the type of facilities to be constructed, a proposed means of financing the facilities, and an estimate of the time required to construct such facilities and place them in operation.

"(2) Within 30 days after the assistant director under ORS 222.880 finds that conditions dangerous to public health exist, a resolution adopted by the city council or the governing body of any district having jurisdiction over the affected territory may be filed with the division. The resolution shall suggest an alternative plan to annexation to the city for removal or alleviation of the conditions dangerous to public health. The resolution shall be accompanied by a proposed plan which shall state the type of facilities to be constructed, a proposed means of financing the facilities, and an estimate of the time required to construct such facilities and place them in operation.

"(3) Upon receipt of such petition or resolution adopted by a district or city council, the division shall:

"(a) Immediately forward copies of any petition or resolution to the city or district referred to in the petition or resolution, and, except where the condition causing the danger to public health is impure or inadequate domestic water, to the commission.

"(b) Order further proceedings on the findings filed under ORS 222.880 stayed pending the review permitted under ORS 222.890 and this section."

[12] ORS 222.890(1) and (2) provide:

"(1) An alternative plan referred to in ORS 222.885 shall be reviewed by the division in cases where danger to public health is caused by impure or inadequate domestic water and in all other cases by the commission. The plan shall be approved or rejected by the appropriate authority. In reviewing the alternative plan contained in the petition, the

authority shall consider whether, in its judgment, the plan contains a preferable alternative for the alleviation or removal of the conditions dangerous to public health. If it determines that annexation to the city provides the best and most expeditious method of removing or alleviating the dangerous conditions, the alternative plan shall be rejected and further proceedings on the finding filed under ORS 222.880 shall resume.

"(2) If the reviewing authority finds that the alternative plan provides a preferable method of alleviating or removing the dangerous conditions, the petitioners or appropriate governing body shall have six months within which to present to such authority information showing:

"(a) That the territory in which the conditions dangerous to public health exist has received approval for the extension of a city's or district's sewer or water lines within the territory or has annexed to a district authorized by law to provide facilities necessary to remove or alleviate the dangerous conditions, and that financing of the facilities for extension of such facilities to the territory has been assured.

"(b) Detailed plans and specifications for the construction of such facilities.

"(c) A time schedule for the construction of such facilities.

"(d) That such facilities, if constructed, will remove or alleviate the conditions dangerous to public health in a manner as satisfactory and expeditious as would be accomplished by the proposed annexation to the city."

[13] At LCDC's request state agencies must submit coordination programs identifying how the agencies' rules and programs will satisfy ORS 197.180 and OAR chapter 660, division 30. LCDC reviews and certifies these rules and programs, and agencies must act within the provisions of the coordination program.

ATTACHMENT G

NEIL GOLDSCHMIDT
GOVERNOR

Department of Human Resources
HEALTH DIVISION
1400 SW 5th AVENUE, PORTLAND, OREGON 97201 (503) 229-5032
TDD-NONVOICE: (503) 229-5497

November 22, 1989

William P. Hutchison
Environmental Quality Commission
c/o Fred Hansen, Director
Department of Environmental Quality
811 S.W. Sixth Avenue
Portland, Oregon 97201

Dear Mr. Hutchison:

Enclosed is a Resolution from the Benton County Board of Commissioners, acting as the Governing Body of the North Albany County Service District, suggesting an alternative plan to city annexation to alleviate a health hazard in the North Albany area. The Resolution is submitted under the provisions of ORS 222.885 and is hereby being forwarded to the Commission for their review under ORS 222.890.

I believe that the alternative plan proposed would provide a timely and effective means of resolving the health hazard created by inadequate installations for the disposal of sewage in North Albany. The Division is willing to provide the Commission with whatever assistance is necessary to assist in your evaluation of the proposal.

Sincerely,

Donna Clark

Donna L. Clark
Acting Administrator

DLC:mcl

cc: Kelly Fish, KACA
Len Pearlman, Department of Justice
Jeff Condit, Benton County Counsel
Jim Blair, Benton County Public Works
Tom Engle, Benton County Health Department
Benton County Commission
Senator Mae Yih
Representative Carolyn Oakley
Bob Rindy, DLCD
Mary Halliburton, DEQ
Steve Bryant, City of Albany

G-1

In the Matter of the Proposed Annexation of a Certain Territory Commonly known as the North Albany Area to the City of Albany, Benton County, Oregon Pursuant to the Provisions of ORS 222.840 to 222.915 Due to Conditions Causing a Danger to Public Health	)	Order of Stay of Proceedings

On May 16, 1989, the Administrator of the Health Division issued Findings of Fact, Finding of Ultimate Fact, Conclusions of Law and Stay of Proceedings in the above stated matter.

Said Proceedings were stayed pursuant to ORS 222.840-.885 to allow for receipt of an Attorney General's Opinion and to allow interested parties to petition for consideration of an alternative plan.

The Health Division has received an alternative plan submitted by the Benton County Board of Commissioners under the provisions of ORS 222.885. Said plan has been forwarded to the City of Albany and the Environmental Quality Commission for their review under ORS 222.890.

Pending the outcome of that review, IT IS HEREBY ORDERED THAT THESE PROCEEDINGS, FILED UNDER ORS 222.880 ARE STAYED.

Dated this 22nd Day of November

Donna Clark

Donna Clark
Acting Administrator
Health Division

BOARD OF COMMISSIONERS
180 NW 5th Street
Corvallis, OR 97330-4777

(503) 757-6800

November 13, 1989

Ms. Donna Clark
Acting Health Division Administrator
1400 SW 5th Avenue
Portland, OR 97201

Re: North Albany Health Hazard Annexation

Dear Ms. Clark:

Attached please find a Resolution suggesting an alternative plan to health hazard annexation for alleviation of the health hazard in the North Albany area. The Benton County Board of Commissioners, acting as the Governing Body of the North Albany County Service District, adopted this resolution on November 13, 1989. This plan was conceptually approved by the Albany/Benton County Committee on October 24, 1989, and by the Albany City Council on November 8, 1989. We hereby submit this alternative plan for your consideration pursuant to ORS 222.885.

The Board would like to express its appreciation to the Health Division for giving us the extra time to work out a consensus plan. Your support for the local process has enabled the County, the City of Albany, and the citizens of North Albany to avoid years of divisive litigation and delay. We would especially like to commend Ron Hall. His help has been invaluable.

Thank you for your consideration.

Sincerely,

Dale D. Schrock
Chairman

Pamela S. Folts
Commissioner

John R. Dilworth
Commissioner

cc: Senator Mae Yih
Rep. Carolyn Oakley
Bob Rindy, DLCD
Mary Halliburton, DEQ
Steve Bryant, City of Albany
Jim Blair, Benton County Public Works
Jeff Condit, County Counsel

G-3

BEFORE THE GOVERNING BODY OF THE NORTH ALBANY COUNTY SERVICE DISTRICT, BENTON COUNTY, STATE OF OREGON

In the matter of suggesting an alternative plan to annexation to the City of Albany for removal or alleviation of conditions dangerous to public health.	)))))	RESOLUTION

WHEREAS, on May 16, 1989, the Administrator of the Oregon State Health Division of the Department of Human Resources issued Findings of Fact, Opinion, Finding of Ultimate Fact, Conclusions of Law and Stay of Proceedings declaring a health hazard in a territory known as the North Albany Area pursuant ORS 222.840 to 222.915; and

WHEREAS, these findings and a subsequent stay issued by the Division on August 10, 1989, stayed further proceedings pursuant to ORS 222.840 to 222.915 until November 15, 1989, to enable area residents and local governments to consider and submit an alternative plan to forced annexation to the City of Albany pursuant to ORS 222.885; and

WHEREAS, Benton County, The City of Albany, and the citizens of North Albany convened the Albany/Benton County (ABC) Committee to study and consider submitting an alternative plan to health hazard annexation; and

WHEREAS, the ABC Committee has recommended an alternative plan, which plan has been endorsed with some modification by Benton County and the City of Albany and is set forth in Attachment A; and

WHEREAS, the Benton County Board of Commissioners acts as the Governing Body of the North Albany County Service District

formed pursuant to ORS Chapter 451, which District has jurisdiction over the affected territory within the meaning of ORS 222.885(2).

BE IT HEREBY RESOLVED that the Governing Body of the North Albany County Service District does hereby suggest the alternative plan contained in Attachment A, and directs that this resolution and attachment be filed with the Oregon State Health Division prior to November 15, 1989.

Dated this 13th day of Nov., 1989.

GOVERNING BODY OF THE NORTH ALBANY COUNTY SERVICE DISTRICT

Dale D. Schrock 11-13-89

Dale D. Schrock, Chairman

John R. Dilworth

John R. Dilworth, Commissioner

Pamela S. Folts

Pamela S. Folts, Commissioner

Approved As To Form:

Office of County Counsel

ATTACHMENT A: PROPOSED ALTERNATIVE PLAN TO ANNEXATION FOR REMOVAL OF HEALTH HAZARD CONDITIONS IN NORTH ALBANY

I. The Proposed Alternative Plan: The City of Albany will provide sewer service from the Albany Sewage Treatment Plant to the affected North Albany territory without requiring annexation of the territory to the City. As part of this plan:

1. Benton County will transfer land use administration in the urban growth boundary to the City of Albany. Such a transfer will also include transfer of building code authority so that all permits may be obtained at one location. The amendments to the Comprehensive Plans and land use regulations necessary to effect this transfer will also provide some ability for additional development once sewer service has been installed. Persons desiring to hook up outside of the health hazard area will be required to sign some form of consent to annexation petition. These changes are designed to encourage future annexation to the City of Albany as development occurs.

2. The North Albany County Service District (NACSD) will transfer its water and sewer service facilities and operation to the City of Albany. Depending upon several legal and financial considerations, the District will either convey all facilities to the City and the Board of Commissioners will extinguish the District pursuant to ORS 198.940(4), or the District will be retained as a taxing authority but will convey its facilities to the City and contract with the City to provide service.

3. The District will not oppose sewer and water rate surcharges imposed by the City of Albany upon areas which are not annexed to the City but which receive sewer and water service.

4. The County will agree not to provide urban levels of other governmental services. The County will not provide additional services to the North Albany area at greater levels than currently provided.

5. The County will support the efforts of Albany and other cities to seek improved annexation options and coordination between the land use laws, the health hazard annexation laws, and the annexation laws in general.

6. The County will provide in-kind planning services to the City of Albany Planning Department to work with the city to implement the alternative plan until the Comprehensive Plan and Zoning Ordinance amendments necessary to effect the alternative plan are completed and adopted. The County and the City will seek planning

grant funds from the Department of Land Conservation and Development (DLCD) to help cover these costs.

7. After the details and costs of the alternative plan are determined and agreed to by the County and City but prior to implementation, the County and the City will call an election to offer phased-value annexation in lieu of implementation of the alternative plan. If phased value annexation is approved by the voters, the City will proceed with provision of sewer service to the territory as it would to any area within the City limits. If phased value annexation is rejected, the City and County will implement the alternative plan. The purpose of this election is to give the citizens of North Albany the final choice between annexation and the alternative plan based on the best information and cost estimates that can be prepared.

8. If the alternative plan fails, if any voluntary annexation election fails, and if health hazard annexation fails, and if, as a result of these failures, the Service District constructs the lines and operates its own stand-alone treatment plant to serve the area, the Service District agrees, subject to the limitations contained in Article XI Section 10 of the Oregon Constitution, to enter into an agreement to purchase any facilities planning work performed or contracted for by the City of Albany.

II. Benefits of the Alternative Plan: The Alternative Plan is preferable to health hazard annexation because it would solve the health hazard in the same cost effective and environmentally sound manner as annexation, while at the same time avoiding political and legal complications that could significantly delay and increase the cost of service.

The alternative plan will solve the health hazard without forcing annexation, removing the objection of the majority of persons who oppose the health hazard annexation. This will prevent the litigation that is virtually inevitable if the state proceeds with forced annexation. Any litigation could easily delay provision of services for two to three years. Further, because the County Service District is currently in existence, no exclusion process will be required pursuant to the health hazard annexation statute, substantially shortening the statutory process.

Elimination of litigation will enable the County or the City to complete the service plan in time to apply for federal grants and loans in May 1990, the optimum time for application to receive grant funding from the Environmental Protection Agency (EPA). Any delay in filing substantially reduces North Albany's chance to obtain such funds.

Finally, the alternative plan is preferable to other non-annexation alternatives involving a separate treatment plant in North Albany because it results in a regional solution to the sewage problem, and because it is consistent with the County and City comprehensive land use policies recognizing the City of Albany as the preferred provider of urban services in the urban growth boundary. This alternative plan will therefore avoid litigation over the land use issues that would occur if the Service District were to suggest an alternative plan involving a new treatment plant in North Albany.

A stand alone plant in North Albany is also less desirable because it would not qualify for federal grants or loans. The City and the County have preliminarily determined that service via the Albany Treatment Plant is the "least cost, most environmentally sound" method of treating the sewage within the meaning of the formula established by the Environmental Protection Agency (EPA). Service via the City treatment plan is therefore the only method of service which would qualify for federal aid.

III. Service Plan: This plan provides for treatment of the wastewater generated in North Albany at the Albany Sewage Treatment Plant. The determination of which jurisdiction will be responsible for the construction of necessary sewer lines, future maintenance of lines, administration, etc. is dependant upon the final arrangement reach regarding the transfer of Service District operations to the City of Albany. Regardless of which jurisdiction becomes the project administrator, the alternative plan will be implemented as follows:

The project administrator will seek an EPA grant and loan for construction of the interceptors. This will require that a Facilities Plan be completed (Step 1).

The project will then be completed in three phases. Phase 1: Construction of a Crocker Creek interceptor (from Scenic to Quarry Road), Phase 2: Construction of a North Albany Road interceptor (from Old Quarry Road to Hickory), and Phase 3: Construction of the collectors within the health hazard boundaries.

The construction of the North Albany interceptor will begin at the existing termination of an 18" diameter line located on Hickory Street near the Albany Athletic Club. This line runs to a pump station at Hickory and Springhill; the force main runs across the Willamette River by a line placed on the bridge structure and empties into the Albany interceptor line along the Willamette River.

The North Albany Road interceptor will be constructed from the existing terminus of the 18" diameter line described above and will continue on Hickory to the North Albany Road, then along North Albany Road to Quarry Road, then along Quarry Road to the point

where Old Quarry Road will intersect with the Crocker Creek interceptor. A lift station will be required to pump the sewage from the Crocker Creek interceptor to the North Albany Road interceptor. This lift station would no longer be needed and would therefore be abandoned when the completion of the Springhill interceptor takes place (the Springhill interceptor is not required to alleviate the health hazard, but is proposed for construction in the future in order to serve the remainder of the urban growth boundary).

The Crocker Creek interceptor begins at Quarry Road and ends at Scenic Drive. It will be constructed along the lowland of Crocker Creek, and is designed to intercept the sewage from the Riverview Heights subdivision and to follow along the northerly side of Gibson Hill to Quarry Road. The Riverview Heights Sewage Treatment Plant would be abandoned following the completion of the North Albany Road interceptor and the Crocker Creek interceptor.

Additional interceptors will be necessary to serve Princeton Heights and Kingston Heights, along Scenic Drive and Crocker Lane respectively.

The map attached as Exhibit A shows the interceptor layout to serve the health hazard area. The Map attached as Exhibit B shows how service to the health hazard area relates to the proposed service plan for the entire urban growth boundary area.

Local collector lines will be constructed after or concurrently with interceptors and will be financed be Bancroft Bonds, with payment made by property owners that are benefited by the construction of the collector lines. The payment of the interceptor lines will either be paid by a general obligation bond issue or by assessments reduced by the amount of any EPA grant or loan.

IV. Estimated Time for Implementation of Alternative Plan: If the Health Division conceptually approves this proposal, the City and County will immediately begin procedures to implement the alternative plan during the six month completion period provided in ORS 222.890(2). The bar graph attached as Exhibit C shows the time estimates to complete various parts of the plan. It should be noted that time is of essence for preparation and review of the Facilities Plan in order to qualify for the EPA grant.

As part of an earlier attempt to solve the health hazard, the Service District contracted for complete contract documents for the Crocker Creek/Springhill interceptor. If the project continues on the basis of the proposed plan, i.e., using North Albany Road interceptor as the interim line for the North Albany sewage, then the contract documents must be revised to reflect this change. If

the entire Crocker/Springhill interceptor were constructed, the plans and specifications would be usable in their present form with only minor updates.

Because the plans and specifications have been completed for the Crocker Creek interceptor, it is estimated that this portion can be started at a very early date. We would expect construction to take place while other phases are being designed.

V. Conclusion: The alternative plan would expeditiously solve the health hazard without forcing persons to annex against their will and without permanently preventing Benton County and the City of Albany from achieving the goals of our respective comprehensive plans.

JGC/JEB/RD:lm

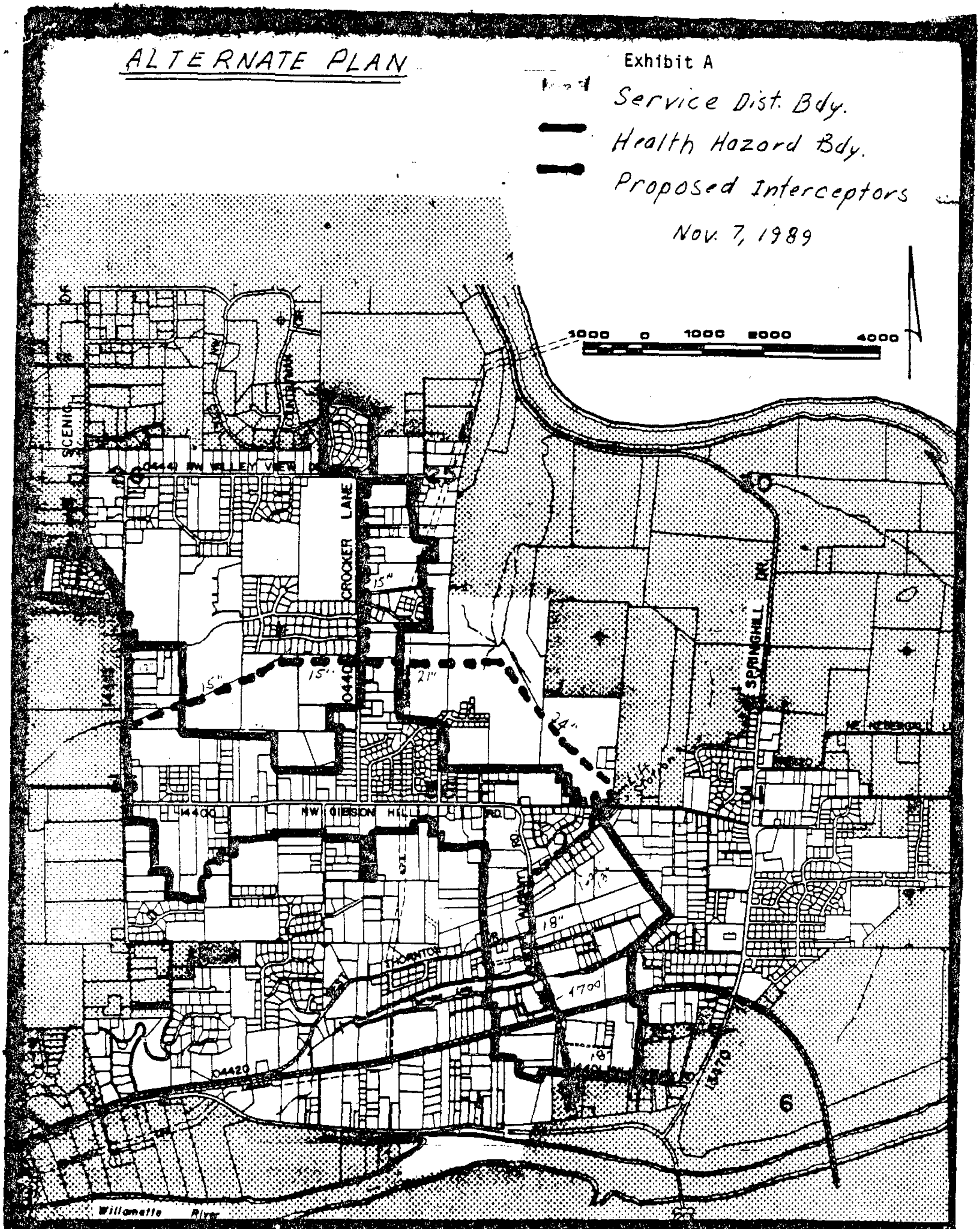

ALTERNATE PLAN
Exhibit A
Service Dist. Bdy.
Health Hazard Bdy.
Proposed Interceptors
Nov. 7, 1989
1000 0 1000 2000 4000
SCENIC
NW VALLEY VIEW
CROCKER LANE
SPRINGHILL DR.
NW GIBSON HILL RD.
15"
21"
24"
18"
04420
6
Willamette River

Exhibit B

NORTH ALBANY PROPOSED INTERCEPTOR AND LATERAL SEWER LAYOUT

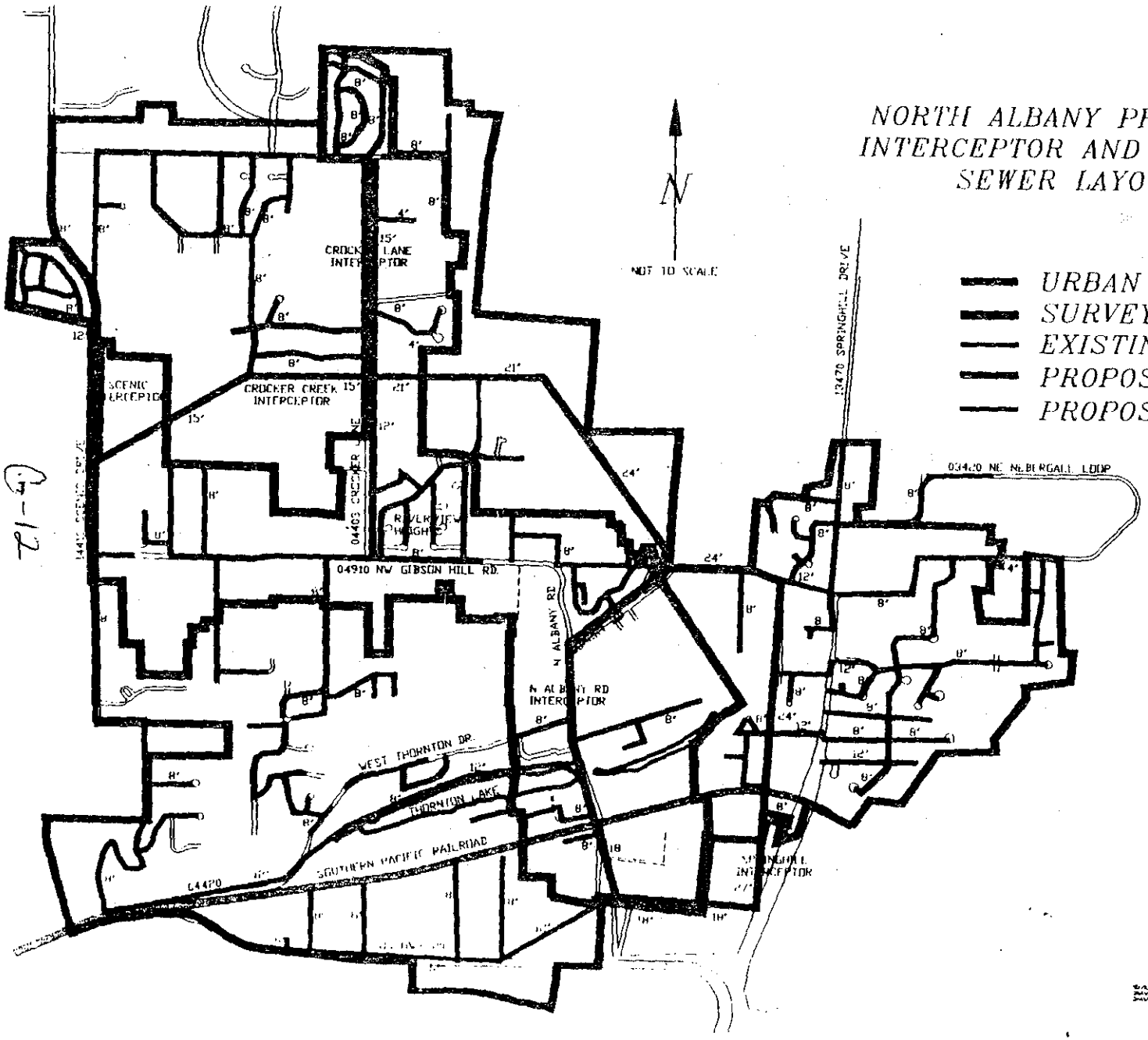
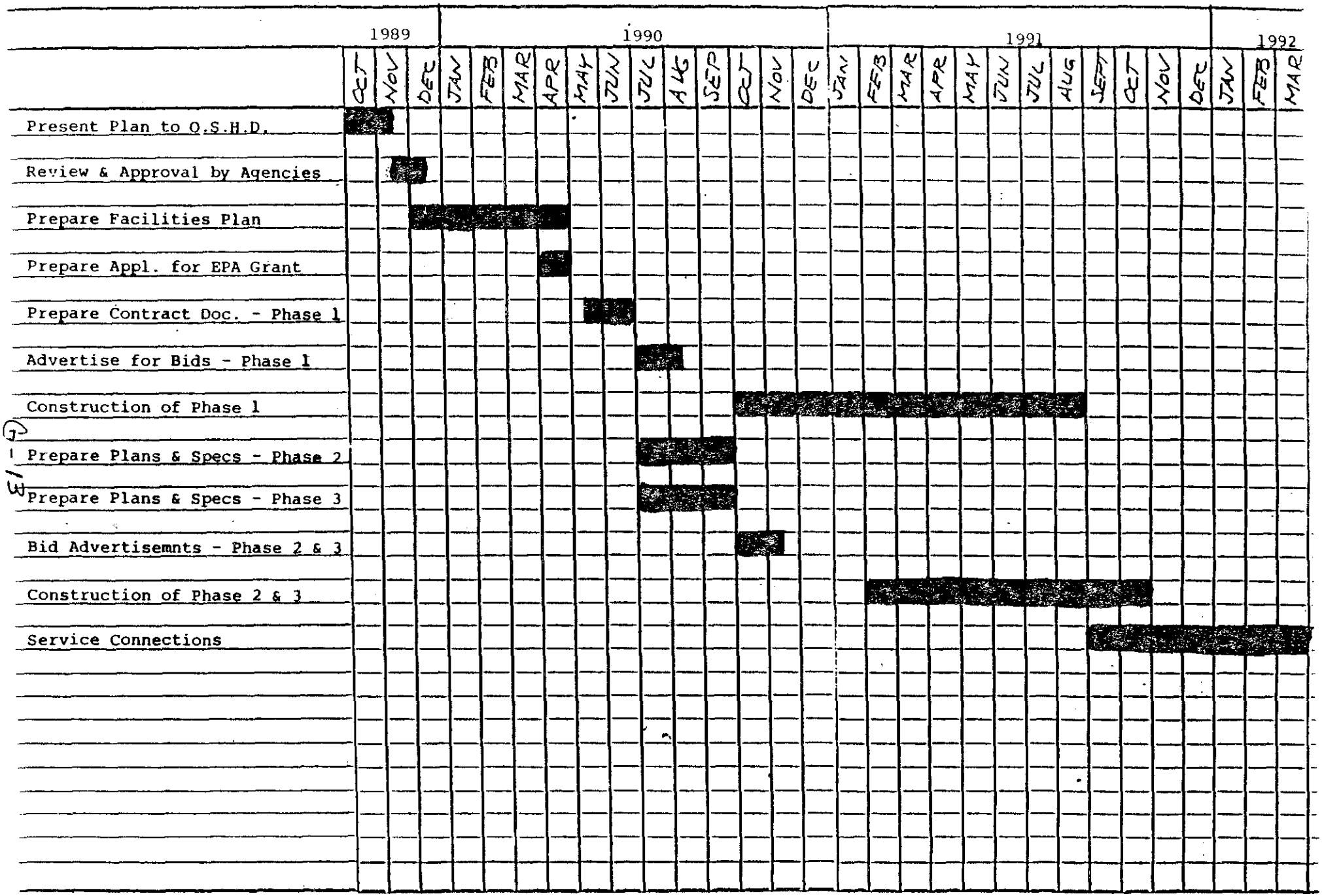


Exhibit C
November 9, 1989

ALTERNATE PLAN FOR NORTH ALBANY
HEALTH HAZARD ANNEXATION



Phase 1: Crocker Creek Interceptor (Scenic to Quarry)
Phase 2: North Albany Road Interceptor (Quarry to Hickory)
Phase 3: [illegible]

NORTH ALBANY COUNTY SERVICE DISTRICT

904 North Albany Road, N.W.

Phone 926-4496 Albany, Oregon 97321

December 1, 1989

Richard Satner
6th Floor Water Quality
811 SW 6th
Portland, OR 97204

RE: Alternate Plan Information
for North Albany Health Hazard Annexation

Dear Mr. Satner:

As per your request please find enclosed map showing the Service District boundary, the health hazard boundary and the proposed intercepters.

The area within the health hazard boundary has been computed to be 767 acres. If you need anything more please let me know.

Sincerely,

Richard Dalke, P.E.
Project & Utilities Manager

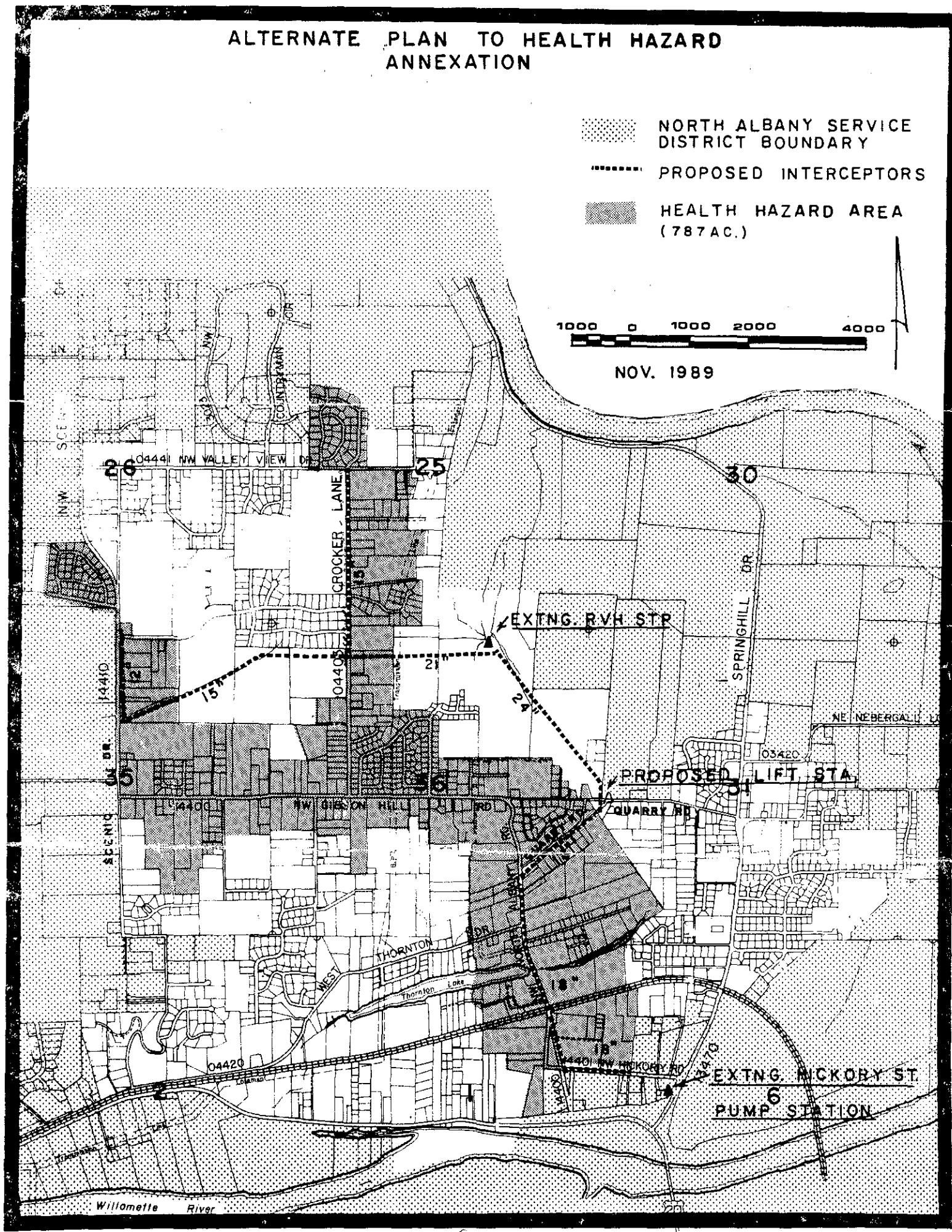
lkk

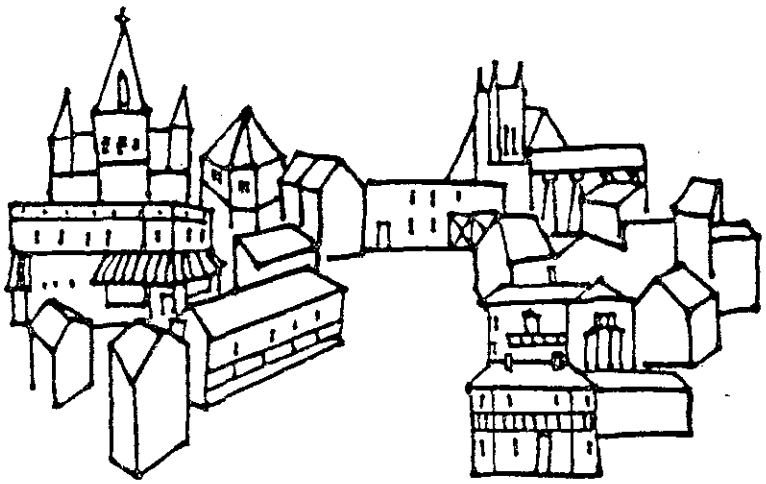
Encl.

NA038N25 12-1-89

G-14

ALTERNATE PLAN TO HEALTH HAZARD ANNEXATION





City of Albany

November 13, 1989

Benton County Commissioners
180 NW 5th
Corvallis, OR 97330

Dear Commissioners:

SUBJECT: North Albany Alternative Plan

On Wednesday, November 8, 1989, the Albany City Council unanimously endorsed Benton County's proposed alternative plan for resolving the North Albany health hazard situation. The Council's action, however, was subject to Benton County's approval of the following additions to the alternative plan scenario:

1. Benton County shall provide the City with the services of at least the equivalent of a half-time Associate Planner for in-kind services or annual cash payment until such time as the comprehensive planning and development code amendment process is completed for the affected area.

2. Benton County and the North Albany County Service District shall commit to the transfer of all service district facilities and assets to the City of Albany. It may be necessary or even desireable to leave the service district in place as a means of continuing to collect on the outstanding debt; however, all other activities of the district should be transferred to the City. The City intends to use its authority as the provider of services to require annexation agreements for all future connections (excluding initial sewer connections in the health hazard area).

3. The City intends to assess both sewer and water rate surcharges on properties that the City serves located outside of the city limits. Benton County's endorsement of the City's surcharge policy would be desireable. The details of the proposed surcharge fees will be determined over the next few months.

4. An annexation election for the affected area in North Albany will be scheduled within the next six months. The details of the election proposal, including the boundaries, phasing in of tax rates, and other details of service provision, will be discussed with Benton County officials and North Albany residents over the next few months.

5. Benton County and/or the North Albany County Service District shall guarantee the City's expenses incurred in preparing the sanitary sewer public facility plan in the event that the City is not determined to be the provider of sewer service throughout the affected area.

It is our understanding that Benton County will be forwarding the details of the alternative plan to the State Health Division. Please use this letter as our indication of support for the plan, provided that you can accept in principle the above additions to the plan.

I would like to express our appreciation for the cooperation that we have received from your staff in developing this alternative plan. It appears now as though there may be an excellent chance that the North Albany health hazard can be resolved in a manner satisfactory to all parties. If you have any questions on the above items, please let me know.

Sincerely,

Steve Bryant

Steve Bryant
City Manager

kg
c: Jeff Condit, Benton County Legal Counsel
John Joyce, Public Works Director
Mark Yeager, Engineering/Utility Division Manager
Ron Bunch, Associate Planner
Jim Delapoer, City Attorney
Council Read File

ALBANY CITY COUNCIL

CITY HALL II - COUNCIL CHAMBERS
November 8, 1989
7:15 p.m.

I. PLEDGE ALLEGIANCE TO THE FLAG

II. CALL TO ORDER

III. ROLL CALL

IV. APPROVAL OF OCTOBER 27 MINUTES
Action: Approved as amended - (water deposit & billing cycle)

V. SCHEDULED BUSINESS

A. BUSINESS FROM THE PUBLIC

B. RESPONSE TO BENTON COUNTY REGARDING ALTERNATIVE PLAN TO NORTH ALBANY HEALTH HAZARD ANNEXATION PROCESS [Pages 1-5]

- Proceed with Benton County proposal with conditions.

C. FIRST READING OF ORDINANCE

1. To amend Albany Municipal Code 3.04, Privilege Tax - Electrical Power and Light Business. [Page 6]
Action: Read 1st and 2nd times - adopted ORD. NO. 4884

2. To amend Albany Municipal Code 5.336, Gas Utility Tax. [Pages 7-8]
Action: Read 1st and 2nd times - adopted ORD. NO. 4885

3. To amend Ordinance No. 4469 and 4846 segregating the liens of Keller Development Company. [Pages 9-20]
Action: Read 1st and 2nd times - adopted ORD. NO. 4886

D. ADOPTION OF RESOLUTIONS

1. Authorization for lien foreclosure for property with delinquent assessment. [Pages 21-22]
Action: Adopted RES. NO. 2906

2. Request for formation of LID - 13th Avenue. [Pages 23-26]
Action: Adopted RES. NO. 2907

3. Request to League of Oregon Cities to endorse seat belt initiative.
Action: RES. NO. 2908

4. Police Chief appointment and request to amend or waive residency requirement.
Action: RES. NO. 2909

ALBANY CITY COUNCIL
REGULAR SESSION

November 8, 1989

The Albany City Council met in regular session on Wednesday, November 8, 1989, at 7:15 p.m. in the City Hall II Council Room.

Following the Pledge of Allegiance, Mayor Rohrbough called the meeting to order. Those members present were Silbernagel, Rouse, Saxton, Goodall, Nelson, and Koehrsen.

Approval of November 6, 1989 Minutes

Mr. Nelson reported that he had requested that the issue of water deposits be revisited as a Business from the Council item at the October 27, 1989 Council meeting. Mr. Goodall moved; Mrs. Silbernagel seconded the motion to approve the minutes of October 27, 1989 as amended. The motion passed unanimously.

BUSINESS FROM THE PUBLIC

There was none.

RESPONSE TO BENTON COUNTY REGARDING ALTERNATIVE PLAN TO NORTH ALBANY HEALTH HAZARD ANNEXATION PROCESS

City Manager Steve Bryant reported on the results of a Council work session held on Friday, November 3, 1989 and the staff recommendation regarding the alternative plan to the North Albany Health Hazard Annexation Process. He further described the pros and cons to the alternative plan and to annexation and the fiscal impact on selected properties with and without annexation. Jeff Condit, Benton County Legal Counsel, spoke on behalf of the Benton County Commissioners and reported on the Commissioners' acceptance of the City's conditions placed on the alternative plan. Mr. Koehrsen moved; Mrs. Silbernagel seconded the motion to proceed with the Benton County proposal as amended by the City, to hold an annexation election within six months, and that the North Albany County Service District (NACSD) pay the City's expenses related to the facility plan if the decision is made that the NACSD will operate a stand-alone sewage treatment plant. The motion passed unanimously.

FIRST READING OF ORDINANCES

To Amend Albany Municipal Code 3.04, Privilege Tax - Electrical Power and Light Business

City Attorney Jim Delapoer read for the first time in title only an ordinance entitled, "AN ORDINANCE AMENDING ALBANY MUNICIPAL CODE CHAPTER 3.04, PRIVILEGE TAX - ELECTRICAL POWER AND LIGHT BUSINESS." Mr. Saxton moved; Mrs. Rouse seconded the motion to read the ordinance a second time in title only. The motion passed unanimously. City Attorney Jim Delapoer read the ordinance a second time in title only. Mr. Saxton moved; Mrs. Rouse seconded the motion to adopt the ordinance. The motion passed unanimously and designated as Ordinance No. 4884.

To Amend Albany Municipal Code 5.36, Gas Utility Tax

City Attorney Jim Delapoer read for the first time in title only an ordinance entitled, "AN ORDINANCE AMENDING ALBANY MUNICIPAL CODE CHAPTER 5.36, GAS UTILITY TAX." Mr. Saxton moved; Mrs. Rouse seconded the motion to read the ordinance a second time in title only. The motion passed unanimously. City Attorney Jim Delapoer read the ordinance a second time in title only. Mr. Nelson moved; Mr. Goodall seconded the motion to adopt the ordinance. The motion passed unanimously and designated as Ordinance No. 4885.

NEIL GOLDSCHMIDT
GOVERNOR

Environmental Quality Commission

811 SW SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

REQUEST FOR EQC ACTION

Meeting Date: January 19, 1989
Agenda Item: G
Division: Hazardous & Solid Waste
Section: Waste Reduction

SUBJECT:

Principal Recyclable Material Lists: Review of lists and recommendations for update.

PURPOSE:

To determine if materials should be added to or deleted from the principal recyclable material list in each wasteshed.

ACTION REQUESTED:

___ Work Session Discussion
- ___ General Program Background
- ___ Program Strategy
- ___ Proposed Policy
- ___ Potential Rules
- ___ Other: (specify)

___ Authorize Rulemaking Hearing

Proposed Rules (Draft)	Attachment ___
Rulemaking Statements	Attachment ___
Fiscal and Economic Impact Statement	Attachment ___
Draft Public Notice	Attachment ___

___ Adopt Rules

Proposed Rules (Final Recommendation)	Attachment ___
Rulemaking Statements	Attachment ___
Fiscal and Economic Impact Statement	Attachment ___
Public Notice	Attachment ___

___ Issue Contested Case Decision/Order

Proposed Order	Attachment ___

_x_ Other: (specify) Attachment _A_
Review Department of Environmental Quality (Department) report on status of principal recyclable material lists and determine what changes are appropriate, if any.

DESCRIPTION OF REQUESTED ACTION:

OAR 340-60-030 (16) requires the Department to review the principal recyclable material list for each wasteshed (OAR 340-60-030(1)) at least annually and to submit any proposed changes to the Environmental Quality Commission (Commission). These lists identify candidates for recyclable materials within each wasteshed. The lists serve as a guide for local affected persons in determining the recyclable materials at each city and disposal site in the wasteshed where the opportunity to recycle is required.

The Department has prepared an informational report (Attachment A) to update the Commission on the status of the principal recyclable material lists. The Department recommends no changes to the lists at this time.

The report contains the following information:
- background summary of the purpose for which the principal recyclable material lists were developed;
- review of market prices and status of markets for existing recyclable materials;
- review of markets for potential candidates for the principal recyclable material lists;
- review of disposal cost trends;
- recommendations for additions or deletions to the principal recyclable material lists; and
- Department conclusions.

AUTHORITY/NEED FOR ACTION:

___ Required by Statute: _____ Attachment ___
Enactment Date: _____
_x_ Statutory Authority: ORS 459.170 (1)(d) Attachment ___
___ Amendment of Existing Rule: _____ Attachment ___
___ Implement Delegated Federal Program:
_____ Attachment ___

_x_ Other: Attachment ___

OAR 340-60-030 (16) requires the Department to review the principal recyclable material lists annually and propose any changes to the Commission.

___ Time Constraints: (explain)

DEVELOPMENTAL BACKGROUND:

___ Advisory Committee Report/Recommendation	Attachment ___
___ Hearing Officer's Report/Recommendations	Attachment ___
___ Response to Testimony/Comments	Attachment ___
___ Prior EQC Agenda Items: (list)	Attachment ___
___ Other Related Reports/Rules/Statutes:	Attachment ___
___ Supplemental Background Information	Attachment ___

REGULATED/AFFECTED COMMUNITY CONSTRAINTS/CONSIDERATIONS:

Since 1984 when rules were adopted to implement the Opportunity to Recycle Act, the principal recyclable material lists have played a significant role in laying the foundation for recycling programs throughout the state. The addition in 1988 of yard debris to the lists for the five Portland area wastesheds has been the only change made to the lists since 1984.

Recycling programs in the state have evolved to the point where the statutory definition of recyclable material and the principal recyclable material lists are no longer the only factors utilized to determine what materials will be recycled in a wasteshed. Many recycling programs have expanded their level of service beyond that which is minimally required under the Opportunity to Recycle Act. Factors which have played an important role in determining what will be recycled in a wasteshed include: whether or not materials are already being recycled; stability of markets; public requests for recycling certain materials; competition for customers; attainment of recycling goals set by local jurisdictions; and desire to keep certain materials out of the wastestream.

The only regulatory requirement for additions to or deletions from the principal recyclable material lists is whether or not the material is recyclable under the statutory definition:

> "Recyclable material means any material or group of materials that can be collected or sold for recycling at a net cost equal to or less than the cost of collection and disposal of the same material."

This definition is, in fact, an economic test; no other

criteria for identifying recyclable materials are provided in the statute or rule.

Based on that statutory definition, recycling service providers may want some items deleted from the principal recyclable material lists because market prices have dropped. However, citizens who participate in curbside programs which collect materials not currently on the lists may want materials added.

Until this year, data have not been available for the Department to conduct a comprehensive economic analysis of what is and is not recyclable under the statutory definition. The lack of collection cost data is being addressed by the Oregon Sanitary Services Institute and the Association of Oregon Recyclers. They will compile data currently being gathered by several recycling service providers and will make that data available to the Department by the end of 1990.

In recommending no change to the principal recyclable material lists, the Department has considered all of the factors mentioned above, not just economics. Given the limited wording of the statute and rule, however, this broad application of criteria could be challenged. The issue of how and why materials are placed on the principal recyclable material lists will be reviewed by the Solid Waste Reduction Advisory Committee by December 1990, and proposed changes to the rule or statute will be subject to approval by the Commission.

PROGRAM CONSIDERATIONS:

Changes to the rule or statute may be required.

ALTERNATIVES CONSIDERED BY THE DEPARTMENT:

1) Make no changes in the principal recyclable material lists; review the criteria for determining whether or not a material is recyclable.

2) Delete materials which do not meet the definition of recyclable material in certain wastesheds (i.e. oil, tin cans, etc.) from the principal recyclable material list for those wastesheds.

3) Add certain new materials (plastics, mixed waste paper and/or magazines), to the principal recyclable material list in those wastesheds where they are being recycled.

DEPARTMENT RECOMMENDATION FOR ACTION, WITH RATIONALE:

The Department recommends that the Commission adopt Alternative 1, no changes at this time for the following reasons:

1) the Department lacks adequate data at this time on incremental collection costs for recycling of plastics, mixed waste paper or magazines to be able to determine conclusively that these items are "recyclable materials" in any of the wastesheds;

2) information gathered by the Department from programs providing collection of plastics or mixed waste paper indicate that collection of these items adds substantially to the cost of collection for all materials; and

3) current declines in market prices are only short term fluctuations and therefore do not warrant deleting materials from the principal recyclable materials lists.

The Department also recommends no changes to the lists until the issue of how a material is determined to be recyclable is resolved and appropriate changes are made to the rules and/or statute.

The recommended action concerning the principal recyclable material lists will not affect the implementation of either the yard debris recycling plans or the Metro Waste Reduction Order. All local governments in the Portland area wastesheds are either implementing or are scheduled to implement Department-approved yard debris recycling plans by 1991. Additionally, the Metro Waste Reduction Order is being implemented on schedule.

CONSISTENCY WITH STRATEGIC PLAN, AGENCY POLICY, LEGISLATIVE POLICY:

The report satisfies a rule requirement that the Department periodically review the principal recyclable material lists and submit any proposed changes to the Commission.

ISSUES FOR COMMISSION TO RESOLVE:

1) Whether or not changes should be made to the principal recyclable material lists.

2) Whether or not changes should be made in the rules to allow other factors to be considered along with the

definition of recyclable material when reviewing the principal recyclable material lists in the future (see Attachment A, page A - 8).

INTENDED FOLLOWUP ACTIONS:

The Department will obtain data on recycling collection costs from the Oregon Sanitary Service Institute and the Association of Oregon Recyclers and review it for its applicability in next year's review of the principal recyclable material lists. The Department will continue to provide technical assistance to wastesheds on all aspects of their recycling programs. The Department will continue to gather information on recycling programs for materials not currently on the principal recyclable material lists so that it can provide technical assistance to those wastesheds which wish to recycle these materials. The Department will also utilize the newly created Solid Waste Reduction Advisory Committee to provide guidance on how materials are determined to be recyclable materials and how the Department can best increase waste diversion levels in the state.

Approved:

Section: David K. Ryll

Division: Stephanie Hallock

Director: Tom Bispham for Fred Hansen

Report Prepared By: Lissa Wienholt

Phone: 229-6823

Date Prepared: January 3, 1990

EAW:eaw
prmrev.89
1/03/90

Attachment A.

REVIEW OF PRINCIPAL RECYCLABLE MATERIALS LISTS CONTAINED IN OAR 340-60-030

AN INFORMATIONAL REPORT

Department of Environmental Quality

Hazardous and Solid Waste Division

Waste Reduction Section

December 1989

BACKGROUND:

ORS 459.170(1)(d) requires the Environmental Quality Commission (Commission) to adopt rules identifying the principal recyclable materials in each wasteshed. These rules were adopted in 1984 and are contained in OAR 340-60-030. OAR 340-60-030(16) requires the Department of Environmental Quality (Department) to annually review the principal recyclable materials list for each wasteshed and to submit any proposed changes of those rules to the Commission.

The list of principal recyclable materials for a wasteshed is a list of materials which are considered candidates for being "recyclable materials" at some place in the wasteshed. "Recyclable material" is defined by ORS 459.005(15) as "any material or group of materials that can be collected and sold for recycling at a net cost equal to or less than the cost of collection and disposal of the same material".

Figure 1 shows the principal recyclable material list for each wasteshed contained in OAR 340-60-030(1). The lists were developed as a reference for wastesheds to use in determining what is a recyclable material at each location where the opportunity to recycle is required. Materials were considered recyclable if they had been collected and recycled somewhere in the wasteshed over a reasonable period of time and were able to be sold to a stable market. Other factors which were used to determine which materials were recyclable included distance to markets and proximity to major transportation routes. Once the principal recyclable material lists had been developed, the Department worked with the wastesheds to determine if there were any materials which were placed on the lists which did not meet the definition of recyclable material.

If materials are added to the principal recyclable material lists the local affected persons would have to evaluate whether or not the material is a recyclable material in any area of the wasteshed where the opportunity to recycle is required. If it met the definition of recyclable material, it would be required to be recycled. If materials are deleted from the principal recyclable material lists, the local affected persons would need to evaluate whether or not they wished to continue to provide recycling services for that material at any point in the wasteshed where the opportunity to recycle is required.

The rules require that materials meet the definition of recyclable material if they are to be placed on the list of principal recyclable materials. As such, market price of materials, cost of collection and cost of disposal will all affect whether materials are to be considered recyclable.

MARKET PRICES FOR CURRENT PRINCIPAL RECYCLABLE MATERIALS:

Market prices for all recyclable materials have varied greatly over the years. Figure 2 illustrates the fluctuations in market prices since 1975 for most recyclable materials. A short description is provided below on market prices for all materials which are currently on the principal recyclable materials lists.

Old Newsprint and Old Corrugated Cardboard:

Market prices for newsprint rose from a low of $45/ton in 1986 to a high of $100/ton in early 1988. Similarly, old corrugated cardboard prices rose from $45/ton to $85/ton for the same time period. This increase in price was stimulated by Northwest mills running at capacity, as well as by strong export markets. Prices for both these commodities began declining in February 1988 and are now at $40/ton for newsprint and $60/ton for corrugated cardboard. This decline was due in part to strikes at the Northwest's major newsprint recycling plants and a softening of export markets for both newsprint and corrugated cardboard. In the case of newsprint, however, declining market prices have been caused primarily by an oversupply of newsprint due to increased collection in the region and nationally. Although some new de-inking capacity is scheduled to come on-line in the Northwest and Canada in the next eighteen months to three years, newsprint prices are expected to remain low in the interim.

Glass:

Glass prices have remained steady at $40/ton since early 1987. However Owens-Brockway, the major user of recycled glass containers in Oregon, currently has an oversupply of green and brown cullet. Owens-Brockway has seen a 28% increase in the amount of cullet received at their Portland mill from 1988 to 1989 and they expect this increase to continue into next year. Although Owens-Brockway is currently utilizing 70-80% cullet in their green and brown glass runs, they are not directing any additional orders for green or brown bottles to their Portland facility and so are unable to reduce their inventory through usage alone. The company has been transporting some of the surplus cullet to their mill in California. Beginning in 1990, Owens may begin taking actions to control their brown and green glass inventory through limiting supplier access to the mill or reducing prices.

Tin Cans:

Tin can prices have remained level at $58/ton since 1987. The market for tin cans follows the market for steel and is currently soft; however, no changes in prices are anticipated.

Other Metals:

Non-ferrous metal prices experienced increases from 1986 to 1988 and are now declining due to an oversupply of material on the

market. The market for ferrous metals has weakened as well and prices have declined due again to oversupply. This short term decline in market prices is expected to last anywhere from six months to one year. Steel scrap processors continue to be very selective in the types of materials they will purchase for recycling, refusing such items as materials originating from public utilities; items which contained asbestos; and bales of unknown origin. Processors continue to require that batteries, catalytic convertors, mufflers, motors, electrical components that may contain PCB's, and other potentially hazardous materials be removed from scrap before it will be accepted. This increase in preparation cost has caused the net value of some scrap steel items such as appliances to fall considerably.

Prices for lead acid batteries have remained steady since 1988. Batteries that are recycled are either shipped to Los Angeles or overseas with the cost of freight being almost as high as the value of the batteries at their destination.

Yard Debris in the Portland Metropolitan Area:

Yard debris is a principal recyclable material in the five Portland area wastesheds where the Commission has adopted rules requiring local governments to develop and implement yard debris collection plans. Four local governments are presently implementing Department-approved local yard debris collection plans. In addition, ten local governments in the Washington wasteshed will be implementing the Department-approved Washington County yard debris recycling plan in 1990. The other local governments in the area should begin implementation of the Metro regional yard debris recycling plan in 1991.

Yard debris processors have experienced limited growth as measured in tons of yard debris processed from 110,000 tons in 1988 to 125,000 tons in 1989. However, their capability to receive and process source separated yard debris and to market yard debris products remains at approximately 200,000 to 250,000 tons per year.

POTENTIAL CANDIDATES FOR PRINCIPAL RECYCLABLE MATERIALS LISTS:

Plastic:

There are approximately two dozen programs operating in Oregon which recycle plastics. The majority of these programs consist of depot collection of certain high density polyethylene (HDPE) containers with some offering collection of mixed plastics as well. There are ten haulers offering curbside collection of plastics. Eight of these haulers are in Eugene and two are in Portland. The Eugene haulers receive a rebate of $170/ton from Lane County for all recyclable material collected at the curb (except newsprint and corrugated cardboard). This rebate helps to offset the costs incurred by the curbside recycling programs. The two Portland haulers offering plastics collection at the curb do so without any subsidy. None of the haulers collecting plastics

have developed any estimates on what it costs to provide this service. Those contacted say that the program costs them more than they are paid for the material but that the primary reasons for providing the service are public demand and competition for customers.

The City of Seattle operates the only other major curbside collection program for plastics in the Northwest. The City operated a six-month pilot program for collection of mixed plastics at the curb. At the end of six months, the contractors estimated the cost of the program at $600-$800/ton. The City felt the cost should be lower and finally abandoned the concept of providing curbside collection of mixed plastics in favor of collecting only polyethylene terephthalate (PET) containers. The City pays its contractors $100/ton for PET collected at the curb. In addition, the plastics industry guarantees the contractors a minimum scrap value for the material of $320/ton as well as a fixed payment to assist with education and promotion of the program. The program, therefore, costs more than $420/ton to operate.

The market for reclaimed plastics is stabilizing, after having experienced a decline over the past eight months. The best markets continue to be available for PET and HDPE with prices ranging from $80-$280/ton depending on how the material is sorted and prepared. Markets for other plastics such as polystyrene and polypropylene are paying $100/ton, but markets will not pay for any mixed plastics. Market prices for plastics are expected to increase this year as the price of virgin resin goes up.

Mixed Waste Paper:

There are currently two curbside programs in Oregon accepting mixed waste paper, both are in the Portland area. One program charges a fee to collect the material and the other will collect mixed waste paper without a charge from garbage customers only. There are at least three local jurisdictions in Washington which collect mixed waste paper at the curb. They are Seattle, Olympia, and Vancouver. These programs indicate that mixed waste paper adds substantially to the cost of the recycling program although none of the programs had any data on the incremental costs incurred by adding this material to their program. Cost estimates obtained by the Department from these programs indicated that the net cost of processing and transporting the mixed waste to the market ranged from $25-$30/ton. After receiving $3-$8/ton for the material, these programs experience a net loss of $17-$27/ton on the processing and transportation portion of the costs alone.

Current markets for mixed waste paper are limited to export markets. The price paid for the material is $5/ton delivered to the Port of Portland. Limited amounts of mixed waste paper are accepted at no charge at depots in the Portland area. Curbside programs collecting large volumes of the material are charged up to $25/ton for material delivered to a broker.

Magazines:

Magazines are currently being accepted as mixed waste paper at most brokers in Portland. Brokers are paid a handling fee to sort magazines out of the mixed waste paper and deliver them to the Smurfit newsprint mill in Oregon City, the only local market. Smurfit has just added this capacity and can only consume 90-100 tons per day although they hope to increase to 125-150 tons per day as their process comes on-line. Smurfit does not know when or by how much they will be able to increase their consumption of this material.

Yard Debris outside of the Portland Metro Area:

While there is some interest in yard debris collection and processing into compost material in wastesheds outside of the Portland Metro area, there is neither adequate processing capacity, market demand for compost or alternative uses for yard debris to prompt the identification of yard debris as a principal recyclable material in any of these wastesheds.

COST OF DISPOSAL:

The cost of disposal of material as garbage has increased in some wastesheds since 1988. In the Metro area, tipping fees at the St. John's landfill increased in 1988 from $16.70/ton to $42.25/ton. The cost decreased by $1/ton in July 1989 to $41.25/ton since Metro is no longer paying the Department a landfill siting fee. Disposal costs at other Metro public access disposal sites are now at $44.75/ton. Disposal costs in the Metro area are expected to continue to climb over the next couple of years to $50-$60/ton as the remaining costs of closing the St. John's landfill and transportation costs to Gilliam County are factored in.

Other wastesheds throughout the state have experienced similar increases in disposal costs as they prepare to close landfills or install leachate detection devices around existing disposal sites. Disposal costs in Marion County increased from $40/ton to $68/ton in July 1989 and costs in Lane County increased from $18/ton to $27/ton in October 1989. The relationship between recycling cost and disposal cost is discussed further in the next section.

ECONOMIC ANALYSIS:

The Department must determine whether or not plastics, mixed waste paper or magazines fit the definition of "recyclable material" set out in ORS 459.005(15) before these materials would be added to any of the principal recyclable material lists. The Department does not gather recycling collection cost data from garbage haulers and recyclers nor is this information readily available from recycling service providers since they have not historically kept separate cost data for recycling versus garbage collection. Without this data it is impossible to run a complete economic analysis to determine if materials should be added to or deleted from the principal recyclable material lists. Detailed collection

data from a few collectors is currently being compiled by the Oregon Sanitary Service Institute and the Association of Oregon Recyclers and will be available to the Department within the next year. Access to this data will allow the Department to better evaluate the economic feasibility of adding materials to the principal recyclable material lists more thoroughly next year. Data will only be collected from a small number of garbage haulers, however, and so may not be representative of collection programs throughout the state.

The Department has been able to gather data on both the change in market prices and disposal costs since the Opportunity to Recycle Act went into effect. In analyzing these costs, the Department assumed that the Metro area would be the first area where materials could be added to the principal recyclable material list due to the proximity to markets and the increase in disposal costs over the past three years. Between 1987 and 1989 the weighted average price paid for recyclables collected at the curb in the Metro area decreased by $24/ton. The Metro area disposal costs have increased by $28/ton during this same time period. Thus, based on these two factors alone, Metro area recycling service providers have experienced a net increase in cash flow of only $4/ton from 1987 to 1989 for material picked up at the curb.

RECOMMENDATION:

The Department recommends no changes at this time to the principal recyclable material list for any of the wastesheds. Principle reasons for recommending no changes at this time are:

1) the Department lacks adequate data at this time on incremental collection costs for recycling of plastics, mixed waste paper or magazines to be able to determine conclusively that these items are "recyclable materials" in any of the wastesheds;

2) information gathered by the Department from programs providing collection of plastics or mixed waste paper indicate that collection of these items adds substantially to the cost of collection for all materials; and

3) current declines in market prices are only short term fluctuations and therefore do not warrant deleting materials from the principal recyclable materials lists.

The Department also recommends no changes in the lists until the issue of how a material is determined to be recyclable is resolved and appropriate changes are made to the rules and/or statute.

CONCLUSIONS:

The principal recyclable material lists served as a good starting point for affected persons in each wasteshed to determine the

recyclable materials at each location where the opportunity to recycle is required. The Department, however, recognizes that there are some materials which are not economically recyclable which service providers and local governments are willing to collect at a cost because the public requests it or it is a desirable item to remove from the wastestream. Additionally, service providers and local governments are reluctant to stop providing recycling collection of materials once they have become established as recyclable materials regardless of cost.

The statutory definition of recyclable material is beginning to play less of a role in determining which materials will be recycled in a wasteshed. Most service providers consider recycling a cost of doing business and an extremely effective public relations tool. Once the Department has developed recycling goals and standards and receives authority to enforce those goals and standards, the definition of recyclable material may no longer be useful. The Department could then designate which materials are to be recycled in each wasteshed and provide technical assistance to the wastesheds in developing recycling programs which will allow them to meet the goals. The Department therefore recommends that changes be made to the rules so that other factors, such as attainment of recycling or waste diversion goals, can be considered aside from the definition of recyclable material when evaluating the principal recyclable material lists in the future. The Department will utilize the Solid Waste Reduction Advisory Committee in developing recycling goals and standards and in reviewing how materials are determined to be recyclable.

(11) Yamhill wasteshed is all of the area within Yamhill County and all of the area within the City of Willamina.

(2) Any affected person may appeal to the Commission for the inclusion of all or part of a city, county, or local government unit in a wasteshed.

Principal Recyclable Material

340-60-030 (1) The following are identified as the principal recyclable materials in the wastesheds as described in Sections (4) through (12) of this rule:

(a) Newspaper;
(b) Ferrous scrap metal;
(c) Non-ferrous scrap metal;
(d) Used motor oil;
(e) Corrugated cardboard and kraft paper;
(f) Aluminum;
(g) Container glass;
(h) Hi-grade office paper;
(i) Tin cans;
(j) Yard debris

(2) In addition to the principal recyclable materials listed in section (1) of this rule, other materials may be recyclable material at specific locations where the opportunity to recycle is required.

(3) The statutory definition of "recyclable material" (ORS 459.005(15)) determines whether a material is a recyclable material at a specific location where the opportunity to recycle is required.

(4) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (j) of this rule:

(a) Clackamas wasteshed;
(b) Multnomah wasteshed;
(c) Portland wasteshed;
(d) Washington wasteshed;
(e) West Linn wasteshed.

(5) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (i) of this rule:

(a) Benton and Linn wasteshed;
(b) Clatsop wasteshed;
(c) Hood River wasteshed;
(d) Lane wasteshed;
(e) Lincoln wasteshed;
(f) Marion wasteshed;
(g) Polk wasteshed;
(h) Umatilla wasteshed;
(i) Union wasteshed;
(j) Wasco wasteshed;
(k) Yamhill wasteshed.

(6) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (g) of this rule:

(a) Baker wasteshed;
(b) Crook wasteshed;
(c) Jefferson wasteshed;
(d) Klamath wasteshed;
(e) Tillamook wasteshed.

(7) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (h) of this rule:

(a) Coos wasteshed;

(b) Deschutes wasteshed;

(c) Douglas wasteshed;

(d) Jackson wasteshed;

(e) Josephine wasteshed.

(8) In the following wasteshed, the principal recyclable materials are those listed in subsections (1)(a) through (f) of this rule:
Malheur wasteshed.

(9) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (g) and (i) of this rule:

(a) Columbia wasteshed;

(b) Milton-Freewater wasteshed.

(10) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (e) of this rule:

(a) Curry wasteshed;

(b) Grant wasteshed;

(c) Harney wasteshed;

(d) Lake wasteshed.

(11) In the following wastesheds, the principal recyclable materials are those listed in subsections 1(a) through (d) of this rule:

(a) Morrow wasteshed;

(b) Sherman wasteshed;

(c) Wallowa wasteshed.

(12) In the following wastesheds, the principal recyclable materials are those listed in subsections (1)(b) through (d) of this rule:

(a) Gilliam wasteshed;

(b) Wheeler wasteshed.

(13) (a) The opportunity to recycle shall be provided for each of the principal recyclable materials listed in sections (4) through (12) of this rule and for other materials which meet the statutory definition of recyclable material at specific locations where the opportunity to recycle is required.

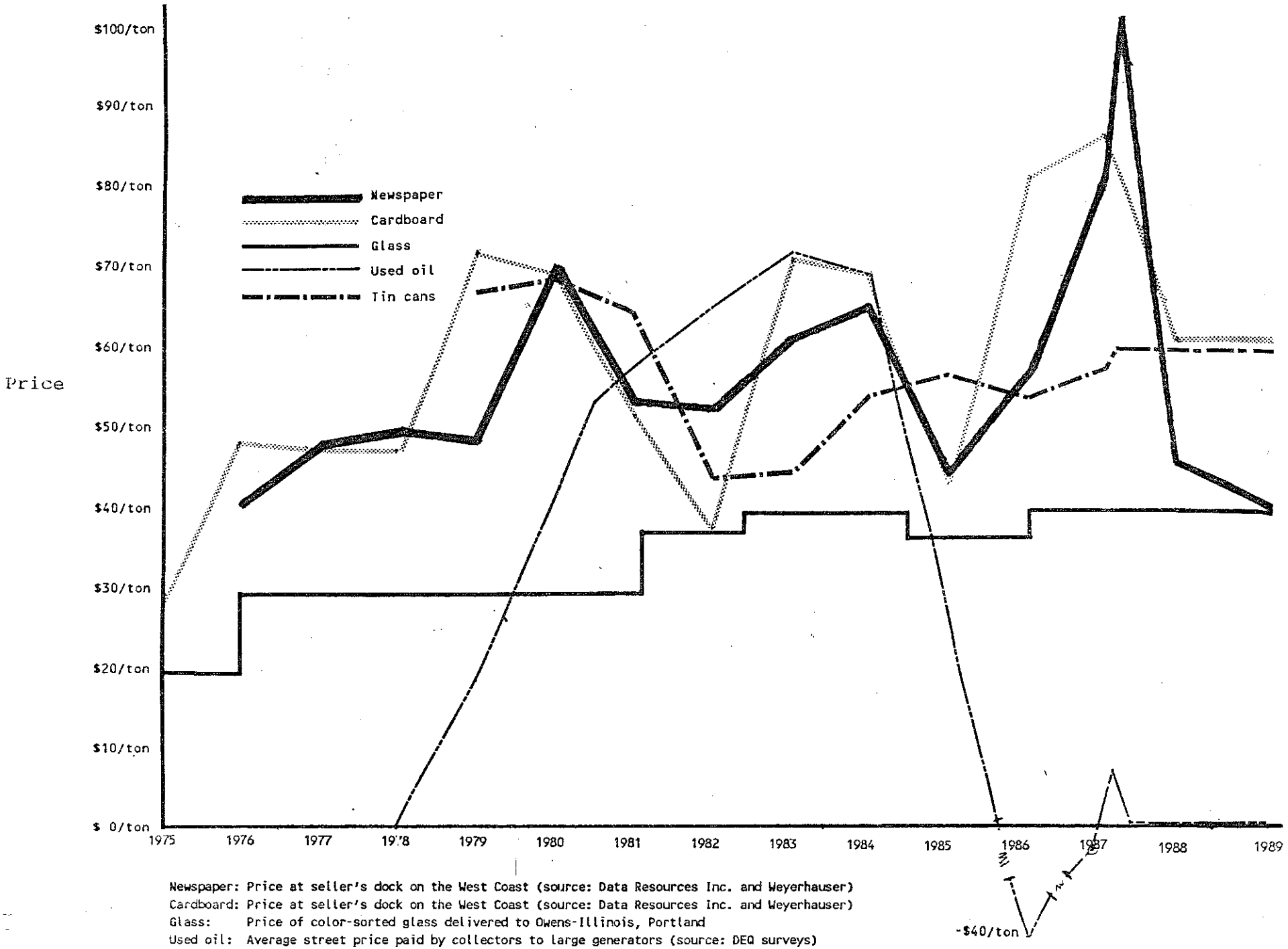
(b) The opportunity to recycle is not required for any material which a recycling report, approved by the Department, demonstrates does not meet the definition of recyclable material for the specific location where the opportunity to recycle is required.

(14) Between the time of the identification of the principal recyclable materials in these rules and the submittal of the recycling reports, the Department will work with affected persons in every wasteshed to assist in identifying materials contained on the principal recyclable material list which do not meet the statutory definition of recyclable material at some locations in the wasteshed where the opportunity to recycle is required.

(15) Any affected person may request the Commission modify the list of principal recyclable material identified by the Commission or may request a variance under ORS 459.185.

(16) The Department will at least annually review the principal recyclable material lists and will submit any proposed changes to the Commission.

Figure 2. Market Price of Recyclable Materials: 1975 - 1989.



Newspaper: Price at seller's dock on the West Coast (source: Data Resources Inc. and Weyerhauser)
Cardboard: Price at seller's dock on the West Coast (source: Data Resources Inc. and Weyerhauser)
Glass: Price of color-sorted glass delivered to Owens-Illinois, Portland
Used oil: Average street price paid by collectors to large generators (source: DEQ surveys)
Tin cans: Price of post-consumer scrap tin cans paid to Oregon collectors by MRI Inc., Seattle

NEIL GOLDSCHMIDT
GOVERNOR

Environmental Quality Commission

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REQUEST FOR EQC ACTION

Meeting Date: January 19, 1989
Agenda Item: H
Division: Air Quality
Section: Asbestos Program

SUBJECT:

Asbestos Abatement Program: Rule Amendments

PURPOSE:

To adopt amendments to OAR 340-25-450 through 25-465(15) and OAR 340-33-010 through 33-100 finalized after public hearings in Portland and Eugene Oregon November 16 and 17, 1989 respectively. The proposed amendments were developed after more than a year's administrative experience with the current rules and are intended to reduce paper work, increase program flexibility and enhance environmental protection. The Oregon Asbestos Advisory Board has been actively involved throughout the development of these proposed amendments which were officially endorsed and submitted to the Environmental Quality Commission, on October 20, 1989, requesting rulemaking hearing authorization.

ACTION REQUESTED:

___ Work Session Discussion
___ General Program Background
___ Potential Strategy, Policy, or Rules
___ Agenda Item ___ for Current Meeting
___ Other: (specify)

___ Authorize Rulemaking Hearing
_X_ Adopt Rules
Proposed Rules — Attachment A
Rulemaking Statements — Attachment B
Fiscal and Economic Impact Statement — Attachment C
Public Notice — Attachment D
___ Issue a Contested Case Order
___ Approve a Stipulated Order
___ Enter an Order
Proposed Order — Attachment ___

___ Approve Department Recommendation

___ Variance Request	Attachment ___
___ Exception to Rule	Attachment ___
___ Informational Report	Attachment ___
___ Other: (specify)	Attachment ___

DESCRIPTION OF REQUESTED ACTION:

The Asbestos Advisory Board on September 13, 1989 recommended that EQC authorize rulemaking hearings on the original proposed amendments. Authorization being given public hearings were held to receive comments on amendments to the asbestos rules. Final amendments will:

- Create a definition of interim storage of asbestos-containing material
- Apply work practices to potentially friable asbestos-containing material
- Provide practical adjustments to asbestos abatement project notification and filing rules
- Provide practical adjustments to training and certification rules
- Make permanent the temporary rules concerning prerequisites for Supervisor Training
- Withdraw proposed amendments creating final air clearance sampling requirements for further study.

AUTHORITY/NEED FOR ACTION:

___ Required by Statute: _____	Attachment ___
Enactment Date: _____	
_X_ Statutory Authority: ORS 468.893, 468.020	Attachment ___
___ Pursuant to Rule: _____	Attachment ___
___ Pursuant to Federal Law/Rule: _____	Attachment ___
___ Other:	Attachment ___
___ Time Constraints:	

As the full-scale supervisor's temporary rules expired December 5, 1989, the permanent rules should be adopted as soon as possible.

DEVELOPMENTAL BACKGROUND:

___	Advisory Committee Report/Recommendation	Attachment ___
_X_	Hearing Officer's Report/Recommendations	Attachment _E_
_X_	Response to Testimony/Comments	Attachment _F_
___	Prior EQC Agenda Items: (list)	Attachment ___
___	Other Related Reports/Rules/Statutes:	Attachment ___
___	Supplemental Background Information	Attachment ___

REGULATED/AFFECTED COMMUNITY CONSTRAINTS/CONSIDERATIONS:

The testimony from hearings in Portland and Eugene has been summarized in Attachments E and F. The Asbestos Control Program has given full consideration to all comments.

The most significant change in these proposed amendments from what went to hearing is the withdrawal of OAR 340-25-465(6)(i) Final Air Clearance Sampling Requirements, which received more comment than any other issue. The Program intends to refine air clearance sampling procedures to ensure a practical and technically accurate rule.

PROGRAM CONSIDERATIONS:

The proposed rules will not have significant effect on the program's resources or personnel. The rules, in general, will reduce paperwork, increase protection of the environment and increase program flexibility.

DEPARTMENT RECOMMENDATION FOR ACTION, WITH RATIONALE:

After due consideration of both written and verbal comments collected through the hearing process, the Department recommends that the Commission adopt revised amendments to OAR Chapter 340 Divisions 25 and 33.

CONSISTENCY WITH STRATEGIC PLAN, AGENCY POLICY, LEGISLATIVE POLICY:

The new amendments to OAR Chapter 340 Divisions 25 and 33 are consistent with the Departments program for controlling the emission of asbestos fibers into the environment and for protecting public health. Furthermore, the Department seeks to maintain rules compatible with the Oregon Occupational Safety and Health Division (OROSHA) as specified in ORS 468.893. The Department is unaware of conflicts between the amended rules and state agency or legislative policies.

ISSUES FOR COMMISSION TO RESOLVE:

None

INTENDED FOLLOWUP ACTIONS:

01/12/90	Submit final rules to EQC for adoption
01/22/90	File the Rules with the Secretary of State
01/25/90	Provide Notice of new rules to those on mailing lists
01/26/90	Print amended rules and provide as needed

Approved:

Section: Sarah V. Armitage

Division: Nick Nikula

Director: Tom Bispham for Fred Hansen

Report Prepared By: Bruce E. Arnold

Phone: 229-5506

Date Prepared: January 3, 1990

BEA:r
ASB\AR1334 (1/90)

OREGON ADMINISTRATIVE RULES
DEPARTMENT OF ENVIRONMENTAL QUALITY
CHAPTER 340 DIVISION 25
ASBESTOS ABATEMENT REQUIREMENTS

EXCERPTED
From
Emission Standards and Procedures
Requirements for Hazardous Air Containments

POLICY

340-25-450

The Commission finds and declares that certain air contaminants for which there is no ambient air standard may cause or contribute to an identifiable and significant increase in mortality or to an increase in serious irreversible or incapacitating reversible illness, and are therefore considered to be hazardous air contaminants. Air contaminants currently considered to be in this category are asbestos, beryllium, and mercury. Additional air contaminants may be added to this category provided that no ambient air standard exists for the contaminant, and evidence is presented which demonstrates that the particular contaminant may be considered as hazardous. It is hereby declared the policy of the Department that the standards contained herein and applicable to operators are to be minimum standards, and as technology advances, conditions warrant, and Department or regional authority rules require or permit, more stringent standards shall be applied.

DEFINITIONS

340-25-455

As used in this rule, and unless otherwise required by context:

(1) **"Asbestos"** means...the asbestiform varieties of serpentine (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite (amosite), anthophyllite, actinolite and tremolite."

(2) **"Asbestos-containing waste material"** means any waste which contains commercial asbestos and is generated by a source subject to the provisions of this subpart, or friable asbestos material including, but not limited to, asbestos mill tailings, control device asbestos waste, friable asbestos waste material, asbestos abatement project waste, and bags or containers that previously contained commercial asbestos.

(3) **"Asbestos abatement project"** means any demolition, renovation, repair, construction or maintenance activity of any public or

private facility that involves the repair, enclosure, encapsulation, removal, salvage, handling or disposal of any material with the potential of releasing asbestos fibers from asbestos-containing material into the air."

NOTE: An asbestos abatement project is not considered to be a source under OAR 340-25-460(2) through (6). Emergency fire fighting is not an asbestos abatement project.

(5) **"Asbestos-containing material"** means asbestos or any material containing [at least] more than 1% asbestos by weight, including particulate asbestos material.

(12) **"Commercial asbestos"** means any variety of asbestos which is produced by extracting asbestos from asbestos ore.

(13) **"Commission"** means the Environmental Quality Commission.

(14) **"Demolition"** means the wrecking or removal of any structural member of a facility together with related handling operations.

(15) **"Department"** means the Department of Environmental Quality.

(16) **"Director"** means the Director of the Department or regional authority and authorized deputies or officers.

(17) **"Facility"** means all or part of any public or private building, structure, installation, equipment, or vehicle or vessel, including but not limited to ships.

(18) **"Friable asbestos material"** means any asbestos-containing material that hand pressure can crumble, pulverize or reduce to powder when dry."

(19) **"HEPA filter"** means a high efficiency particulate air filter capable of filtering 0.3 micron particles with 99.97 percent efficiency.

(20) **"Interim storage of asbestos containing waste material" means the storage of asbestos containing waste material which has been placed in a container outside a regulated area until transported to an authorized landfill.**

(21) **"Hazardous air contaminant"** means any air contaminant considered by the Department or Commission to cause or contribute to an identifiable and significant increase in mortality or to an increase in serious irreversible or incapacitating reversible illness and for which no ambient air standard exists.

(25) **"Particulate asbestos material"** means any finely divided particles of asbestos material.

(26) **"Person"** means any individual, corporation, association, firm, partnership, joint stock company, public and municipal

corporation, political sub-division, the state and agency thereof, and the federal government and any agency thereof.

(29) **"Regional authority"** means any regional air quality control authority established under the provisions of ORS 468.505.

(30) **"Renovation"** means altering in any way one or more facility components. Operations in which load-supporting structural members are wrecked or removed are excluded.

(31) **"Small-scale asbestos abatement project"** means any asbestos abatement project which meets the definition given in OAR 340-33-020(17).

(32) Small scale, short duration maintenance and renovating activity" means an activity which meets the definition given in OAR 340-33-020(18).

[(33)] (34) **"Structural member"** means any load-supporting member of a facility, such as beams and load-supporting walls; or any non-supporting member, such as ceilings and non-load-supporting walls.

GENERAL PROVISIONS

340-25-460

(1) **Applicability.** The provisions of these rules shall apply to any source which emits air contaminants for which a hazardous air contaminant standard is prescribed. Compliance with the provisions of these rules shall not relieve the source from compliance with other applicable rules of the Oregon Administrative Rules, Chapter 340, or with applicable provisions of the Oregon Clean Air Implementation Plan.

(7) **Delegation of authority.** The Commission may, when any regional authority requests and provides evidence demonstrating its capability to carry out the provisions of these rules relating to hazardous contaminants, authorize and confer jurisdiction within its boundary until such authority and jurisdiction shall be withdrawn for cause by the Commission.

EMISSION STANDARDS AND PROCEDURAL REQUIREMENTS FOR ASBESTOS

340-25-465

(4) **Asbestos abatement projects.** ~~[All persons intending to conduct or provide for the conduct of]~~ Any person who conducts an asbestos abatement project shall comply with ~~[the requirements set forth in]~~ OAR 340-25-465(5), (6), and (7). The following asbestos abatement projects are exempt from these requirements:

(a) Asbestos abatement conducted in a private residence which is occupied by the owner and the owner-occupant performs the asbestos abatement.

(b) [Removal of vinyl asbestos floor tile that is not attached by asbestos-containing cement, exterior asbestos roofing shingles, exterior asbestos siding, asbestos-containing cement pipes and sheets, and other materials approved by the Department provided that the materials are not caused to become friable or to release asbestos fibers. Precautions taken to ensure that this exemption is maintained may include but are not limited to:]

Removal of nonfriable asbestos-containing materials that are not shattered, crumbled, pulverized or reduced to dust until disposed of in an authorized disposal site. This exemption shall end whenever the asbestos containing material becomes friable or releases asbestos fibers into the environment.

[(A) Asbestos-containing materials are not sanded, or power sawn or drilled;

(B) Asbestos-containing materials are removed in the largest sections practicable and carefully lowered to the ground;

(C) Asbestos-containing materials are handled carefully to minimize breakage throughout removal, handling, and transport to an authorized disposal site.

(D) Asbestos-containing materials are wetted prior to removal and during subsequent handling, to the extent practicable.]

(c) Removal of less than [0.5] three square feet or three linear feet of friable asbestos-containing material provided that the removal of asbestos is not the primary objective and [the following conditions are met:] methods of removal are in compliance with OAR 437 Division 3 "Construction" (29 CFR 1926 Appendix G to 1926.58). An asbestos abatement project shall not be subdivided into smaller sized units in order to qualify for this exemption.

[(A) The generation of particulate asbestos material is minimized.

(B) No vacuuming or local exhaust ventilation and collection is conducted with equipment having a collection efficiency lower than that of a HEPA filter.

(C) All asbestos-containing waste materials shall be cleaned up using HEPA filters or wet methods.

(D) Asbestos-containing materials is wetted prior to removal and during subsequent handling, to the extent practicable.]

(d) Removal of asbestos-containing materials which are sealed from the atmosphere by a rigid casing, provided

that the casing is not broken or otherwise altered such that asbestos fibers could be released during removal, handling, and transport to an authorized disposal site.

NOTE: The requirements and jurisdiction of the Department of Insurance and Finance, Oregon Occupational Safety and Health Division and any other state agency are not affected by these rules.

(5) **Notification Requirements.** Written notification of any asbestos abatement project shall be provided to the Department on a Department form. The notification must be submitted by the facility owner or operator or by the contractor in accordance with one of the procedures specified in subsection (a) or (b), [~~or~~ ~~(e)~~] below except as provided in subsections [~~(e)~~] (c) [~~(f)~~] (d) and [~~(g)~~] (f) below.

(a) Submit the notifications as specified in subsection [~~d~~]-(c) below and the project notification fee to the Department at least ten days before beginning any asbestos abatement project.

(A) The project notification fee shall be:

(i) Twenty-five dollars ($25) for each small-scale asbestos abatement project except for small-scale projects in residential buildings described in OAR 340-25-465(5) [~~d~~] (c).

(ii) Fifty dollars ($50) for each project greater than a small-scale asbestos abatement project and less than 260 linear feet or 160 square feet.

(iii) Two-hundred dollars ($200) for each project greater than 260 linear feet or 160 square feet, and less than 2600 linear feet or 1600 square feet.

(iv) Five hundred dollars ($500) for each project greater than 2600 linear feet or 1600 square feet.

(B) Project notification fees shall be payable with the completed project notification form. No notification will be considered to have occurred until the notification fee is submitted.

(C) Notification of less than ten days is permitted in case of an emergency involving protection of life, health or property or, after providing prior verbal or written notification, where an unscheduled or unexpected event creates the opportunity to conduct an asbestos abatement project. Notification shall include the information contained in subsection [(d)] (c) below, and the date of

the contract if applicable. If original notification is provided by phone, written notification and the project notification fee shall be submitted within three (3) days after the start of the emergency abatement.

(D) The Department must be notified prior to any changes in the scheduled starting or completion dates or other substantial changes or the notification will be void.

(b) For small-scale asbestos abatement projects conducted ~~[at one facility,]~~ at one or more facilities by a single contractor or a single facility owner with centrally controlled asbestos operations and maintenance the notification may be submitted as follows:

(A) Establish eligibility for use of this notification procedure with the Department prior to use;

(B) Maintain on file with the Department a general asbestos abatement plan. The plan shall contain the information specified in subsections ~~[(d)]~~(c)(A) through ~~[(d)]~~(c)(I) below, to the extent possible;

(C) Provide to the Department a summary report of all small-scale asbestos abatement projects conducted [at the facility] in the previous three months by the 15th day of the month following the end of the calendar quarter. The summary report shall include the information specified in subsections ~~[(d)]~~ (c) (J) through [(d)](c)(M) below for each project, a description of any significant variations from the general asbestos abatement plan; and a description of asbestos abatement projects anticipated for the next quarter;

(D) Provide to the Department, upon request, a list of asbestos abatement projects which are scheduled or are being conducted at the time of the request.

~~[(D)]~~(E) Submit a project notification fee of two-hundred dollars per year ($200/year) prior to use of this notification procedure and annually thereafter while this procedure is in use.

~~[(E)]~~(F) Failure to provide payment for use of this notification procedure shall void the general asbestos abatement plan and each subsequent abatement project shall be individually assessed a project notification fee.

~~[(c) For small-scale asbestos abatement projects conducted by a contractor at one or more facilities], [notification may be submitted as follows:]~~

~~(A) Establish eligibility for use of this procedure with the Department prior to use;~~

~~(B) Maintain on file with the Department a general asbestos abatement plan containing the information specified in subsections (d)(A) through (d)(G), to the extent possible;~~

~~(C) Provide to the Department a monthly summary of all small-scale projects performed by the 15th day of the following month including the information specified in subsections (d)(H) through (d)(M) below and a description of any significant variations from the general asbestos abatement plan for each project;~~

~~(D) Provide to the Department, upon request, a list of asbestos abatement projects which are scheduled or are being conducted at the time of the request; and~~

~~(E) Submit a notification fee of $25 per monthly summary prior to the use of this notification procedure.~~

~~(F) Failure to provide payment for use of this notification procedure shall void the general asbestos abatement plan and each subsequent abatement project shall be individually assessed a project notification fee.~~]

[~~(d)~~](c) The following information shall be provided for each notification:

(A) Name and address of person [~~intending to engage in~~] conducting asbestos abatement.

(B) Contractor's Oregon asbestos abatement license number, if applicable, and certification number of the supervisor for full-scale asbestos abatement or certification number of the trained worker for a project which does not have a certified supervisor.

(C) Method of asbestos abatement to be employed.

(D) Procedures to be employed to insure compliance with OAR 340-25-465.

(E) Names, addresses, and phone numbers of waste transporters.

(F) Name and address or location of the waste disposal site where the asbestos-containing waste material will be deposited.

(G) Description of asbestos disposal procedure.

(H) Description of building, structure, facility, installation, vehicle, or vessel to be demolished or renovated, including address or location where the asbestos abatement project is to be accomplished.

(I) Facility owner's or operator's name, address and phone number.

(J) Scheduled starting and completion dates of asbestos abatement work.

(K) Description of the asbestos type, approximate asbestos content (percent), and location of the asbestos-containing material.

(L) Amount of asbestos to be abated: linear feet, square feet, thickness.

(M) Any other information requested on the Department form.

[~~(e)~~] (d) No project notification fee shall be assessed for asbestos abatement projects conducted in the following residential buildings: site-built homes, modular homes constructed off site, condominium units, mobile homes, and duplexes or other multi-unit residential buildings consisting of four units or less. Project notification for a full-scale asbestos abatement project, as defined in OAR 340-33-020(14), in any of these residential buildings shall otherwise be in accordance with subsection (5)(a) of this section. Project notification for a small-scale asbestos abatement project, as defined in OAR 340-33-020(17), in any of these residential buildings is not required.

[~~(f)~~] (e) The project notification fees specified in this section shall be increased by 50% when an asbestos abatement project is commenced without filing of a project notification and/or submittal of a notification fee and when notification of less than ten days is provided under subsection (5)(a) (C) of this section.

[~~(g)~~] (f) The Director may waive part or all of a project notification fee. Requests for waiver of fees shall be made in writing to the Director, on a case-by-case basis, and be based upon financial hardship. Applicants for waivers must describe the reason for the request and certify financial hardship.

[~~(h)~~] (g) Pursuant to ORS 468.535, a regional authority may adopt project notification fees for asbestos abatement projects in different amounts than are set forth in this rule. The fees shall be based upon the costs of the regional authority in carrying out the delegated asbestos program. The regional authority may collect, retain, and expend such project notification fees for asbestos abatement projects within its jurisdiction.

(6) Work practices and procedures. The following procedures shall be employed during an asbestos abatement project to prevent emissions of particulate asbestos material into the ambient air:

(a) Remove [~~friable~~] asbestos-containing materials before any wrecking or dismantling that would break up the materials or preclude access to the materials for subsequent removal. However, [~~friable~~] asbestos-containing materials need not be removed before demolition if:

(A) They are on a facility component that is encased in concrete or other similar material; and

(B) These materials are adequately wetted whenever exposed during demolition.

(b) Adequately wet [~~friable~~] asbestos-containing materials when they are being removed. In renovation, maintenance, repair, and construction operations, wetting that would unavoidably damage equipment is not required if the owner or operator:

(A) Demonstrates to the Department that wetting would unavoidably damage equipment, and

(B) Adequately wraps or encloses any asbestos-containing material during handling to avoid releasing fibers.

(C) [~~(B)~~] Uses a local exhaust ventilation and collection system designed and operated to capture the particulate asbestos material produced by the asbestos abatement project.

(c) When a facility component covered or coated with [~~friable~~] asbestos-containing materials is being taken out of the facility as units or in sections:

(A) Adequately wet any [~~friable~~] asbestos-containing materials exposed during cutting or disjointing operation; and

(B) Carefully lower the units or sections to ground level, not dropping them or throwing them.

(d) For [~~friable~~] asbestos-containing materials being removed or stripped:

(A) Adequately wet the materials to ensure that they remain wet until they are disposed of in accordance with OAR 340-25-465(13); and

(B) Carefully lower the materials to the floor, not dropping or throwing them; and

(C) Transport the materials to the ground via dust-tight chutes or containers if they have been removed or stripped above ground level and were not removed as units or in sections.

(e) If a facility is being demolished under an order of the State or a local governmental agency, issued because the facility

is structurally unsound and in danger of imminent collapse, the requirements of subsections (a), (b), (c), (d), and (f) of this section shall not apply, provided that the portion of the facility that contains [~~friable~~] asbestos-containing materials is adequately wetted during the wrecking operation.

(f) None of the operations in subsections (a) through (d) of this section shall cause any visible emissions. Any local exhaust ventilation and collection system or other vacuuming equipment used during an asbestos abatement project, shall be equipped with a HEPA filter or other filter of equal or greater collection efficiency.

(g) Contractors licensed and workers certified to conduct only small-scale asbestos abatement projects under OAR 340-33 may use only those work practices and engineering controls specified by OAR 437 [~~Appendix-83-G-(Asbestos)-(9/17/87)~~] Division 3 "Construction" (29 CFR 1926 Appendix G 1926.58) unless the Department authorizes other methods on a case-by-case basis.

Small-scale short-duration maintenance or renovating activities meeting the definition OAR 340-33-020(18) and complying with work practices and engineering controls specified in Appendix G above may be exempted from OAR 437 Division 3 "Construction" (29 CFR 1926 to 1926.58) paragraphs (e)(6), (j)(1(i) and (j)(2)(i)

(h) The Director may approve, on a case-by-case basis, requests to use an alternative to a specific worker or public health protection requirement as provided by these rules for an asbestos abatement project. The contractor or facility owner or operator must submit in advance a written description of the alternative procedure which demonstrates to the Director's satisfaction that the proposed alternative procedure provides worker and public health protection equivalent to the protection that would be provided by the specific provision, or that such level of protection cannot be obtained for the asbestos abatement project.

(7) Related Work Practices and Controls Work practices and engineering controls employed for asbestos abatement projects by contractors and/or workers who are not otherwise subject to the requirements of the Oregon Department of Insurance and Finance, [~~Accident Prevention-Division~~] Oregon Occupational Safety and Health Division shall comply with the subsections of OAR 437 Division 3 "Construction" (29 CFR 1926 Appendix G to 1926.58) which limit the release of asbestos-containing material or exposure of other persons. As used in this subsection the term employer shall mean the operator of the asbestos abatement project and the term employee shall mean any other person.

(13) Work Practices for storage, transport, and disposal of asbestos-containing waste material: The owner or operator of any source covered under the provisions of sections (3), (4), (8) or (11) of

this rule or any other source of friable asbestos-containing waste material shall meet the following standards.

(a) There shall be no visible emissions to the outside air, except as provided in subsection (13) [~~(c)~~] (f) of this section, during the collection; processing, including incineration; packaging; transporting; or deposition of any asbestos-containing waste material which is generated by such source.

(b) The interim storage of asbestos-containing waste material shall protect the waste from dispersal into the environment and provide physical security from tampering by unauthorized persons. The interim storage of asbestos-containing waste material is the sole responsibility of the contractor, owner or operator performing the asbestos abatement project.

(c) [~~(B)~~] All asbestos-containing waste material shall be wetted and stored and transported to [~~the~~] an authorized disposal site in leak-tight containers such as two plastic bags each with a minimum of a thickness of 6 mil., or fiber or metal drums.

(d) [~~(b)~~] All asbestos-containing waste material shall be disposed of at a disposal site authorized by the Department.

(A) Persons intending to dispose of asbestos-containing waste material shall notify the landfill operator of the type and volume of the waste material and obtain the approval of the landfill operator prior to bringing the waste to the disposal site.

(B) [~~(G)~~] The waste transporter shall immediately notify the landfill operator upon arrival of the waste at the disposal site. Off-loading of asbestos-containing waste material shall be done under the direction and supervision of the landfill operator.

(C) [~~(D)~~] Off-loading of asbestos-containing waste material shall occur at the immediate location where the waste is to be buried. The waste burial site shall be selected in an area of minimal work activity that is not subject to future excavation.

(D) [~~(E)~~] Off-loading of asbestos-containing waste material shall be accomplished in a manner that prevents the leak-tight transfer containers from rupturing and prevents visible emissions to the air.

(E) [~~(F)~~] Asbestos-containing waste material deposited at a disposal site shall be covered with at least 2 feet of soil or 1 foot of soil plus 1 foot of other waste before compacting equipment runs over it but not later than the end of the operating day.

(F) Records of disposal at an authorized landfill shall be maintained by the source for a minimum of three years and shall be made available upon request to the Department. For an asbestos abatement project conducted by a contractor licensed under OAR 340-33-040, the records shall be retained by the licensed contractor. For any other asbestos abatement project, the records shall be retained by the facility owner.

(e)[~~(A)~~] All asbestos-containing waste material shall be sealed into containers labeled with a warning label that states:

DANGER

Contains Asbestos Fibers
Avoid Creating Dust
Cancer and Lung Disease Hazard
Avoid Breathing Airborne
Asbestos Fibers

[~~(B)~~] Alternatively, warning labels specified by the U.S. Environmental Protection Agency under 40 CFR 61.152(b)(1)(iv) (3/10/86) may be used.

[~~(e)~~](f) Rather than meet the requirements of this section, an owner or operator may elect to use an alternative storage, transport, or disposal method which has received prior written approval by the Department [~~in writing~~].

(14) Any waste which contains nonfriable asbestos-containing material and which is not subject to subsection (13) of this rule shall be handled and disposed of using methods that will prevent the release of airborne asbestos-containing material.

(15) Open storage or accumulation of friable asbestos material or asbestos-containing waste material is prohibited.

Editor's Note - This is a reprint of all sections and subsections of Oregon Administrative Rules Chapter 340, Division 25, which pertain to asbestos abatement. Deleted sections pertain to other asbestos and hazardous air pollutant sources.

OREGON ADMINISTRATIVE RULES
DEPARTMENT OF ENVIRONMENTAL QUALITY
CHAPTER 340 DIVISION 33
ASBESTOS CERTIFICATION REQUIREMENTS

ASBESTOS REQUIREMENTS

340-33-010 AUTHORITY, PURPOSE, & SCOPE

(1) Authority. These rules are promulgated in accordance with and under the authority of ORS 468.893.

(2) Purpose. The purpose of these rules is to provide reasonable standards for:

(a) training and licensing of asbestos abatement project contractors,

(b) training and certification of asbestos abatement project supervisors and workers,

(c) accreditation of providers of training of asbestos contractors, supervisors, and workers,

(d) administration and enforcement of these rules by the Department.

(3) **Scope**

(a) OAR 340-33-000 through -100 is applicable to all work, including demolition, renovation, repair, construction, or maintenance activity of any public or private facility that involves the repair, enclosure, encapsulation, removal, salvage, handling, or disposal of any material which could potentially release asbestos fibers into the air; except as provided in (b) and (c) below.

(b) OAR 340-33-000 through -100 do not apply to an asbestos abatement project which is exempt from OAR 340-25-465(4).

(c) OAR 340-33-010 through -100 do not apply to persons performing vehicle brake and clutch maintenance or repair.

(d) Full-scale asbestos abatement projects are differentiated from smaller projects. Small-scale asbestos abatement projects as defined by OAR 340-33-020(17)

(A) where the primary intent is to disturb the asbestos-containing material and prescribed work practices are used, and

(B) where the primary intent is not to disturb the asbestos-containing material.

(e) OAR 340-33-000 through -100 provide training, licensing, and certification standards for implementation of OAR 340-25-465, Emission Standards and Procedural Requirements for Asbestos.

340-33-020 DEFINITIONS

As used in these rules,

(1) "Accredited" means a provider of asbestos abatement training courses is authorized by the Department to offer training courses that satisfy requirements for contractor licensing and worker training.

(2) "Agent" means an individual who works on an asbestos abatement project for a contractor but is not an employe of the contractor.

(3) "Asbestos" means the asbestiform varieties of serpentine (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite (amosite), anthophyllite, actinolite and tremolite.

(4) "Asbestos abatement project" means any demolition, renovation, repair, construction or maintenance activity of any public or private facility that involves the repair, enclosure, encapsulation, removal, salvage, handling or disposal of any asbestos-containing material with the potential of releasing asbestos fibers from asbestos containing material into the air.

Note: Emergency fire fighting is not an asbestos abatement project.

(5) "Asbestos-containing material" means any material containing more than one percent asbestos by weight, including particulate asbestos material.

(6) "Certified" means a worker has met the Department's training, experience, and/or quality control requirements and has a current certification card.

(7) "Contractor" means a person that undertakes for compensation an asbestos abatement project for another person. As used in this subsection, "compensation" means wages, salaries, commissions and any other form of remuneration paid to a person for personal services.

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

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

(10) "Director" means the Director of the Department of Environmental Quality.

(11) "EPA" means the United States Environmental Protection Agency.

(12) "Facility" means all or part of any public or private building, structure, installation, equipment, or vehicle or vessel, including but not limited to ships.

(13) "Friable asbestos material" means any asbestos-containing material that hand pressure can crumble, pulverize or reduce to powder when dry.

(14) "Full-scale asbestos abatement project" means any removal, renovation, encapsulation, repair or maintenance of any asbestos-containing material which could potentially release asbestos fibers into the air, and which is not classified as a small-scale project as defined by (17) below.

(15) "Licensed" means a contracting entity has met the Department's training, experience, and/or quality control requirements to offer and perform asbestos abatement projects and has a current asbestos abatement contractor license.

(16) "Persons" means an individual, public or private corporation, nonprofit corporation, association, firm, partnership, joint venture, business trust, joint stock company, municipal corporation, political subdivision, the state and any agency of the state or any other entity, public or private, however organized.

(17) "Small-scale asbestos abatement project" means small-scale, short-duration projects as defined by (18) below, and/or removal, renovation, encapsulation, repair, or maintenance procedures intended to prevent asbestos containing material from releasing fibers into the air and which:

(a) Remove, encapsulate, repair or maintain less than 40 linear feet or 80 square feet of asbestos-containing material;

(b) Do not subdivide an otherwise full-scale asbestos abatement project into smaller sized units in order to avoid the requirements of these rules;

(c) Utilize all practical worker isolation techniques and other control measures; and

(d) Do not result in worker exposure to an airborne concentration of asbestos in excess of 0.1 fibers per cubic centimeter of air calculated as an eight (8) hour time weighted average.

(18) "Small-scale, short-duration renovating and maintenance activity" means a task for which the removal of asbestos is not the primary objective of the job, including, but not limited to:

(a) Removal of <u>small</u> quantities of asbestos-containing insulation on pipes;

(b) Removal of small quantities of asbestos-containing insulation on beams or above ceilings;

(c) Replacement of an asbestos-containing gasket on a valve;

(d) Installation or removal of a small section of drywall; or

(e) Installation of electrical conduits through or proximate to asbestos-containing materials.

(f) No such activity described above shall result in airborne asbestos concentrations above 0.1 fibers per cubic centimeter of air (calculated as an eight-hour time weighted average)

Small-scale, [~~short-duration~~] activities shall be limited to no more than 40 linear feet or 80 square feet of asbestos containing material. An asbestos abatement activity that would otherwise qualify as a full-scale abatement project shall not be subdivided into smaller units in order to avoid the requirements of these rules.

(19) "Trained worker" means a person who has successfully completed specified training and can demonstrate knowledge of the health and safety aspects of working with asbestos.

(20) "Worker" means an employe or agent of a contractor or facility owner or operator.

[~~340-33-010(3)~~] 340-33-030 GENERAL PROVISIONS

(1) Persons engaged in the removal, encapsulation, repair, or enclosure of any asbestos-containing material which has the potential of releasing asbestos fibers into the air must be licensed or certified, unless exempted by OAR 340-33-010(3).

(2) An owner or operator of a facility shall not allow any persons other than those employees of the facility owner or operator who are appropriately certified or a licensed asbestos abatement contractor to perform an asbestos abatement project in or on that facility. Facility owners and operators are not required to be licensed to perform asbestos abatement projects in or on their own facilities.

(3) Any contractor engaged in a full-scale asbestos abatement project must be licensed by the Department under the provisions of OAR 340-33-040.

(4) Any person acting as the supervisor of any full-scale asbestos abatement project must be certified by the Department as a Supervisor for Full-Scale Asbestos Abatement under the provisions of OAR 340-33-050.

(5) Any worker engaged in or working on any full-scale asbestos abatement project must be certified by the Department as a Worker for Full-Scale Asbestos Abatement under the provisions of OAR 340-33-050, or as a Supervisor for Full-Scale Asbestos Abatement.

(6) Any contractor or worker engaged in any small-scale asbestos abatement project but not licensed or certified to perform full-scale asbestos abatement projects, must be licensed or

certified by the Department as a Small-Scale Asbestos Abatement Contractor or a Worker for Small-Scale Asbestos Abatement, respectively under the provisions of OAR 340-33-040 and -050.

(7) Any provider of training which is intended to satisfy the licensing and certification training requirements of these rules must be accredited by the Department under the provisions of OAR 340-33-060.

(8) Any person licensed, certified, or accredited by the Department under the provisions of these rules shall comply with the appropriate provisions of OAR 340-25-465 and OAR 340-33-000 through -100 and maintain a current address on file with the Department, or be subject to suspension or revocation of license, or certification, or accreditation.

~~[(9) Asbestos abatement contractors and workers may perform asbestos abatement projects without a license or certificate until January 1, 1989. Thereafter, any contractor or worker engaged in an asbestos abatement project must be licensed or certified by the Department.]~~

(9)~~[(10)]~~ The Department may accept evidence of violations of these rules from representatives of other federal, state, or local agencies.

(10)~~[(11)]~~ A regional air pollution authority which has been delegated authority under OAR 340-25-460(7) may inspect for and enforce against violations of licensing and certification regulations. A regional air pollution authority may not approve, deny, suspend or revoke a training provider accreditation, contractor license, or worker certification, but may refer violations to the Department and recommend denials, suspensions, or revocations.

~~[(12) An extension of time beyond January 1, 1989, for mandatory contractor licensing, supervisor certification or worker certification may be approved by the Commission if:]~~

~~[(a) Adequate accredited training as required for any of the categories of licensing or certification is not available in the State, and]~~

~~[(b) There is a public health or worker danger created due to inadequate numbers of appropriately licensed or certified persons to properly perform asbestos abatement activities.]~~

~~[(13) Variances from these rules may be granted by the Commission under ORS 468.345.]~~

340-33-040 CONTRACTOR LICENSING

(1) Contractors may be licensed to perform either of the following categories of asbestos abatement projects:

(a) Full-Scale Asbestos Abatement Contractors: All asbestos abatement projects, regardless of project size or duration, or

(b) Small-Scale Asbestos Abatement Contractor: Small-scale asbestos abatement projects.

(2) Application for licenses shall be submitted on forms prescribed by the Department and shall be accompanied by:

(a) Documentation that the contractor, or contractor's employee representative, is certified at the appropriate level by the Department:

(A) Full-scale Asbestos Abatement Contractor license: Certified Supervisor for Full-Scale Asbestos Abatement.

(B) Small-Scale Asbestos Abatement Contractor: Certified Worker for Small-Scale Asbestos Abatement.

(b) Certification that the contractor has read and understands the applicable Oregon and federal rules and regulations on asbestos abatement and agrees to comply with the rules and regulations.

(c) A list of all certificates or licenses, issued to the contractor by any other jurisdiction, that have been suspended or revoked during the past one (1) year, and a list of any asbestos-related enforcement actions taken against the contractor during the past one (1) year.

(d) List any additional project supervisors for full-scale projects and their certification numbers as Supervisors for Full-Scale Asbestos Abatement.

(e) Summary of asbestos abatement projects conducted by the contractor during the past 12 months.

(f) A license application fee.

(3) The Department will review the application for completeness. If the application is incomplete, the Department shall notify the applicant in writing of the deficiencies.

(4) The Department shall deny, in writing, a license to a contractor who has not satisfied the license application requirements.

(5) The Department shall issue a license to the applicant after the license is approved.

(6) The Department shall grant a license for a period of 12 months. Licenses may be extended during Department review of a renewal application.

(7) Renewals:

(a) License renewals must be applied for in the same manner as is required for an initial license.

(b) For renewal, the contractor or employee representative must have completed at least the appropriate annual refresher course.

(c) The complete renewal application shall be submitted no later than 60 days prior to the expiration date.

(8) The Department may suspend or revoke a license if the licensee:

(a) Fraudulently obtains or attempts to obtain a license.

(b) Fails at any time to satisfy the qualifications for a license or comply with the rules adopted by the Commission.

(c) Fails to meet any applicable state or federal standard relating to asbestos abatement.

(d) Permits an untrained or uncertified worker to work on an asbestos abatement project.

(e) Employs a worker who fails to comply with applicable state or federal rules or regulations relating to asbestos abatement.

(9) A contractor who has a license revoked may reapply for a license after demonstrating to the Department that the cause of the revocation has been resolved.

340-33-050 CERTIFICATION

(1) Workers on asbestos abatement projects shall be certified at one or more of the following levels:

(a) Certified Supervisor for Full-Scale Asbestos Abatement.

(b) Certified Worker for Full-Scale Asbestos Abatement.

(c) Certified Worker for Small-Scale Asbestos Abatement.

(2) Application for Certification-General Requirements.

(a) Applications shall be submitted to the provider of the accredited training course within thirty (30) days of completion of the course.

(b) Applications shall be submitted on forms prescribed by the Department and shall be accompanied by the certification fee.

(3) Application to be a Certified Supervisor for Full-Scale Asbestos Abatement shall include:

(a) Documentation that the applicant has successfully completed the Supervisor for Full-Scale Asbestos Abatement level training and examination as specified in OAR 340-33-070 and the Department guidance document, and

(b) Documentation that the applicant has been certified as a Worker for Full-Scale Asbestos Abatement and has at least 3 months of full-scale asbestos abatement experience, including time on powered air purifying respirators and experience on at least five separate asbestos abatement projects; or certified as worker for Full-Scale asbestos abatement and six months of general construction, environmental or maintenance supervisory experience demonstrating skills to independently plan, organize and direct personnel in conducting an asbestos abatement project. The Department shall have the authority to determine if any applicant's experience satisfies those requirements. ~~[Applications for licenses submitted prior to January 1, 1989 shall not be required to include documentation of certification as a worker.]~~

(4) Application to be a Certified Worker for Asbestos Abatement shall include:

(a) Documentation that the applicant to be a Certified Worker for Full-Scale Asbestos Abatement has successfully completed the Worker for Full-Scale Asbestos Abatement level training and examination as specified in OAR 340-33-070 and the Department guidance document.

(b) Documentation that the applicant to be a Certified Worker for Small-Scale Asbestos Abatement has successfully completed the Worker for Small-Scale Asbestos Abatement level training and examination as specified in OAR 340-33-070 and the Department guidance document.

(5) Training course providers shall issue certification to an applicant who has fulfilled the requirements of certification.

(6) Certification at all levels is valid for a period of twenty-four (24) months after the date of issue.

(7) Renewals

(a) Certification renewals must be applied for in the same manner as application for original certification.

(b) To gain renewal of certification, a Worker for Full-Scale Asbestos Abatement and a Supervisor for Full-Scale Asbestos Abatement must complete the appropriate annual refresher course no sooner than nine (9) months and no later than twelve (12) months after the issuance date of the certificate, and again no sooner than three (3) months prior

to the expiration date of the certificate. A worker may apply in writing to the Department for taking refresher training at some other time than as specified by this paragraph for reasons of work requirements or hardship. The Department shall accept or reject the application in writing.

(c) To gain renewal of certification, a Worker for Small-Scale Asbestos Abatement must comply with the regulations on refresher training which are in effect at the time of renewal. Completion of an accredited asbestos abatement review class may be required if the Environmental Quality Commission determines that there is a need to update the workers' training in order to meet new or changed conditions.

(8) The Department may suspend or revoke a worker's certificate for failure to comply with any state or federal asbestos abatement rule or regulation.

(9) If a certification is revoked, the worker may reapply for another initial certification only after twelve (12) months from the revocation date.

(10) A current worker certification card shall be available for inspection at each asbestos abatement project site for each worker conducting asbestos abatement activities on the site.

340-33-060 **TRAINING PROVIDER ACCREDITATION**

(1) General

(a) Asbestos training courses required for licensing or certification under these rules may be provided by any person.

(b) Any training provider offering training in Oregon to satisfy these certification and licensing requirements must be accredited by the Department.

(c) Each of the different training courses which are to be used to fulfill training requirements shall be individually accredited by the Department.

(d) The training provider must satisfactorily demonstrate through application and submission of course agenda, faculty resumes, training manuals, examination materials, equipment inventory, and performance during on-site course audits by Department representatives that the provider meets the minimum requirements established by the Department.

(e) The training course sponsor shall limit each class to a maximum of thirty participants unless granted an exception in writing by the Department. The student to instructor ratio for hands-on training shall be equal to or less than ten to one (10:1). To apply for an exception allowing class size to

exceed thirty, the course sponsor must submit the following information in writing to the Department for evaluation and approval prior to expanding the class size.

(A) The new class size limit,

(B) The teaching methods and techniques for training the proposed larger class,

(C) The protocol for conducting the written examination, and

(D) Justification for a larger class size.

(f) Course instructors must have academic credentials, demonstrated knowledge, prior training, or field experience in their respective training roles.

(g) The Department may require any accredited training provider to use examinations developed by the Department in lieu of the examinations offered by the training provider.

~~[(h) Training providers seeking accreditation for courses conducted since January 1, 1987, may apply for accreditation of those course offerings as though they were applying for initial accreditation. Contractors and workers trained by these providers since January 1, 1987 may be eligible to use this prior training as satisfaction of the initial training required by these licensing and certification rules.]~~

(h)~~[(i)]~~ The Department may require accredited training providers to pay a fee equivalent to reasonable travel expenses for one Department representative to audit any accredited course which is not offered in the State of Oregon for compliance with these regulations. This condition shall be an addition to the standard accreditation application fee.

(2) Application for Accreditation.

(a) Application for accreditation shall be submitted to the Department in writing on forms provided by the Department and attachments. Such applications shall, as a minimum, contain the following information:

(A) Name, address, telephone number of the firm, individual(s), or sponsors conducting the course, including the name under which the training provider intends to conduct the training.

(B) The type of course(s) for which approval is requested.

(C) A detailed course outline showing topics covered and the amount of time given to each topic, including the hands-on skill training.

(D) A copy of the course manual, including all printed material to be distributed in the course.

(E) A description of teaching methods to be employed, including description of audio-visual materials to be used. The Department may, at its discretion, request that copies of the materials be provided for review. Any audio-visual materials provided to the Department will be returned to the applicant.

(F) A description of the hands-on facility to be utilized including protocol for instruction, number of students to be accommodated, the number of instructors, and the amount of time for hands-on skill training.

(G) A description of the equipment that will be used during both classroom lectures and hands-on training.

(H) A list of all personnel involved in course preparation and presentation and a description of the background, special training and qualification of each, as well as the subject matter covered by each.

(I) A copy of each written examination to be given including the scoring methodology to be used in grading the examination; and a detailed statement about the development and validation of the examination.

(J) A list of the tuition or other fees required.

(K) A sample of the certificate of completion and certification card label.

(L) A description of the procedures and policies for re-examination of students who do not successfully complete the training course examination.

(M) A list of any states or accrediting systems that approve the training course.

(N) A description of student evaluation methods (other than written examination to be used) associated with the hands-on skill training, as applicable.

(O) A description of course evaluation methods used by students.

(P) Any restriction on attendance such as class size, language, affiliation, and/or target audience of class.

(Q) A description of the procedure for issuing replacement certification cards to workers who were issued a certification card or certification card label by the training provider within the previous 12 months and whose cards have been lost or destroyed.

(R) Any additional information or documentation as may be required by the Department to evaluate the adequacy of the application.

(S) Accreditation application fee.

(b) Application for initial training course accreditation and course materials shall be submitted to the Department at least 45 days prior to the requested approval date.

(c) Upon approval of an initial or refresher asbestos training course, the Department will issue a certificate of accreditation. The certificate is valid for one year from the date of issuance.

(d) Application for renewal of accreditation must follow the procedures described for the initial accreditation. In addition, course instructors must demonstrate that they have maintained proficiency in their instructional specialty and adult training methods during the twelve (12) months prior to renewal.

(3) Denial, Suspension or Revocation of Certificate of Accreditation. The Director may deny, revoke or suspend an application or current accreditation upon finding of sufficient cause. Applicants and certificate holders shall also be advised of the duration of suspension or revocation and any conditions that must be met before certificate reinstatement. Applicants shall have the right to appeal the Director's determination through an administrative hearing in accordance with the provisions of OAR Chapter 340 Division 11. The following may be considered grounds for denial, revocation or suspension:

(a) False statements in the application, omission of required documentation or the omission of information.

(b) Failure to provide or maintain the standards of training required by these regulations.

(c) Failure to provide minimum instruction required by these regulations.

(d) Failure to report to the Department any change in staff or program which substantially deviates from the information contained in the application.

(e) Failure to comply with the administrative tasks and any other requirement of these regulations.

(4) Training Provider Administrative Tasks. Accredited training providers shall perform the following as a condition of accreditation:

(a) Administer the training course examination only to those students who successfully complete the training course.

(b) Issue a numbered certificate to each students who successfully passes the training course examination. Each certificate shall include the name of the student, name of the course completed, the dates of the course and the

examination, name of the training provider, a unique certificate number, and a statement that the student passed the examination.

(c) Issue a photo identification card to each student seeking initial or renewal certification who successfully completes the training course examination and meets all other requirements for certification. The photo identification card shall meet the Department specifications.

(d) Place a label on the back of the photo identification card of each student who successfully completes a refresher training course and examination as required to maintain certification. The label shall meet Department specifications.

(e) Provide to the Department within ten (10) calendar days of the conclusion of each course offering the name, address, telephone number, Social Security Number, course title and dates given, attendance record, exam scores, and course evaluation form of each student attending the course and the certification number, certification fee, and a photograph for each student certified. Record of the information shall be retained by the training provider for a period of three (3) years.

(f) Obtain advance approval from the Department for any changes in the course instructional staff, content, training aids used, facility utilized or other matters which would alter the instruction from that described in the approval application.

(g) Utilize and distribute as part of the course information or training aides furnished by the Department.

(h) ~~[Notify the Department in writing at least one week before a training course is scheduled to begin. The notification must include the date, time and address where the training will be conducted.]~~ Provide the Department with a monthly class schedule at least one week before the schedule begins. Notification shall include time and location of each course. Training providers shall promptly notify the Department within three days whenever any unscheduled class is given.

(i) Establish and maintain course records and documents relating to course accreditation application. Accredited training providers shall make records and documents available to the Department upon request. Training providers whose principle place of business is outside of the State of Oregon shall provide a copy of such records or documents within ten (10) business days of receipt of such a written request from the Department.

(h) Notify the Department prior to issuing a replacement certification card.

(i) Accredited training providers must have their current accreditation certificates at the location where they are conducting training.

340-33-070 GENERAL TRAINING STANDARDS

(1) Courses of instruction required for certification shall be specific for each of the certificate categories and shall be in accordance with Department guidelines. The topics or subjects of instruction which a person must receive to meet the training requirements must be presented through a combination of lectures, demonstrations, and hands-on practice.

(2) Courses requiring hands-on training must be presented in an environment suitable to permit participants to have actual experience performing tasks associated with asbestos abatement. Demonstrations not involving individual participation shall not substitute for hands-on training.

(3) Persons seeking certification as a Supervisor for Full-Scale Asbestos Abatement shall successfully complete an accredited training course of at least four days as outlined in the DEQ Asbestos Training Guidance Document. The training course shall include lectures, demonstrations, at least six hours of hands-on training, individual respirator fit testing, course review, and a written examination consisting of multiple choice questions. Successful completion of the training shall be demonstrated by achieving a passing score on the examination, course attendance, and full participation in the hands-on training.

(4) Any person seeking certification as a Worker for Full-Scale Asbestos Abatement shall successfully complete an accredited training course of at least three days duration as outlined in the DEQ Asbestos Training Guidance Document. The training course shall include lectures, demonstrations, at least six hours of actual hands-on training, individual respirator fit testing, course review, and an examination of multiple choice questions. Successful completion of the course shall be demonstrated by achieving a passing score on the examination, course attendance, and full participation in the hands-on training. The course shall adequately address the following topics:

(5) Any person seeking certification as a Worker for Small-Scale Asbestos Abatement shall complete at least a two day approved training course as outlined in the DEQ Asbestos Training Guidance Document. The small-scale asbestos abatement worker course shall include lectures, demonstrations, at least six hours of hands-on training, individual respirator fit testing, course review, and an examination of multiple choice questions. Successful completion of the course shall be demonstrated by achieving a passing score on the examination, course attendance, and full participation in the hands-on training.

(6) Refresher training shall be at least one day duration for Certified Supervisors and Workers for Full-Scale Asbestos Abatement and at least three hours duration for Certified Workers

for Small-Scale Asbestos Abatement. The refresher courses shall include a review of key areas of initial training, updates, and an examination of multiple choice questions as outlined in the DEQ Asbestos Training Guidance Document. Successful completion of the course shall be demonstrated by achieving a passing score on the examination, course attendance, and full participation in any hands-on training.

(7) One training day shall consist of at least seven hours of actual classroom instruction and hands-on practice.

340-33-080 PRIOR TRAINING

Successful completion of an initial training course ~~[not]~~ accredited by a governmental agency other than the Department may be used to satisfy the training and examination requirements of OAR 340-33-050 and OAR 340-33-060 provided that all of the following conditions are met.

(1) The Department determines that the course and examination requirements are equivalent to or exceed the requirements of OAR 340-33-050 and 340-33-060 and the asbestos training guidance document, for the level of certification sought. State and local requirements may vary.

(2) ~~[If the training was completed prior to January 1, 1987, the applicant must demonstrate to the Department that additional experience sufficient to maintain knowledge and skills in asbestos abatement has been obtained in the interim.]~~ For an applicant to qualify for a refresher course and certification, prior training must have occurred within two years of the application to the Department. Applicants must be in good standing in all states where they are certified.

(3) The applicant who has received recognition from the Department for alternate initial training successfully completes an Oregon accredited refresher course and refresher course examination for the level of certification sought.

340-33-090 RECIPROCITY

The Department may develop agreements with other jurisdictions for the purposes of establishing reciprocity in training, licensing, and/or certification if the Department finds that the training, licensing and/or certification standards of the other jurisdiction are at least as stringent as those required by these rules.

(c) Training Provider Accreditation

(d) Asbestos Abatement Project Notifications

(2) Contractors shall pay a non-refundable license application fee of:

(a) Three hundred dollars ($300) for a one year Full-Scale Asbestos Abatement Contractor license.

(b) Two hundred dollars ($200) for a one year Small-Scale Asbestos Abatement Contractor license.

(3) Workers shall pay a non-refundable certification fee of:

(a) One hundred dollars ($100) for a two year certification as a certified Supervisor for Full-Scale Asbestos Abatement.

(b) Eighty dollars ($80) for a two year certification as a Certified Worker for Full-Scale Asbestos Abatement.

(c) Fifty dollars ($50) for a two year certification as a Certified Worker for Small-Scale Asbestos Abatement.

(4) Training Providers shall pay a non-refundable accreditation application fee of:

(a) One thousand dollars ($1000) for a one year accreditation to provide a course for training supervisors on Full-Scale projects.

(b) Eight hundred dollars ($800) for a one year accreditation to provide a course for training workers on Full-Scale projects.

(c) Five hundred dollars ($500) for a one year accreditation to provide a course for training workers on Small-Scale projects.

(d) Two hundred and fifty dollars ($250) for a one year accreditation to provide a course for refresher training for any level of certification.

(5) Requests for waiver of fees shall be made in writing to the Director, on a case-by-case basis, and be based upon financial hardship. Applicants for waivers must describe the reason for the request and certify financial hardship. The Director may waive part or all of a fee.

Note: The requirements and jurisdiction of the Department of Insurance and Finance, Accident Prevention Division and any other state agency are not affected by these rules.

(Adopted May 17, 1987; effective January 1, 1989)

ASB\AH342

ATTACHMENT B

STATEMENT OF NEED FOR RULEMAKING

Pursuant to ORS 183.335(2), this statement provides information on the intended action to amend rules.

Legal Authority

1. Oregon Revised Statute 468.020 requires the Commission to adopt rules and standards as necessary to perform its vested functions.

2. Oregon Revised Statute 468.893 allows the Commission to establish standards and procedures for asbestos training providers and abatement workers, determine procedures for abatement project notification, and to establish asbestos abatement, handling and disposal work practice standards.

Need for the Rule

The proposed amendments are the result of a long-term effort to delete outdated or irrelevant regulations, render procedures more efficient and practical, respond to current industrial practices, and generally fine-tune the Department's asbestos regulations.

Principal Documents Relied Upon

- ORS 468.020, 468.893

- OAR 340-25-465, Hazardous Air Contaminant Rules for Asbestos

- OAR 340-33-010 et seq., Asbestos Licensing and Certification Requirements

Land Use Compatibility Statement

The Department has concluded that the proposed rules do not appear to affect land use, and will be consistent with Statewide Planning Goals and Guidelines.

ASB\AR13541

FISCAL AND ECONOMIC IMPACT STATEMENT

Proposed rule amendments fall into three categories: 1) Housekeeping changes that have no fiscal impact, 2) procedural changes that economically impact the regulated community, and 3) changes in standards or requirements that economically impact the regulated community.

1) Housekeeping Amendments

The Department has projected no fiscal impact for the following rule amendments:

OAR 340-33-030(9) & (12) - Repeal of sections creating special licensing or certification provisions until January 1, 1989, a deadline that has already passed.

OAR 340-33-030(13) - Repeal of section that repeats variance authority already contained in ORS 468.345.

OAR 340-33-060(1)(h) - Repeal of accreditation grandfathering provision for asbestos training courses taught since January 1, 1987. The Department has received only one request under this provision, and no other requests are expected in the future.

2) Procedural Amendments

OAR 340-25-465(5)(a)(c) - Allows asbestos abatement projects to commence without prior notification when unexpected event creates opportunity to work. This amendment is expected to allow an economic savings to facilities able to perform abatement projects only under certain circumstances (ie: production line down time). The Department is not able to quantify the savings.

OAR 340-25-465(5)(b) - Deletion of more costly month to month project notification option, amendment allowing single owner/operator of centrally controlled facilities to file one notice for multiple abatement projects. These amendments also represent a currently unquantifiable savings to persons performing asbestos abatement projects by decreasing the amount of notification fees to be paid.

OAR 340-33-050(3)(b) - Amendment allowing persons with six months experience as maintenance or construction supervisors and full-scale worker certification to take supervisor's training course. This amendment allows economic savings to the regulated community by allowing the previous prerequisite of hands-on training, and by also allowing supervisory experience to quality for the supervisors training course.
OAR 340-33-060(4)(h) - Amendment requiring a written monthly training schedule instead of written notice one week before each class. This amendment helps trainers plan their courses in advance and thereby reduce training course marketing costs.

OAR 340-33-080 - Limits transferability of out-of-state asbestos training to training received within two years of application with the Department. The Department projects no fiscal impact.

Amendments to Standards and Requirements

OAR 340-25-455(20) - New definition of "interim storage of asbestos-containing waste material". This amendment will economically impact the regulated community by requiring prevention of asbestos dispersal physical tampering. The costs associated with these requirements are unknown because they may be achieved in a number of ways. This amendment should also help to prevent cleanup costs associated with accidental contamination between the source and the disposal site.

OAR 340-25-465(4)(b) & (6) - Amendments clarify that normally nonfriable materials can be made friable, and as a result hazardous, by certain work practices. These amendments could increase costs to contractors removing or disturbing asbestos-containing materials in a manner that makes them friable, and subject to further regulation. Cost increases would be offset by current OROSHA regulations for worker protection.

ASB\AR1355

Oregon Department of Environmental Quality

A CHANCE TO COMMENT ON...

Amendments to Asbestos Work Practice and Training Rules
NOTICE OF PUBLIC HEARING

Hearing Date: November 16 & 17, 1989
Comments Due: December 1, 1989

WHO IS AFFECTED: All persons performing asbestos abatement projects, and asbestos training providers.

WHAT IS PROPOSED: The Department of Environmental Quality is proposing to amend OAR 340-25-455(20); -25-455(4), (5) and (6); -33-030(9), (12) and (13); -33-060(1)(h), (4)(g); and -33-080

WHAT ARE THE HIGHLIGHTS: Proposed amendments would:

- add a definition of interim storage of asbestos containing material
- apply existing work practices to potentially friable asbestos containing material
- make practical adjustments to asbestos abatement project notification and filing rules
- require air clearance monitoring upon completion of abatement projects
- make practical adjustments to training and certification rules
- make permanent existing temporary rules on prerequisites for supervisor training

HOW TO COMMENT: Copies of the complete proposed rule package may be obtained from the Air Quality Division in Portland 811 S.W. Sixth Avenue or the regional office nearest you. For further information contact Bruce Arnold at 229-5506.

A public hearing will be held before a hearings officer at:

Department of Environmental Quality, Conference Room 4
811 SW 6th Ave., Portland, OR
November 16, 1989
2:00 pm to 5:00 pm

Harris Hall, Lane Co. Courthouse
125 E 8th St., Eugene, OR
November 17, 1989
1:00 pm to 4:00 pm

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

11/1/86

FOR FURTHER INFORMATION:

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

Oral and written comments will be accepted at the public hearing. Written comments may be sent to the DEQ, but must be received by no later than December 1, 1989.

WHAT IS THE NEXT STEP:

After public hearing the Environmental Quality Commission may adopt rule amendments identical to the proposed amendments, adopt modified rule amendments on the same subject matter, or decline to act. The Commission's deliberation should come January 11, 1990 as part of the agenda of a regularly scheduled Commission meeting.

A Statement of Need, Fiscal and Economic Impact Statement, and Land Use Consistency Statement are attached to this notice.

ASB\AR1340

ATTACHMENT E

MEMORANDUM

TO: Environmental Quality Commission

FROM: Bruce Arnold, Hearings Officer (Certification Coordinator)

DATE: December 15, 1989

SUBJECT: Hearings Officer Report

Hearings Officer's Report on the Department's proposal to amend OAR 340-25-455 (20); 25-455 (4), (5) and (6); OAR 340-33-030 (9), (12), and (13); 33-060 (1) (h), (4) (a); and 33-080.

The Department of Environmental Quality held two rule hearings one in Portland and Eugene, Oregon at the times and places announced in the Secretary of State's Bulletin, The Oregonian, Eugene Register Guard, Eastern Oregonian and Daily Journal of Commerce. Sixteen persons attended the Portland hearing, four testifying; twenty-four persons attended the Eugene hearing, two testifying. Eighteen separate pieces of written testimony were also received and are listed at the end of this report.

By far, the newly proposed rules for final air clearance sampling OAR 340-25-465 (6) (i) drew the greatest number of comments. These can be reduced to several categories. Several commentors objected to the proposed rules on an economic basis arguing it was a big expense for schools; **Bill Candee** of Cascade Insulation stated that the air clearance sampling costs would be exorbitant for small jobs in central and eastern Oregon. He also suggested changes to reduce the burden on small projects. Another group of commentors generally approved the concept of final air clearance sampling but offered various amendments. **Rene Garrett** told listeners consideration should be given when it was physically (scientifically) impossible to get a clearance result due to high levels of air contamination such as in paper mills or when other factors made air clearance sampling unfeasible. **Ms. Kelly Champion** of Hall-Kimbrell Environmental also said air sampling volumes should be less than ten (10) liters per minute according to the Asbestos Hazard Emergency Response Act (AHERA) standards. The last group of testifiers also accepted the concept of clearance air sampling but suggested that any such program should be constructed in accordance with other pre-existing governmental regulations in particular federal (AHERA). It was also noted that AHERA air sampling standards have been adopted by several large cities including New York and Chicago. **Ron Petty** of PBS said that the Department must prepare detailed guidelines to ensure consistent sampling and laboratory results among all laboratories.

Amendments proposed for OAR 340-25-465 (4),(5), and (6) also elicited wide comment. OAR 340-25-465 (4) attempts to create a clear understanding as to when nonfriable asbestos containing materials are no longer exempt from the rules. Opposition to the proposed amendments was from both **Lane Regional Air Pollution Authority** and **Armstrong Industries**, the first expressing satisfaction with the old rule and the latter saying the proposed rules will have an unnecessary economic impact on the floor covering industry. Armstrong felt that the use of the word "broken" as used in the proposed regulation anticipated the use of that word in NESHAP regulations and was not therefore properly defined and should not be used. If the word "broken" is used the Department must create extensive guidelines necessary to ensure compliance by floor covers and small scale asbestos removers.

Armstrong also suggested the use of AHERA definition of friable materials to avoid negative economic impacts on the construction trades.

Mark Morford writing for the law firm of Stoel Rives Boley Jones and Grey commented that it is not clear why the rule is being changed and believes the changes are so vague contractors and building owners will liberally interpret the exemption, inviting a cavalier approach to the regulation.

OAR 25-465 (5) includes amendments creating a non-refundable filing fee, simplifies notification procedures for single contractors and single facilities and allows for notification of less than ten days when unexpected events create an opportunity to remove asbestos. Generally commentors did not have objection with the current language requiring ten day notification of abatement projects, some thought the amendments allowing removal upon unexpected events were retrogressive and invited abuse. **Lane Regional Air Pollution Authority** suggested amendments requiring prior verbal or written notification when an unscheduled event occurs. No-one objected to the simplification of the notification system for single contractors or facility owners. The Department received information from the Attorney General that a non-refundable fee was not currently within the Department's authority.

OAR 25-465 (6) was amended to include nonfriable asbestos-containing material under the work practices and procedures applied to friable materials whenever nonfriable materials were broken. **Mr. Morford** commented that the limited definition set forth in OAR 25-465 (6) for asbestos-containing material may be unnecessary and may create confusion with the definition of asbestos containing material in OAR 340-25-455 (2) and submits alternate language, namely the definition in OAR 340-25-455 (2) "asbestos-containing materials" for use throughout the rules. **Armstrong Industries** echoed these concerns especially concerning vinyl sheet floor coverings and also suggested an alternative restricting the work practices to non-friable materials, which had been transformed to friable materials by improper practices.

OAR 340-25-465 (13)(b) was amended to create requirements for the interim storage of asbestos-containing waste material. **Mr. Morford** agreed with this concept, but questioned who was actually responsible for the safe storage of the material. He felt that the responsible party is inadequately designated in OAR 340-25-465 (13) and that sentence in OAR

(13)(b) declaring the interim storage of asbestos-containing waste material is the sole responsibility of those responsible for the abatement project is misleading and should be deleted.

Lastly the Department received a few comments concerning amendments to OAR 340-33-010 thru 33-100 that the Department should not reduce the experience requirements for full scale asbestos supervisors by allowing persons with six months construction or maintenance experience and workers card to qualify for the supervisors course.

The full text of the written comments and audio cassette of the hearings are available for examination.

Written Testimony Received
by the Department
December 1, 1989

Entity	Signatory
Archdiocese of Portland in Oregon	Donavon E. Nissly, LEA Designate
Associated Floor Coverings Contractors	Jerry Van Scoy, Executive Director
Armstrong World, Industries, Inc.	Michael I. Otchet, Associate Counsel Product Defense Litigation
Cascade Insulation, Inc.	Bill Candee, President
Department of Insurance and Finance, OR OSHA	Mark Noll, Occupational Health Consultant
Environmental Consulting Services, Inc	Sheila Monroe, Technical Director
Lake Oswego Insulation Co.	John Mayer, President
Lane Council of Governments	JoAnn McCauley, Information Coordinator
Lane Regional Air Pollution Authority	Donald R. Arkell, Director
National Roofing Contractors Association	Carl Good, Director Membership Development

Oregon Remodelers Association	James Breitbart, Executive Director
Professional Environmental Associates	Jim Chartier, V.P. General Manager
Roseburg Forest Products Co.	Jose Phillips, Corporate Safety and IH Supervisor
Roseburg Public Schools	Steve Chaney, Director of Physical Plant Services
Stoel, Rives, Boley Jones & Grey Attorneys at Law	Mark Morford
Westinghouse Environmental and Geotechnical Services Inc.	Carl C. Allen, Supervisor, Solids Laboratory
Weyerhauser Paper Company	Dick Gimby Asbestos Coordinator
W.L. Thomas, Inc.	Lester Pluard, V.P

ASB\AH327

Response to Comments Received on
Proposed Amendments to Asbestos Regulations

The Asbestos Program is unable to respond to some comments that are beyond the scope of the proposed rule changes. All comments received have been reviewed and may be considered in subsequent rule revisions.

OAR 340-25-455 (31) Definition of small scale asbestos abatement project

COMMENTS:

To achieve consistency with OAR 340, division 33, and Oregon Occupational Safety and Health Division (OROSHA) add definition of "small scale short duration maintenance and renovating activity".

RESPONSE:

The Department agrees that this language should be added for consistency. This change is housekeeping in nature.

OAR 340-25-465 (4)(b) Exemption for nonfriable materials

COMMENTS:

The Department has received comments that the proposed exemption for nonfriable materials is too vague and will lead to inconsistent interpretations and enforcement. Specifically, commenters were concerned that the word "broken" is not well enough defined, and would require further administrative interpretation. For example, how many broken floor tiles at a removal site would end the nonfriable materials exemption ?
One individual recommended inclusion of "significantly" before the word broken, to allow for minimal breakage.

Commenters requested that the Department adopt EPA's Asbestos Containing Materials in Schools Rule (40 CFR 763.83): "Friable... means that the material, when dry, may be crumbled, pulverized or reduced to powder by hand pressure, and includes previously nonfriable materials after such previously nonfriable material becomes damaged to the extent that when dry it may be crumbled, pulverized or reduced to powder by hand pressure."

The proposed exemption was criticized for being inconsistent with EPA's rules governing abatement in schools (AHERA). A product could be exempt under AHERA but regulated under the Department's proposal.

Representatives of building owners and contractors questioned why the Department proposes to eliminate work practice requirements listed under the exemption for nonfriable materials.

Others were concerned that the proposed nonfriable exemption would subject all asbestos-containing materials at a demolition site to treatment and disposal as friable waste materials.

RESPONSE:

The Department agrees that the word "broken" in the proposed exemption for nonfriable materials could cause confusion. However, we still believe it necessary to end the exemption when nonfriable materials are disturbed in a way that will cause significant breakage and potential fiber release. To convey this concept, we have replaced the word "broken" with "shattered". It is our intent to fully regulate disturbances of nonfriable asbestos materials when there is potential for fiber release.

The Department rejects the AHERA definition of materials to be regulated as friable because it relies on the concept of friability after materials have already been disturbed. While nonfriable materials may have been broken into many pieces, causing potential fiber release, they still may be resistant to crumbling by hand pressure. It is also doubtful whether nonfriable materials already reduced to dust by inappropriate work practices could be further crumbled or reduced to powder by hand pressure. Relating the nonfriable materials exemption to permissible exposure limits is unacceptable for similar reasons. Significant fiber releases could already have occurred by the time a contractor determines violation of permissible exposure limits.

While the Department agrees that consistent state and federal regulations are less confusing to the regulated community, we believe that the public health and environment will be better protected by a more stringent definition of exempt nonfriable materials.

Specific work practice requirements were eliminated from the section exempting nonfriable materials to avoid limiting the methods for removal of nonfriable materials. The Department will continue to provide guidance on these methods, and any other methods identified as effective.

Finally, asbestos-containing building materials are subject to regulation under existing Oregon Administrative Rules if building demolition can cause the release of asbestos fibers. Once removed, nonfriable building materials can be disposed of as demolition waste.

OAR 340-25-465 (4)(c) Allows removal of less than three square feet of friable asbestos-containing material without worker certification or contractor's license when removal is not primary objective.

COMMENTS:

The reference in this section to 29 CFR 1926, Appendix G to 1926.58, Oregon OSHA small scale short duration work practices, should be included verbatim instead of referenced.

RESPONSE:

The Department and Oregon OSHA work closely to regulate the asbestos abatement industry. Oregon asbestos abatement workers are trained to comply with both DEQ and OROSHA regulations. Because Appendix G to 1926.58 is readily available from either agency, and full inclusion would considerably lengthen DEQ regulations, we believe that a reference to this section is sufficient. The Department plans to include relevant OROSHA regulations in information packets to be sent to small scale abatement contractors.

OAR 340-25-465 (4) Creates nonrefundable $75 filing fee for asbestos project notifications.

RESPONSE:

The Department has deleted this proposal on the advise of the Attorney General's office which has stated that it is not currently within the Department's authority to create a nonrefundable portion of the existing filing fee.

OAR 340-25-465 (5)(a)(C) Allows less than 10 day notice of abatement project where unexpected opportunities arise.

COMMENTS:

This proposal should be amended to require prior verbal or written notification of the Department to assure legitimate use of the exemption, and some advance notice for inspections.

The Department also received a comment that allowing less than 10 days notice would work against the goal of requiring owners and contractors to anticipate asbestos before beginning work. The condition of unscheduled or unanticipated opportunity is too vague.

RESPONSE:

The Department agrees that an amendment requiring prior notification is necessary and has included the suggested language.

The goal of this proposal is to facilitate necessary abatement projects where normal conditions (eg: production line operation) would otherwise prevent them. The Department plans to consider such requests on a case by case basis, the same way it now considers emergency waivers. Persons applying for the 10 day waiver will be required to demonstrate opportunity created by an unexpected event, not merely that asbestos was present where it was not expected.

OAR 340-25-465 (5)(b) Allows one notification for small scale projects conducted by contractor at one or more facilities.

COMMENTS:

To clarify that this notification applies to multiple facilities, add "at one or more facilities" after the word "conducted".

RESPONSE:

The Department agrees that this amendment helps to clarify its intent, and has included the suggested language.

OAR 340-25-465 (6) Creates limited definition of "asbestos containing material" regulated under this section to include nonfriable materials that are broken, crumbled, pulverized or reduced to dust by work practices.

COMMENTS:

The proposed limited definition is not consistent with the existing definition of asbestos-containing materials, and it creates an inference that nonfriable asbestos-containing materials are not covered by other portions of the regulation. The intent of the proposed revision can be accomplished by relying on the general definition of asbestos-containing materials and the limited exception for nonfriable materials.

RESPONSE:

The Department agrees that the suggested amendments will achieve its intended purpose more effectively. The words "friable asbestos materials" have been replaced with the previously defined "asbestos-containing materials". The limited definition of "asbestos-containing materials" has been deleted.

OAR 340-25-465 (6)(i) Final air clearance sampling requirements.

Because of several unresolved technical issues, and significant alterations from the first draft, the Department plans to hold an additional hearing on air clearance sampling requirements in February 1990, and proceed to adoption as soon as technical issues concerning this proposed amendment have been resolved.

OAR 340-25-465 (6)(g) Incorporates reference to OROSHA standard.

COMMENTS:

OROSHA suggested a revision to this section to explain that small-scale licensed contractors or small-scale certified workers would need to comply with all of OROSHA's construction asbestos rules, unless they can exempt themselves from certain sections of the rule by performing a small-scale, short-duration renovating or maintenance activity.

RESPONSE:

This suggestion would increase compatibility between DEQ and OROSHA regulations. The Department has included the suggested language.

OAR 340-25-465 (13)(b) Provides for interim storage of asbestos-containing waste material.

COMMENTS:

Commenters supported the inclusion of restrictions on interim storage of asbestos-containing waste material. The statement placing sole responsibility for interim storage upon the person(s) responsible for the abatement project was criticized as being vague. It deviates from language at the beginning of this section which places compliance responsibility upon source owners or operators.

RESPONSE:

The Department agrees that the reference to persons responsible for an abatement project is unclear. This sentence has been amended to place responsibility upon contractors, owners or operators performing an asbestos abatement project. This amendment uses three previously defined terms to specify responsible parties.

OAR 340-33-020 (18) Definition of small-scale, short duration renovating and maintenance activity.

COMMENTS:

Oregon OSHA commented that this definition should include a worker exposure standard to be consistent with OROSHA regulations.

RESPONSE:

For consistency, the Department has added the worker exposure standard of 0.1 fibers per cubic centimeter of air calculated as an eight hour time weighted average.

OAR 340-33-050 (3)(b) Allows applicant for full-scale abatement supervisor to substitute six months of general construction, environmental or

maintenance supervisory experience for three months of full-scale abatement experience.

COMMENTS:

An industrial facility representative commented that experience as a "general company supervisor" should also be allowed to substitute for abatement experience.

The Department received a comment that this proposal would be an inappropriate relaxation of certification requirements.

RESPONSE:

The Department believes that construction, environmental or maintenance supervisory experience could provide an individual with skills to plan, organize, and direct personnel in an abatement project. Under this rule revision, the Department retains discretion to determine whether those skills have been demonstrated. Experience as a general company supervisor may not provide skills transferable to the asbestos abatement setting.

ASB\AH341

NEIL GOLDSCHMIDT
GOVERNOR

Environmental Quality Commission

811 SW SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

REQUEST FOR EQC ACTION

Meeting Date: January 19, 1990
Agenda Item: I
Division: Air Quality
Section: Program Operations

SUBJECT:

Rule Adoption:

Kraft Mill Regulations: Modifications to Correct Deficiencies, Add Opacity Standards, and Clarify Monitoring Requirements.

Neutral Sulfite Semi-Chemical (NSSC) Pulp Mills: Addition of Regulations Specific to this Source Class.

PURPOSE:

Revisions of the Kraft Pulp Mill Regulations are required to comply with Federal Clean Air Act Section 110 and Section 111(d) for short term emission standards, control of total Reduced Sulfur (TRS) compounds, and correction of existing discrepancies. More stringent regulations are also proposed to limit opacity.

Neutral Sulfite Semi-Chemical (NSSC) Pulp Mill Regulations are required to adequately address emissions and unique operating conditions encountered with this source class.

ACTION REQUESTED:

___ Work Session Discussion
___ General Program Background
___ Potential Strategy, Policy, or Rules
___ Agenda Item ___ for Current Meeting
___ Other: (specify)

___ Authorize Rulemaking Hearing
_X_ Adopt Rules
Proposed Rules — Attachment A
Rulemaking Statements — Attachment B
Fiscal and Economic Impact Statement — Attachment B
Public Notice — Attachment B
___ Issue a Contested Case Order
___ Approve a Stipulated Order
___ Enter an Order
Proposed Order — Attachment ___

___ Approve Department Recommendation

___ Variance Request	Attachment ___
___ Exception to Rule	Attachment ___
___ Informational Report	Attachment ___
___ Other: (specify)	Attachment ___

DESCRIPTION OF REQUESTED ACTION:

Adoption of the proposed Kraft Pulp Mill Regulations would:

1. Revise the existing particulate and TRS standards from monthly averages to daily averages to conform with the short term daily averaging period for the particulate ambient air quality standard in accordance with Environmental Protection Agency (EPA) requirements.

2. Revise the existing standards based on monthly averages to reflect daily averaging periods. EPA guidelines specify 12-hr averaging periods for TRS. However, a 24-hour averaging period is acceptable provided that the Department of Environmental Quality (DEQ) shows equivalency or provides justification based on information submitted by industry. The Department's justification will be based on equivalency, for the recovery furnace emission, and control costs for other sources.

3. Revise the existing sulfur dioxide (SO_2) standard from a monthly average to a 3-hour average to conform with the short term ambient air quality standard for SO_2 in accordance with EPA requirements.

4. Implement an opacity standard for recovery furnace exhaust stacks. Opacity is the degree to which emissions reduce the transmission of light and obscure the view of an object in the background of the exhaust stack. It can be measured in the exhaust stack by a transmissometer or visually at or near the stack exit. Pulp mills are the only industrial sources in Oregon not currently subject to opacity limitations. The proposed standard is 35 percent not to be exceeded more than 30 minutes in any consecutive 180 minute period or 60 minutes in any consecutive 24 hour period.

5. Require recovery furnaces to meet a more stringent particulate standard, equivalent to the Federal New Source Performance Standard (NSPS), if the source replaces or significantly upgrades the control equipment.

6. Add a TRS standard specifically for smelt dissolving tank vents in lieu of inclusion of smelt dissolving tank TRS emissions with TRS from "other sources". This change conforms to EPA guidelines.

7. Add opacity standard of 20 percent for lime kilns and smelt dissolving tanks.

8. Clarify monitoring requirements and provide for oxygen corrections when oxygen levels exceed specified levels. This change will improve the Department's ability to evaluate compliance and will meet EPA requirements.

Adoption of the proposed Neutral Sulfite Semi-Chemical Pulp Mill regulations would:

1. Provide specific regulations tailored to control the emissions from this particular source class. The sulfite pulp mill regulations which have been previously applied are not adequate for the neutral sulfite semi-chemical pulp process.

2. Add 24-hour emission standards for particulate and TRS and 3-hour emission standards for SO2.

3. Add monitoring and reporting requirements.

4. Add opacity standards for spent liquor incinerators, acid absorption towers, and other NSSC sources.

AUTHORITY/NEED FOR ACTION:

___	Required by Statute: _____ Enactment Date: _____	Attachment ___
_X_	Statutory Authority: ORS 468.020/468.295(3)	Attachment B
___	Pursuant to Rule: _____	Attachment ___
___	Pursuant to Federal Law/Rule: _____	Attachment ___
___	Other:	Attachment ___
_X_	Time Constraints:	

The State EPA/DEQ Agreement (SEA) requires the Department of Environmental Quality to propose rule adoption by the end of 1989. Proposed rule adoption was postponed until January 1990 to accommodate a last minute request from industry which has resulted in an opacity proposal which is more protective of the ambient standard than the previous proposal, yet is acceptable to the industry.

DEVELOPMENTAL BACKGROUND:

___	Advisory Committee Report/Recommendation	Attachment ___
_X_	Hearing Officer's Report/Recommendations	Attachment _C_
___	Response to testimony/Comments	Attachment ___
_X_	Prior EQC Agenda Items: Request for Hearing Authorization	Attachment _B_
_X_	Other Related Reports/Rules/Statutes Effect of Proposed Rules on Kraft Mills	Attachment _D_
___	Supplemental Background Information	Attachment ___

REGULATED/AFFECTED COMMUNITY CONSTRAINTS/CONSIDERATIONS:

EPA, industry representatives, and DEQ met and discussed each party's concerns after the public hearing. Except as discussed below, the concerns have been addressed by nonsubstantive wording changes; revisions to conform to minimum federal requirements, with some dissent from the industry; or revisions which address industry concerns without relaxing emission limitations.

The effect of the proposed rule changes on existing mills is highlighted in Attachment D.

The Kraft pulp mill industry was opposed to two primary aspects of the proposed rules. They opposed the use of continuous emission monitors as an enforcement tool and opacity limitations for recovery furnaces. The greatest opposition was the use of continuous opacity data obtained from transmissometers. This opposition was based on the certainty that there would be recovery furnace opacity excursions for various reasons resulting in exceedances of the standard. However, other states with Kraft mill recovery furnaces have opacity standards which range from 20-45 percent. The Federal New Source Performance Standard for recovery furnaces is 35 percent. Therefore, an opacity limitation of 35 percent was considered to be appropriate. Industry was opposed to a 35 percent opacity limitation because of periodic excursions above 35 percent inherent in the older mills. Although their excursions were of limited duration, industry believed it would present a problem in maintaining continual compliance. However, a consensus was reached which included provisions to allow excursions above 35 percent for no more than 30 minutes in any 180 minute period or 60 minutes in any 24 hour period. This provided some relief to industry on an hourly basis but is more stringent on a daily basis. The proposed standard also provided industry the provisions necessary to maintain

continual compliance without causing an exceedance of the 24 hour ambient air particulate standard.

Transmissometers (continuous opacity monitors) will not be required where wet pollution control devices are currently in use, as the wet plumes interfere with the readings. An opacity limitation of 20 percent was also established for lime kilns and smelt dissolving tanks. This limitation is based on visual observations because of stack moisture content.

The proposed rules reference a Department Continuous Emission Monitoring manual. As this report is being written, it is expected that some revisions may be needed prior to finalization. Since the manual can be revised by the Department either before or after rule adoption, the Department and industry representatives have agreed that the current manual is adequate to support the adoption.

There is little impact on the Neutral Sulfite Semi-Chemical (NSSC) Pulp Mill industry and only one comment was received. The affected mill questioned the need for a 35 percent limitation for spent liquor incinerators and suggested 45 percent opacity, although they feel that they can meet 35 percent.

PROGRAM CONSIDERATIONS:

Departmental impacts are as follows:

1. Improved ability to ascertain compliance status.

2. Minimal staff impact (some need for increased auditing of continuous emission monitors and source tests, corrective actions may also be required if the mills do not meet the new standards).

3. Adoption of the proposed rule changes will require some staff time to modify existing Air Contaminant Discharge Permits to include the revisions.

ALTERNATIVES CONSIDERED BY THE DEPARTMENT:

During development of the proposed rules, the following options were considered:

1. Recovery Furnace Opacity:

   a. As proposed: The 35 percent standard with provisions for excursions above 35 percent within 180 minute and 24 hour periods. This standard will

require more staff time to visually evaluate opacity than a 60 minute standard, but compliance can also be verified at most mills by continuous emissions monitoring records.

b. Initially proposed: The one hour opacity standard would allow visual observations to be made which would not be time consuming with an averaging period longer than one hour. Visual evaluation is necessary when continuous opacity monitors cannot be used because of excessive stack moisture. This included a provision to increase the opacity limit for emissions from stacks with a diameter of greater than ten feet.

c. Daily average opacity: This option would preclude visual observations and cause difficulty in correlating particulate emissions tests and opacity. However, it would be easier for mills to comply with a daily average.

d. Limit compliance monitoring for opacity to visual observations but use continuous opacity monitors as an indicator of particulate emission controls performance. This would be inconsistent with attempts to increase the Department's ability to monitor compliance and to utilize staff resources most effectively.

e. Status quo: Opacity as an indicator of particulate control only (could be based on correlation with mass emissions). This, however, would conflict with EPA requirements for day-by-day compliance determination.

2. Place the entire set of amended proposed rules out on public notice, as requested by industry. The Department sees no advantage to this. No general public comments were received on the rules, and the affected industry has been involved throughout the process. Industry concerns have been considered throughout the development of the final recommended rule making. Some of the changes required to obtain EPA approval increase the impacts on mills, but to a minor extent compared to the overall cost of pollution controls.

DEPARTMENT RECOMMENDATION FOR ACTION, WITH RATIONALE:

Adopt the revisions to be effective upon filing, to both the Kraft Pulp Mill regulations and the Neutral Sulfite Semi-Chemical (NSSC) Pulp Mill regulations. We believe these

revisions to be approvable by EPA, uses Department resources wisely, and satisfies environmental criteria.

CONSISTENCY WITH STRATEGIC PLAN, AGENCY POLICY, LEGISLATIVE POLICY:

This rule adoption is expected to be consistent with the strategic plan, agency policy, and legislative policy.

ISSUES FOR COMMISSION TO RESOLVE:

1. Should the existing Kraft Mill Rules be amended to correct deficiencies identified by EPA?

2. Should limits on opacity beyond those required to demonstrate particulate emissions control for Kraft recovery furnaces and additional compliance determination methods be adopted?

3. Should the Environmental Quality Commission (Commission, EQC) adopt rules specific to the Neutral Sulfite mills to more effectively regulate emissions from the Neutral Sulfite Industry?

INTENDED FOLLOWUP ACTIONS:

1. Submit an approved version of the Kraft Pulp Mill regulations to the Secretary of State for codification.

2. Modify Air Contaminant Discharge Permits to conform to the new requirements.

Approved:

Section: Wayne L. Sims

Division: Nick Nikkila

Director: Tom Bispham for Fred Hansen

Report Prepared By: William J. Fuller

Phone: 229-5749

Date Prepared: January 3, 1990

WJF:a
PO\AR1745 (1/90)

Kraft Pulp Mills

[**ED. NOTE:** Administrative Order DEQ 50 repealed previous rules 340-25-155 through 340-25-195 (consisting of SA 38, filed 4-4-69).]

DEFINITIONS

340-25-150 As used in these regulations, unless otherwise required by context:

(1) "Continual Monitoring" means sampling and analysis, in a [~~continuous or~~] timed sequence, using techniques which will adequately reflect actual emission levels or concentrations on an [~~continuous~~] ongoing basis.

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

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

(4) "BLS" means Black Liquor Solids, dry weight.

(5) "Kraft Mill" or "Mill" means any industrial operation which uses for a cooking liquor an alkaline sulfide solution containing sodium hydroxide and sodium sulfide in its pulping process.

(6) "Lime Kiln" means any production device in which calcium carbonate is thermally converted to calcium oxide.

(7) "Non-Condensibles" means gases and vapors, contaminated with TRS compounds [~~gases~~], from the digestion and multiple-effect evaporation processes of a mill [~~that are not condensed with the equipment used in said processes~~].

(8) "Other Sources" means sources of TRS emissions in a kraft mill other than recovery furnaces and lime kilns, including but not limited to:

(a) Vents from knotters, brown stock washing systems, evaporators, blow tanks, [~~smelt tanks,~~] blow heat accumulators, black liquor storage tanks, black liquor oxidation system, pre-steaming vessels, tall oil recovery operations; and

[~~(b) Any operation connected with the treatment of condensate liquids within the mill; and~~]

[~~(c)~~](b) Any vent which is shown to [~~be a significant contributor of odorous gases~~] contribute to an identified nuisance condition.

(9) "Particulate Matter" means all solid or liquid material, other than uncombined water, emitted to the ambient air [~~which may be removed on a glass fiber filter maintained during sampling at stack temperature or above the water vapor dew point of the stack gas, whichever is greater, but not more than 202° C. (400° F.). The glass fiber filter to be used shall be MSA 1106BH or equivalent.~~] as measured by EPA Method 5 or an equivalent test method in accordance with the Department Source Test Manual. Particulate matter emission determinations by EPA Method 5 shall use water as the cleanup solvent instead of acetone, and consist of the average of three (3) separate consecutive runs having a minimum sampling time of 60 minutes each, a maximum sampling time of eight (8) hours each, and a minimum sampling volume of 31.8 dscf each.

(10) "Parts Per Million (ppm)" means parts of a contaminant per million parts of gas by volume on a dry-gas basis (1 ppm equals 0.0001% by volume).

(11) "Production" means the daily [~~average~~] amount of air-dried unbleached pulp, or equivalent, produced during the 24-hour period each calendar day, [~~as determined by dividing the monthly total production by the number of days specific production equipment operates,~~] or Department approved equivalent period, and expressed in air-dried metric tons (admt) per day. The corresponding English unit is air-dried tons (adt) per day.

(12) "Recovery Furnace" means the combustion device in which [~~pulping chemicals are converted to a molten smelt and~~] dissolved wood solids are incinerated and pulping chemicals recovered from the molten smelt. For these regulations, and where present, this term shall include the direct contact evaporator.

(13) "Significant Upgrading of Pollution Control Equipment" means a modification or a rebuild of an existing pollution control device for which a capital expenditure of 50 percent or more of the replacement cost of the existing device is required, other than ongoing routine maintenance.

[~~(13)~~] (14) "Standard Dry Cubic Meter" means the amount of gas that would occupy a volume of one cubic meter, if the gas were free of uncombined water, at a temperature of 20° C. (68° F.) and a pressure of 760 mm of Mercury (29.92 inches of Mercury). The corresponding English unit is standard dry cubic foot. When applied to recovery furnace gases "standard dry cubic meter" requires adjustment of the gas volume to that which would result in a concentration of 8% oxygen if the oxygen concentration exceeds 8%. When applied to lime kiln gases "standard dry cubic meter" requires adjustment of the gas volume to that which would result in a concentration of 10 [~~percent~~]% oxygen if the oxygen concentration exceeds 10%. The mill shall demonstrate that oxygen concentrations are below noted values or furnish oxygen levels and corrected pollutant data.

[~~(14)~~] (15) "Total Reduced Sulfur (TRS)" means the sum of the sulfur compounds [~~in~~] hydrogen sulfide, methyl mercaptan[~~s~~], dimethyl sulfide, and dimethyl disulfide, and any other organic sulfides present[~~ in an oxidation state of minus two~~] expressed as hydrogen sulfide (H_2S).

(16) "Continuous monitoring" means instrumental sampling of a gas stream on a continuous basis, excluding periods of calibration.

(17) "Daily Arithmetic Average" means the average concentration over the twenty-four hour period in a calendar day, or Department approved equivalent period, as determined by continuous monitoring equipment or reference method testing. Determinations based on EPA reference methods or equivalent methods in accordance with the Department Source Test Manual consist of three (3) separate consecutive runs having a minimum sampling time of sixty (60) minutes each and a maximum sampling time of eight (8) hours each. The three values for concentration (ppm or grains/dscf) are averaged and expressed as the daily arithmetic average which is used to determine compliance with process weight limitations, grain loading or volumetric concentration limitations and to determine daily emission rate.

(18) "Smelt dissolving tank vent" means the vent serving the vessel used to dissolve the molten smelt produced by the recovery furnace.

STATEMENT OF POLICY

340-25-155 Recent technological developments have enhanced the degree of malodorous emission control possible for the kraft pulping process. While recognizing that complete malodorous and particulate emission control is not presently possible, consistent with the meteorological and geographical conditions in Oregon, it is hereby declared to be the policy of the Department to:

(1) Require, in accordance with a specific program and time table for all sources at each operating mill, the highest and best practicable treatment and control of atmospheric emissions from kraft mills through the utilization of technically feasible equipment, devices, and procedures. Consideration will be given to the economic life of equipment, which when installed, complied with the highest and best practicable treatment requirement;

(2) Require degrees and methods of treatment for major and minor emission points that will minimize emissions of odorous gases and eliminate ambient odor nuisances;

(3) Require effective monitoring and reporting of emissions and reporting of other data pertinent to air quality or emissions. The Department will use these data in conjunction with ambient air data and observation of conditions in the surrounding area to develop and revise emission and ambient air standards, and to determine compliance therewith;

(4) Encourage and assist the kraft pulping industry to conduct a research and technological development program designed to progressively reduce kraft mill emissions, in accordance with a definite program, including specified objectives and time schedules.

HIGHEST AND BEST PRACTICABLE TREATMENT AND CONTROL REQUIRED

340-25-160 (1) Notwithstanding the specific emission limits set forth in rule 340-25-165, in order to maintain the lowest possible emission of air contaminants, the highest and best practicable treatment and control currently available shall in every case be provided, with consideration being given to the economic life of the existing equipment.

(2) All installed process and control equipment shall be operated at full effectiveness and efficiency at all times, such that emissions of contaminants are kept at lowest practicable levels.

EMISSION LIMITATIONS

340-25-165 (1) Emission of Total Reduced Sulfur (TRS):

(a) Recovery Furnaces:

(A) The emissions of TRS from each recovery furnace placed in operation before January 1, 1969, shall not exceed 10 ppm [as a daily arithmetic average] and 0.15 Kg [-S]/metric ton (0.30 lb[-S]/ton) of production as [a monthly] daily arithmetic averages;

(B) TRS emissions from each [new] recovery furnace placed in operation after January 1, 1969, and before September 25, 1976, or any recovery furnace modified significantly after January 1, 1969, and before September 25, 1976, to expand production shall be controlled such that the emissions of TRS shall not exceed 5 ppm [as a daily arithmetic average] and [0.08] 0.075 Kg[-S]/metric ton (0.150 lb[-S]/ton) of production as [a monthly] daily arithmetic averages.

(b) Lime kilns. Lime Kilns shall be operated and controlled such that emissions of TRS shall not exceed[:]

[(A) 40 ppm and 0.1 Kg S/metric ton (0.2 lb S/ton) of production as monthly arithmetic averages;

(B) As soon as practicable, but not later than July 1, 1978, 20 ppm and 0.05 Kg S/metric ton (0.1 lb S/ton) of production as monthly arithmetic averages;

(C) As soon as practicable, but not later than July 1, 1983,]
20 ppm as a daily arithmetic average and 0.05 Kg[-S]/metric ton (0.10 lb[S]/ton) of production as a [monthly] daily arithmetic average[;]. This paragraph applies to those sources where construction was initiated prior to September 25, 1976.

[(D) 20 ppm as a daily arithmetic average and 0.05 Kg S/metric ton (0.1 lb S/ton) of production as a monthly arithmetic averages from each new lime kiln placed in operation or any lime kiln modified significantly to expand production.]

(c) Smelt Dissolving Tanks.

(A) As soon as practicable, but not later than July 1, 1990, TRS emissions from each smelt dissolving tank shall not exceed 0.0165 gram/Kg BLS (0.033 lb/ton BLS) as a daily arithmetic average, except as provided in paragraph (B) below.

(B) Where an explosion hazard, which was in existence on March 26, 1989, exists and control is not practical or economically not feasible and adequate documentation of these conditions is provided to the Department, the affected smelt dissolving tank shall not exceed 0.033 gram/Kg BLS (0.066 lb/ton BLS) as a daily average.

[(c)] (d) Non-Condensibles [:] . [(A)] Non-condensibles from digesters, [and] multiple-effect evaporators] and contaminated condensate stripping shall be continuously treated to destroy TRS gases y thermal incineration in a lime kiln or incineration device capable of subjecting the non-condensibles to a temperature of not less than 650° C. (1200° F.) for not less than 0.3 second[s;]. An alternate device meeting the above requirements shall be available in the event adequate incineration in the primary device cannot be accomplished. Venting of TRS gases during changeover shall be minimized but in no case shall the time exceed one hour.

[(B) When steam or air stripping of condensates or other contaminated streams is practiced, the stripped gases shall be subjected to treatment in the non-condensible system or otherwise given equivalent treatment.]

[(d)] (e) Other Sources:

(A) [As soon as practicable, but not later than July 1, 1978, t]The total emission of TRS from other sources including, but not limited to, knotters and brown stock washer vents, brown stock washer filtrate tank vents, and black liquor oxidation vent [, and contaminated condensate

stripping] shall not exceed [0.1] 0.078 Kg[-S]/metric ton ([0.2] 0.156 lb[S]/ton) of production[;] as a daily arithmetic average.

(B) Miscellaneous Sources and Practices. [When] If it is determined that sewers, drains, and anaerobic lagoons significantly contribute to an odor problem, a program for control shall be required.

[(e) Compliance Programs.--Each mill with any sources not in compliance with the 1978 emission limits shall submit a program and schedule for achieving compliance to the Department for approval by no later than August 1, 1977.--As soon as practicable, but not later than January 1, 1980, each mill with lime kiln(s) not in compliance with the 1983 limits shall submit a program and schedule for achieving compliance.]

(2) Particulate Matter:

(a) Recovery Furnaces. The emissions of particulate matter from each recovery furnace stack shall not exceed: [a monthly arithmetic average of:]

(A) 2.0 kilograms per metric ton ([four (4)] 4.0 pounds per ton) of production as a daily arithmetic average; [and]

(B) 0.30 gram[s] per dry standard cubic meter (0.13 grain[s] per dry standard cubic foot) as a daily arithmetic average in accordance with 340-25-150(17) and the Department Source Test Manual; and

(C) 35 percent opacity for a period or periods aggregating more than thirty (30) minutes in any one hundred eighty (180) consecutive minutes or more than sixty (60) minutes in any twenty four (24) consecutive hours (excluding periods when the facility is not operating).

(b) Lime Kilns. The emissions of particulate matter from each lime kiln stack shall not exceed [a monthly arithmetic average of]:

(A) 0.50 kilogram per metric ton ([one (1)] 1.00 pound per ton) of production as a daily arithmetic average; [and]

(B) 0.46 gram[s] per dry standard cubic meter (0.20 grain[s] per dry standard cubic foot)[.] as a daily arithmetic average in accordance with 340-25-150(17) and the Department Source Test Manual; and

(C) The visible emission limitations in section 340-25-165(4).

(c) Smelt Dissolving Tanks. The emission of particulate matter from each smelt dissolving tank stack shall not exceed: [a monthly arithmetic average of 0.25 Kg/metric ton (one-half (1/2) pound per ton of production).]

(A) A daily arithmetic average of 0.25 kilogram per metric ton (0.50 pound per ton) of production; and

(B) The visible emission limitations in section 340-25-165(4).

(d) Replacement or Significant Upgrading of existing particulate pollution control equipment after July 1, 1988 shall result in more restrictive standards as follows:

(A) Recovery Furnaces.

(i) The emission of particulate matter from each affected recovery furnace stack shall not exceed 1.00 kilogram per metric ton (2.00 pounds per ton) of production as a daily arithmetic average; and

(ii) 0.10 gram per dry standard cubic meter (0.044 grain per dry standard cubic foot) as a daily arithmetic average in accordance with 340-25-150(17) and the Department Source Test Manual.

(B) Lime Kilns.

(i) The emission of particulate matter from each affected lime kiln stack shall not exceed 0.25 kilogram per metric ton (0.50 pound per ton) of production as a daily arithmetic average; and

(ii) 0.15 gram per dry standard cubic meter (0.067 grain per dry standard cubic foot) as a daily arithmetic average in accordance with 340-25-150(17) and the Department Source Test Manual when burning gaseous fossil fuel; or

(iii) 0.50 kilogram per metric ton (1.00 pound per ton) of production as a daily arithmetic average; and

(iv) 0.30 gram per dry standard cubic meter (0.13 grain per dry standard cubic foot) as a daily arithmetic average in accordance with 340-25-150(17) and the Department Source Test Manual when burning liquid fossil fuel.

(C) Smelt Dissolving Tanks. The emissions of particulate matter from each smelt dissolving tank vent stack shall not exceed 0.15 kilogram per metric ton (0.30 pound per ton) of production as a daily arithmetic average.

(3) Sulfur Dioxide (SO_2). Emissions of sulfur dioxide from each recovery furnace stack shall not exceed a ~~[daily]~~ 3-hour arithmetic average of 300 ppm on a dry-gas basis except ~~[during]~~ when burning fuel oil. The sulfur content of fuel oil used shall not exceed the sulfur content of residual and distillate oil established in 340-22-010(2) and 340-22-015, respectively. ~~[start-up-and-shut-down-periods.]~~

(4) ~~[New-Facility-Compliance.--As-soon-as-practicable,-but-not-later than-within-180-days-of-the-start-up-of-a-new-kraft-mill-or-of-any-new-or modified-facility-having-emissions-limited-by-these-regulations,-that facility-shall-be-operated,-controlled,-or-limited-to-comply-with-the applicable-provisions-of-these-regulations-and-the-mill-shall-conduct-source sampling-or-monitoring-as-appropriate-to-demonstrate-compliance.]~~ All kraft mill sources with the exception of recovery furnaces shall not exceed an opacity equal to or greater than 20 percent for a period exceeding three (3) minutes in any one (1) hour.

(5) New Source Performance Standards. New or modified sources that commenced construction after September 24, 1976, are subject to each provision of this section and the New Source Performance Standards, OAR section 340-25-630, whichever is more stringent.

(6) Each mill with any recovery furnace, lime kiln, or smelt dissolving tank not in compliance by January 1, 1990 with the emission limitations of this section shall submit by July 1, 1990 a program and schedule for achieving compliance as soon as practicable but no later than July 1, 1991.

MORE RESTRICTIVE EMISSION LIMITS

340-25-170 The Department may establish more restrictive emission limits than the numerical emission standards contained in rule 340-25-165 and maximum allowable daily mill site emission limits in kilograms per day for an individual mill upon a finding by the Department ~~[Commission]~~ that:

(1) the individual mill is located or is proposed to be located in a special problem area or an area where ambient air standards are exceeded or are projected to be exceeded[.] or where the emissions will have a significant air quality impact in an area where the standards are exceeded; or

(2) An odor or nuisance problem has been documented at any mill, in which case the TRS emission limits may be reduced below the regulatory limits; or

(3) Other rules which are more stringent apply.

PLANS AND SPECIFICATIONS

340-25-175 Prior to construction of new kraft mills or modification of facilities affecting emissions at existing kraft mills, complete and detailed engineering plans and specifications for air pollution control devices and facilities and such other data as may be required to evaluate projected emissions and potential effects on air quality shall be submitted to and approved by the Department. All construction shall be in accordance with plans as approved in writing by the Department.

MONITORING

340-25-180 (1) General:

(a) The details of the monitoring program for each mill shall be submitted to and approved by the Department. This submittal shall include diagrams and descriptions of all monitoring systems, monitoring frequencies, calibration schedules, descriptions of all sampling sites, data reporting formats and duration of maintenance of all data and reports. Any changes that are subsequently made in the approved monitoring program shall be submitted in writing to the Department for review and approved in writing prior to change;

(b) All records associated with the approved monitoring program including, but not limited to, original data sheets, charts, calculations, calibration data, production records and final reports shall be maintained for a continuous period of at least ~~[365 days]~~ 2 calendar years and shall be furnished to the Department upon request.

(c) All source test data; TRS and SO_2 concentrations (ppm), corrected for oxygen content, if required, that are determined by continuous monitoring equipment; and opacity as determined by continuous monitoring equipment or EPA Method 9 will be used to determine compliance with applicable emission standards.

All continuous monitoring data, excluding the above, will be used to evaluate performance of emitting processes and associated control systems, and for the qualitative determination of plant site emissions.

(2) Total Reduced Sulfur (TRS). Each mill shall ~~[continually]~~ continuously monitor TRS in accordance with the following:

(a) The monitoring equipment shall determine compliance with the emission limits and reporting requirements established by these regulations,

and shall [~~continually~~] continuously sample and record concentrations of TRS[~~;~~]:

(b) The sources monitored shall include, but are not limited to[~~;-the~~] individual recovery furnaces, [~~stacks-and-the~~] and lime kilns, [~~stacks;~~]- All sources shall be monitored downstream of their respective control equipment, in either the ductwork or the stack, in accordance with the Department Continuous Emissions Monitoring (CEMS) Manual.

(c) At least [~~one~~] once per year, vents from other sources as required in subsection 340-25-165(1)[~~(d)~~](e), Other Sources, shall be sampled to demonstrate the representativeness of the emissions of TRS using EPA Method 16, 16A, 16B or continuous emission monitors. EPA methods shall consist of three (3) separate consecutive runs of one hour each in accordance with the Department Source Test Manual. Continuous emissions monitors shall be operated for three consecutive hours in accordance with the Department Continuous Emissions Monitoring Manual. [~~and-the~~] All results shall be reported to the Department.

(d) Smelt dissolving tank vents shall be sampled for TRS quarterly except that testing may be semi-annual when the preceding six source tests were less than 0.0124 gram/Kg Bls (0.025 lb/ton Bls) using EPA Method 16, 16A or 16B. EPA methods shall consist of three (3) separate consecutive runs of one hour each in accordance with the Department Source Test Manual.

(3)[~~(a)~~] Particulate Matter

(a) [~~Particulate-Matter:-~~]Each mill shall sample the recovery furnace(s), lime kiln(s) and smelt dissolving tank[~~(s)~~] vent(s) for particulate emissions [~~with:~~] in accordance with the Department Source Test Manual.

[~~(A) The-sampling-method;-and~~

~~(B)-The-analytical-method-approved-in-writing-by-the-Department;~~]

(b) Each mill shall provide [~~continual~~] continuous monitoring of opacity of emissions discharged to the atmosphere from [~~the~~] each recovery furnace stack [~~in a manner~~] in accordance with the Department Continuous Emissions Monitoring Manual; or

(c) Where monitoring of opacity from each recovery furnace is not feasible, provide continuous monitoring of particulate matter from each recovery furnace using sodium ion probes in accordance with the Department Continuous Emissions Monitoring Manual.

(d) Recovery furnace particulate source tests shall be performed quarterly except that testing may be semi-annual when the preceding six (6) source tests were less than 0.225 gram/dscm (0.097 grain/dscf) for furnaces subject to 340-25-165(2)(a) or 0.075 gram/dscm (0.033 grain/dscf) for furnaces subject to OAR 340-25-165(2)(d)(A).

(e) Lime kiln source tests shall be performed semi-annually.

(f) Smelt dissolving tank vent source tests shall be performed quarterly except that testing may be semi-annual when the preceding six (6) source tests were less than 0.187 Kilogram per metric ton (0.375 pound per ton) of production.

(4) Sulfur Dioxide (SO_2). Representative sulfur dioxide emissions from each recovery furnace[~~(s)~~] shall be determined at least once each month by the average of three (3) one hour source tests in accordance with the Department Source Test Manual or from continuous emission monitors. If continuous emission monitors are used, the monitors shall be operated for three consecutive hours in accordance with the Department Continuous Emissions Monitoring Manual.

(5) Combined Monitoring. The Department may allow the monitoring for opacity of a combination of more than one emission stream if each individual emission stream has been demonstrated with the exception of

opacity to be in compliance with all the emission limits of rule 340-25-165. The Department may establish more stringent emission limits for the combined emission stream [shall be established by the Department].

REPORTING

340-25-185 Unless otherwise authorized or required by permit, data shall be reported by each mill for each calendar month by the fifteenth day of the subsequent calendar month as follows:

(1) Applicable daily average emissions of TRS gases expressed in parts per million of H_2S on a dry gas basis with oxygen concentrations, if oxygen corrections are required, for each source included in the approved monitoring program;

(2) [Monthly] Daily average emissions of TRS gases in [kilograms] pounds of total reduced sulfur per equivalent [metric] ton of pulp processed, expressed as H_2S, for each source included in the approved monitoring program;

(3) [Monthly] 3-Hour average emission of SO_2 based on all samples collected in one sampling period from the recovery furnace(s), expressed as ppm, dry basis:

(4) [Monthly average emission of particulates in grams per standard cubic meter; and kilograms per metric ton of pulp produced based upon the sampling conducted in accordance with the approved monitoring program;] All daily average opacities for each recovery furnace stack where transmissometers are utilized.

(5) [Average monthly equivalent kraft pulp production;]All 6-minute average opacities from each recovery furnace stack that exceeds 35 percent.

(6) [Average daily and the value of the maximum hourly opacity; and/or the average daily and the value of the maximum hourly particulate emissions

~~in grams per standard cubic meter for each recovery furnace stack on a daily basis;~~ Daily average kilograms of particulate per equivalent metric ton (pounds of particulate per equivalent ton) of pulp produced for each recovery furnace stack. Where transmissometers are not feasible, the mass emission rate shall be determined by alternative sampling conducted in accordance with 340-25-180(3)(c).

(7) The results of each recovery furnace particulate source test in grams per standard cubic meter (grains per dry standard cubic foot) and for the same source test period the ~~[continual]~~ hourly average opacity ~~[or]~~ , where transmissometers are used, and the particulate monitoring record obtained in accordance with the approved ~~[continual]~~ or the alternate monitoring program ~~[required]~~ noted in section 340-25-180(3)(c).

(8) Unless otherwise approved in writing, ~~[the cumulative number of hourly averages each day that the recovery furnace particulate and TRS, and lime kiln TRS emissions exceed the numerical regulatory or permit limits;]~~ all periods of non-condensible gas bypass shall be reported.

(9) Upset conditions shall be reported in accordance with section 340-25-190(3);

(10) Each kraft mill shall furnish, upon request of the Department, such other pertinent data as the Department may require to evaluate the mill's emission control program.

(11) Monitoring data reported shall reflect actual observed levels corrected for oxygen, if required, and analyzer calibration.

(12) Oxygen concentrations used to correct pollutant data shall reflect oxygen concentrations at the point of measurement of pollutants.

(13) The Department shall be notified at least ten (10) days in advance of all scheduled reference method testing including all scheduled changes.

UPSET CONDITIONS

340-25-190 (1) Each mill shall [~~immediately~~] report to the Department abnormal mill operations including control and process equipment maintenance, or [~~breakdowns~~] unexpected upsets [~~which~~] that result in [~~violations~~] emissions in excess of the regulatory or air contaminant discharge permit limits within one hour, or when conditions prevent prompt notice, as soon as possible but no later than one hour after the start of the next working day. The mill shall also take immediate corrective action to reduce emission levels to regulatory or permit levels.

(2) [~~Significant~~] [~~u~~]Upsets shall be reported in writing with an accompanying report on measures taken or to be taken to correct the condition and prevent its reoccurrence within five (5) working days of each incident.

(3) Each mill shall report the cumulative duration in hours each month of the upsets reported in section (1) of this rule and classified as to:

(a) Recovery Furnace:

(A) TRS;

(B) Particulate.

(b) Lime Kiln:

(A) TRS;

(B) Particulate.

(c) Smelt Tank Particulate.

OTHER ESTABLISHED AIR QUALITY LIMITATIONS

340-25-195 [DEQ 50, f. 2-9-73, ef. 3-1-73;
Repealed by DEQ 137, f. & ef. 6-10-77]

PUBLIC HEARING

340-25-200 [DEQ 50, f. 2-9-73, ef. 3-1-73;
Repealed by DEQ 137, f. & ef. 6-10-77]

CHRONIC UPSET CONDITIONS

340-25-205 If the Department determines that an upset condition is chronic and correctable by installing new or modified process or control procedures or equipment, a program and schedule to effectively eliminate the deficiencies causing the upset conditions shall be submitted. Such reoccurring upset conditions causing emissions in excess of applicable limits [~~may be exempted from rules 340-21-065 and 340-21-070 through 340-21-075 and~~] may be subject to civil penalty or other appropriate action.

NEUTRAL SULFITE SEMI-CHEMICAL (NSSC) PULP MILLS

Definitions

340-25-220 As used in these regulations, unless otherwise required by context:

(1) "Continual Monitoring" means sampling and analysis, in a timed sequence, using techniques which will adequately reflect actual emission levels or concentrations on an ongoing basis.

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

(3) "Emission" means a release into the atmosphere of air containments.

(4) "BLS" means black liquor solids, dry weight.

(5) "Neutral Sulfite Semi-Chemical (NSSC) Pulp Mill" means any industrial operation which uses for cooking, a liquor prepared from a sodium carbonate solution and sulfur dioxide at a neutral PH, range 6-8.

(6) "Particulate Matter" means all solid or liquid material, other than uncombined water, emitted to the ambient air as measured by EPA Method 5 or an equivalent test method in accordance with the Department Source Test Manual. Particulate matter emission determinations by EPA Method 5 shall use water as the cleanup solvent instead of acetone, and consist of the average of three (3) separate consecutive runs having a minimum sampling time of 60 minutes each, a maximum sampling time of eight (8) hours each, and a minimum sampling volume of 31.8 dscf each.

(7) "Parts per Million (ppm)" means parts of a contaminant per million parts of gas by volume on a dry-gas basis (one ppm equals 0.0001% by volume).

(8) "Production" means the daily amount of virgin air-dried unbleached NSSC pulp, or equivalent, produced during the 24-hr period each calendar day, or Department approved equivalent period, expressed in air-dried metric

tons (ADMT) per day. The corresponding English unit is air-dried tons(ADT) per day.

(9) "Spent Liquor Incinerator" means the combustion device in which pulping chemicals are subjected to high temperature to evaporate the water, incinerate organics and reclaim the sodium sulfate (saltcake) and sodium carbonate.

(10) "Acid Absorption Tower" means the device where the sodium carbonate and sulfur dioxide react to form a sodium sulfite solution prior to use as the cooking liquor.

(11) "Standard Dry Cubic Meter" means the amount of gas that would occupy a volume of one cubic meter, if the gas were free of uncombined water, at a temperature of 20°C.(68°F.) and a pressure of 760 mm of mercury.

(12) "Total Reduced Sulfur (TRS)" means the sum of the sulfur compounds hydrogen sulfide, methyl mercaptan, dimethyl sulfide, and dimethyl disulfide, and any other organic sulfides present. These monitors shall be located downstream of the control device.

(13) "Continuous Monitoring" means instrumental sampling of a gas stream on a continuous basis, excluding periods of calibration.

(14) "Daily Arithmetic Average" means the average concentration over the twenty-four hour period in a calendar day or, Department approved equivalent period, as determined by continuous monitoring equipment or reference method testing. Determinations based on EPA reference methods or equivalent methods in accordance with the Department Source Test Manual consist of three (3) separate consecutive runs having a minimum sampling time of sixty (60) minutes each and a maximum sampling time of eight (8) hours each. The three values for concentration (ppm or grains/dscf) are averaged and expressed as the daily arithmetic average which is used to

determine compliance with process weight limitations, grain loading or volumetric concentration limitations and to determine daily emission rate.

Highest and Best Practicable Treatment and Control Required

340-25-222 (1) Notwithstanding the specific emission limits set forth in 340-25-224, in order to maintain the lowest possible emission of air contaminants, the highest and best practicable treatment and control currently available shall in every case by provided, with consideration being given to the economic life of the existing equipment.

(2) All installed process and control equipment shall be operated at full effectiveness and efficiency at all times, such that emissions of contaminants are kept at lowest practicable levels.

Emission Limitations

340-25-224 (1) Emission of Total Reduced Sulfur (TRS): Spent Liquor Incinerator. The emissions of TRS from any spent liquor incinerator stack shall not exceed 10 ppm and 0.07 gram/kg BLS (0.14 lb/ton BLS) as a daily arithmetic average in accordance with 340-25-220(14).

(2) Particulate Matter: Spent Liquor Incinerator. The emissions of particulate matter from any spent liquor incinerator stack shall not exceed:

(a) 3.6 grams/kg BLS (7.2 lbs/ton BLS) as a daily arithmetic average in accordance with 340-25-220(14) and the Department Source Test Manual; and

(b) Exhibit an opacity equal to or greater than 35 percent for a period exceeding 3 minutes in any one hour (excluding periods when the facility is not operating).

(3) Sulfur Dioxide (SO_2):

(a) Spent Liquor Incinerator. The emissions of sulfur dioxide from each spent liquor incinerator stack shall not exceed a 3-hr arithmetic average of 10 ppm on a dry-gas basis.

(b) Acid Absorption Tower: The emissions of sulfur dioxide from the acid absorption tower stack shall not exceed 20ppm as a 3-hr arithmetic average on a dry gas basis.

(4) All NSSC sources with the exception of spent liquor incinerators shall not exhibit an opacity equal to or greater than 20 percent for a period exceeding three (3) minutes in any one hour.

More Restrictive Emission Limits

340-25-226 The Department may establish more restrictive emission limits than the numerical emission standards contained in 340-25-224 and maximum allowable daily mill site emission limits in kilograms per day, for an individual mill, upon a finding by the Department that:

(1) The individual mill is located or is proposed to be located in a special problem area or an area where ambient air standards are exceeded or are projected to be exceeded; or

(2) When an odor or nuisance problem has been documented at any mill the TRS emission limits may be reduced below the regulatory limits.

Plans and Specifications

340-25-228 Prior to construction of new neutral sulfite semi-chemical (NSSC) pulp mills or modification of facilities affecting emissions at existing NSSC mills, complete and detailed engineering plans and specifications for air pollution control devices and facilities and such data as may be required to evaluate projected emissions and potential effects on air quality shall be submitted to and approved by the Department. All construction shall be in accordance with plans as approved in writing by the Department.

Monitoring

340-25-230 (1) General

(a) The details of the monitoring program for each mill shall be submitted to and approved by the Department. This submittal shall include diagrams and descriptions of all monitoring systems, monitoring frequencies, calibration schedules, descriptions of all sampling sites, data reporting formats and duration of maintenance of all data and reports. Any changes that are subsequently made in the approved monitoring program shall be submitted in writing to the Department for review and approved in writing prior to change.

(b) All records associated with the approved monitoring program including, but not limited to, original data sheets, charts, calculations, calibration data, production records and final reports shall be maintained for a period of at least two calendar years and shall be furnished to the Department upon request.

(2)(a) Total Reduced Sulfur (TRS). Each mill shall continuously monitor the spent liquor incinerator for TRS emissions using: continuous monitoring equipment, except where a vibration problem, which was in existence on March 26, 1989, exists and continuous monitoring equipment is not practical or economically feasible; in which case, upon documentation of the above condition, the spent liquor incinerator shall be sampled for TRS emissions using the reference method and the analytical method (EPA Method 16, 16A, or 16B) as outlined in the Department Source Test Manual.

(b) Spent liquor incinerator TRS source tests shall be performed quarterly except that testing may be semi-annual when the preceding six (6) source tests were less than 7.5 ppm.

(c) Flow rate measurements used to determine TRS mass emission rates shall be corrected for cyclonic flow, where applicable.

(3)(a) Particulate Matter. Each mill shall sample the spent liquor incinerator for particulate emissions with:

(A) The sampling method; and

(B) The analytical method specified in the Department Source Test Manual.

(b) Spent liquor incinerator particulate source tests shall be performed quarterly except that testing may be semi-annual when the preceding six (6) source tests were less than 0.05 Gram/Kg BLS (0.10 lb/ton BLS). All sampling data shall be corrected for cyclonic flow, where applicable.

(c) Each mill shall provide continuous monitoring of opacity of emissions discharged to the atmosphere from the spent liquor incinerator, and the acid plant in accordance with the Department Continuous Emission Monitoring Manual; except that when continuous monitoring of opacity is not

feasible due to excessive moisture then EPA Method 9 shall be used for the determination of opacity.

(4) Sulfur Dioxide (SO_2). Representative sulfur dioxide emissions from spent liquor incinerators and from the acid absorption tower shall be determined at least once every six (6) months with:

(A) The sampling method; and

(B) The analytical method specified in the Department Source Test Manual.

Reporting

340-25-232 Unless otherwise authorized by permit, data shall be reported by each mill for each sampling period by the fifteenth day of the first month following the applicable sampling period as follows:

(1) Daily average emissions of TRS gases in kilograms of total reduced sulfur per metric ton (pounds of total reduced sulfur per ton) of black liquor solids expressed as H_2S based on all samples collected in one sampling period from the spent liquor incinerator.

(2) Daily average emissions of particulate in kilograms per metric ton (pounds per ton) of black liquor solids based on all samples collected in one sampling period from the spent liquor incinerator.

(3) Daily average concentration of sulfur dioxide in ppm for each source included in the approved monitoring program based on all samples collected in any one sampling period.

(4) Daily average amount of virgin air-dried unbleached NSSC pulp produced expressed as air dried metric tons per day (air dried tons per day).

(5) Daily average amount of black liquor solids, dry weight, fired in the spent liquor incinerator during periods of operation.

(6) Upset conditions shall be reported in accordance with 340-25-234 (3).

(7) Each mill shall furnish, upon request of the Department, such other pertinent data as the Department may require to evaluate the mills emission control program.

(8) The Department shall be notified at least ten (10) days in advance of all scheduled reference method testing including all scheduled changes.

(9) Data reported shall reflect actual observed levels.

Upset Conditions

340-25-234 (1) Each mill shall report abnormal mill operations to the Department including control and process equipment maintenance, or unexpected upsets that result in emissions in excess of the regulatory or air containment discharge permit limits within one hour, or when conditions prevent prompt notification, as soon as possible but no later than one hour after the start of the next working day. The mill shall also take immediate corrective action to reduce emission levels to regulatory or permit levels.

(2) Upsets shall be reported in writing with an accompanying report on measures taken or to be taken to correct the condition and prevent its reoccurrence within five (5) working days of each incident.

(3) Each mill shall report the cumulative duration in hours each month of the upsets reported in section (1) of this rule and classified as to:

(a) Spent Liquor Incinerator

(A) TRS

(B) Particulate

(C) SO_2

(D) Opacity

NEIL GOLDSCHMIDT
GOVERNOR

Environmental Quality Commission

811 SW SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

REQUEST FOR EQC ACTION

Meeting Date: March 3, 1989
Agenda Item: G
Division: Air Quality
Section: Program Operations

SUBJECT:

Authorization for a public hearing to consider amending the Air Quality Kraft Mill Regulations and adoption of regulations for Neutral Sulfite Semi-Chemical Pulp Mills

PURPOSE:

Revisions of the Kraft Pulp Mill Regulations are required to comply with EPA requirements, for the control of Total Reduced Sulfur (TRS), daily emission standards, and correction of discrepancies and adopt new Neutral Sulfite Mill Regulations specific to that process.

ACTION REQUESTED:

___ Work Session Discussion
- ____ General Program Background
- ____ Program Strategy
- ____ Proposed Policy
- ____ Potential Rules
- ____ Other: (specify)

_X_ Authorize Rulemaking Hearing

Proposed Rules (Draft)	Attachment A
Rulemaking Statements	Attachment B
Fiscal and Economic Impact Statement	Attachment B
Draft Public Notice	Attachment C

___ Adopt Rules

Proposed Rules (Final Recommendation)	Attachment ___
Rulemaking Statements	Attachment ___
Fiscal and Economic Impact Statement	Attachment ___
Public Notice	Attachment ___

___ Issue Contested Case Decision/Order

Proposed Order	Attachment ___

___ Other: (specify)

DESCRIPTION OF REQUESTED ACTION:

Authorization of a public hearing to receive testimony on revision of the Kraft Mill Regulations and adoption of Neutral Sulfite Semi-Chemical (NSSC) regulations. The proposed regulations adopt daily standards in lieu of monthly standards, implement opacity standards and meet EPA TRS guidelines for Kraft Mills. The proposed NSSC regulations are required to better regulate that specific chemical pulping process.

AUTHORITY/NEED FOR ACTION:

X	Required by Statute: ORS 468.295 Enactment Date: July 1989	Attachment D
___	Statutory Authority: _____	Attachment ___
___	Amendment of Existing Rule: _____	Attachment ___
___	Implement Delegated Federal Program: _____	Attachment ___
___	Other:	Attachment ___
___	Time Constraints: (explain)	

DEVELOPMENTAL BACKGROUND:

X	Department Report (Background/Explanation)	Attachment E
___	Advisory Committee Report/Recommendation	Attachment ___
___	Hearing Officer's Report/Recommendations	Attachment ___
___	Response to Testimony/Comments	Attachment ___
___	Prior EQC Agenda Items: (list)	Attachment ___
___	Other Related Reports/Rules/Statutes:	Attachment ___
___	Supplemental Background Information	Attachment ___

REGULATED/AFFECTED COMMUNITY CONSTRAINTS/CONSIDERATIONS:

Seven Kraft Mills and one Neutral Sulfite Semi-Chemical Pulp Mill will be affected. The amount that each mill will be affected will vary depending upon compliance status of each mill and whether additional control is required. Testimony received at the public hearing should define the impact to each mill.

PROGRAM CONSIDERATIONS:

No significant impact

ALTERNATIVES CONSIDERED BY THE DEPARTMENT:

1. Authorize public hearings to obtain testimony on the proposed draft rules in Attachment A.

2. Modify the draft rules as proposed in Attachment A and authorize public hearings.

3. Refuse request for public hearing on the proposed rule.

DEPARTMENT RECOMMENDATION FOR ACTION, WITH RATIONALE:

The Department recommends that the Commission authorize public hearings to gather testimony on adoption of the revised Kraft Mill Regulations and the Neutral Sulfite Semi-Chemical Regulations. Adoption of the proposed regulations are considered necessary to conform with Section 110 and 111d of the Clean Air Act and allow EPA approval of Kraft Mill Regulations and Neutral Sulfite Mill Regulations, as amendments to the State Implementation Plan.

CONSISTENCY WITH STRATEGIC PLAN, AGENCY POLICY, LEGISLATIVE POLICY:

ISSUES FOR COMMISSION TO RESOLVE:

1. Whether existing Kraft Mill rules should be amended to correct deficiencies identified by EPA.

2. Whether to implement new rules for Neutral Sulfite Mills, to more effectively regulate emissions from the neutral sulfite industry.

INTENDED FOLLOWUP ACTIONS:

- Public Hearing Notices in the Secretary of State's Bulletin and local newspapers.
- Notify local jurisdictions and interested parties of public hearings and comment period.
- Hold public hearing in Portland on March 26, 1989.
- Evaluate and respond to comments of industry and public.
- Incorporate comments into proposed rules, based on Department's evaluation.
- Submit final rules for adoption at the July 14, 1989, EQC meeting.

Approved:

Section: _____

Division: _____

Director: _____

Report Prepared By: W.J. Fuller

Phone: 229-5749

Date Prepared: February 15, 1989

WJF:ax
AX324
(2/15/89)

ATTACHMENT A

Kraft Pulp Mills

[ED. NOTE: Administrative Order DEQ 50 repealed previous rules 340-25-155 through 340-25-195 (consisting of SA 38, filed 4-4-69).]

DEFINITIONS

340-25-150

As used in these regulations, unless otherwise required by context:

(1) "Continual Monitoring" means sampling and analysis, in a continuous or timed sequence, using techniques which will adequately reflect actual emission levels or concentrations on a continuous basis.

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

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

(4) "BLS" means Black Liquor Solids, dry weight.

(5) "Kraft Mill" or "Mill" means any industrial operation which uses for a cooking liquor an alkaline sulfide solution containing sodium hydroxide and sodium sulfide in its pulping process.

(6) "Lime Kiln" means any production device in which calcium carbonate is thermally converted to calcium oxide.

(7) "Non-Condensibles" means gases and vapors, contaminated with TRS <u>compounds</u> ~~{gases}~~, from the digestion and multiple-effect evaporation processes of a mill ~~{that are not condensed with the equipment used in said processes}~~.

(8) "Other Sources" means sources of TRS emissions in a kraft mill other than recovery furnaces and lime kilns, including but not limited to:

(a) Vents from knotters, brown stock washing systems, evaporators, blow tanks, smelt tanks, blow heat accumulators,

black liquor storage tanks, black liquor oxidation system, pre-steaming vessels, tall oil recovery operations;

(b) Any operation connected with the treatment of condensate liquids within the mill; and

(c) Any vent which is shown to be a significant contributor of odorous gases.

(9) "Particulate Matter" means all solid material in an emission stream ~~[which may be removed on a glass fiber filter maintained during sampling at stack temperature or above the water vapor dew point of the stack gas, whichever is greater, but not more than 202°C (400°F). The glass fiber filter to be used shall be MSA 1106BH or equivalent.]~~ as measured by EPA Method 5, or EPA Method 17 if the stack temperature is no greater than 205°C (400°F).

(10) "Parts Per Million (ppm)" means parts of a contaminant per million parts of gas by volume on a dry-gas basis (1 ppm equals 0.0001% by volume).

(11) "Production" means the daily ~~[average]~~ amount of air-dried unbleached kraft pulp, or equivalent, produced as determined by dividing the monthly total production by the number of days specific production equipment operates, and expressed in air-dried metric tons (admt) per day. The corresponding English unit is air-dried tons (adt) per day.

(12) "Recovery Furnace" means the combustion device in which pulping chemicals are converted to a molten smelt and wood solids are incinerated. For these regulations, and where present, this term shall include the direct contact evaporator.

(13) "Significant Upgrading of Pollution Control Equipment" means a modification or a rebuild of an existing pollution control device for which a capital expenditure of 50 percent or more of the replacement cost of the existing device is required.

{(13)} (14) "Standard Dry Cubic Meter" means the amount of gas that would occupy a volume of one cubic meter, if the gas were free of uncombined water, at a temperature of 20° C. (68° F.) and a pressure of 760 mm of Mercury (29.92 inches of Mercury). The corresponding English unit is standard dry cubic foot. When applied to recovery furnace gases "standard dry cubic meter" requires adjustment of the gas volume to that which would result in a concentration of 8% oxygen if the oxygen concentration exceeds 8%. When applied to lime kiln gases "standard dry cubic meter" requires adjustment of the gas volume to that which would result in a concentration of 10 {percent}% oxygen if the oxygen concentration exceeds 10%. The mill shall demonstrate that oxygen concentrations are below noted values.

{(14)} (15) "Total Reduced Sulfur (TRS)" means the sum of the sulfur compounds {in} hydrogen sulfide, methyl mercaptan{s}, dimethyl sulfide, and dimethyl disulfide, and any other organic sulfides present in an oxidation state of minus two.

Stat. Auth.: ORS Ch. 468

Hist.: DEQ 50, f. 2-9-73, ef. 3-1-73; DEQ 137, f. & ef. 6-10-77

STATEMENT OF POLICY

340-25-155

Recent technological developments have enhanced the degree of malodorous emission control possible for the kraft pulping process. While recognizing that complete malodorous and particulate emission control is not presently possible, consistent with the meteorological and geographical conditions in Oregon, it is hereby declared to be the policy of the Department to:

(1) Require, in accordance with a specific program and time table for all sources at each operating mill, the highest and best practicable treatment and control of atmospheric emissions from kraft mills through the utilization of technically feasible equipment, devices, and procedures. Consideration will be given to the economic life of equipment, which when installed, complied with the highest and best practicable treatment requirement;

(2) Require degrees and methods of treatment for major and minor emission points that will minimize emissions of odorous gases and eliminate ambient odor nuisances;

(3) Require effective monitoring and reporting of emissions and reporting of other data pertinent to air quality or emissions. The Department will use these data in conjunction with ambient air data and observation of conditions in the surrounding area to develop and revise emission and ambient air standards, and to determine compliance therewith;

(4) Encourage and assist the kraft pulping industry to conduct a research and technological development program designed to progressively reduce kraft mill emissions, in accordance with a definite program, including specified objectives and time schedules.

Stat. Auth.: ORS Ch.

Hist.: DEQ 50, f. 2-9-73, ef. 3-1-73

OAR25155 (1/89)

HIGHEST AND BEST PRACTICABLE TREATMENT AND CONTROL REQUIRED

340-25-160

(1) Notwithstanding the specific emission limits set forth in rule 340-25-165, in order to maintain the lowest possible emission of air contaminants, the highest and best practicable treatment and control currently available shall in every case be provided, with consideration being given to the economic life of the existing equipment.

(2) All installed process and control equipment shall be operated at full effectiveness and efficiency at all times, such that emissions of contaminants are kept at lowest practicable levels.

Stat. Auth.: ORS Ch.

Hist.: DEQ 50, f. 2-9-73, ef. 3-1-73

OAR25160 (1/89)

EMISSION LIMITATIONS

340-25-165

(1) Emission of Total Reduced Sulfur (TRS):

(a) Recovery Furnaces:

(A) The emissions of TRS from each recovery furnace placed in operation before January 1, 1969, shall not exceed 10 ppm ~~[as a daily arithmetic average]~~ and 0.15 Kg ~~[~~ S~~]~~/metric ton (0.30 lb~~[~~-S~~]~~/ton) of production as ~~[~~a ~~monthly]~~ daily arithmetic averages;

(B) TRS emissions from each new recovery furnace placed in operation after January 1, 1969, and before September 25, 1976, or any recovery furnace modified significantly to expand production shall be controlled such that the emissions of TRS shall not exceed 5 ppm ~~[as a daily arithmetic average]~~ and 0.08 Kg~~[~~-S~~]~~/metric ton (0.15 lb~~[~~-S~~]~~/ton) of production as ~~[~~a ~~monthly]~~ daily arithmetic averages.

(b) Lime kilns. Lime Kilns shall be operated and controlled such that emissions of TRS shall not exceed:

(A) 40 ppm and 0.10 Kg~~[~~-S~~]~~/metric ton (0.20 lb~~[~~-S~~]~~/ton) of production as monthly arithmetic averages;

(B) As soon as practicable, but not later than July 1, 1978, 20 ppm and 0.05 Kg~~[~~-S~~]~~/metric ton (0.10 lb~~[~~-S~~]~~/ton) of production as monthly arithmetic averages;

(C) As soon as practicable, but not later than July 1, 1983, 20 ppm as a daily arithmetic average and

0.05 Kg{-S}/metric ton (0.10 lb{-S}/ton) of production as a monthly arithmetic average;

(D) 20 ppm {as-a-daily-arithmetic-average} and 0.05 Kg{S}/metric ton (0.10 lb{-S}/ton) of production as {a monthly} 12 hour arithmetic averages from each new lime kiln placed in operation or any lime kiln modified significantly to expand production. This paragraph applies to those sources where construction was initiated prior to September 25, 1976.

(c) Smelt Dissolving Tanks.

(A) As soon as practicable, but not later than July 1, 1990, TRS emissions from each smelt dissolving tank shall not exceed 0.033 g/Kg BLS (0.066 lb/ton BLS) as a 12 hour average.

{(c)} (d) Non-Condensibles:

(A) Non-condensibles from digesters and multiple-effect evaporators shall be continuously treated to destroy TRS gases by thermal incineration in a lime kiln or incineration device capable of subjecting the non-condensibles to a temperature of not less than 650° C. (1200° F.) for not less than 0.3 second{s;}. An alternate device shall be available in the event adequate incineration in the primary device cannot be accomplished. Venting of TRS gases during changeover shall be minimized but in no case shall the time exceed one hour.

(B) When steam- or air-stripping of condensates or other contaminated streams is practiced, the stripped gases shall be subjected to treatment in the non-condensible incineration system or otherwise given equivalent treatment.

~~(d)~~ (e) Other Sources:

(A) As soon as practicable, but not later than July 1, 1978, the total emission of TRS from other sources including, but not limited to, knotters and brown stock washer vents, brown stock washer filtrate tank vents, black liquor oxidation vents, and contaminated condensate stripping shall not exceed 0.10 Kg~~(-S)~~/metric ton (0.20 lb~~(-S)~~/ton) of production;

(B) Miscellaneous Sources and Practices. When it is determined that sewers, drains, and anaerobic lagoons significantly contribute to an odor problem, a program for control shall be required.

~~(e)~~ (f) Compliance Programs. ~~Each mill with any sources not in compliance with the 1978 emission limits shall submit a program and schedule for achieving compliance to the Department for approval by no later than August 1, 1977. As soon as practicable, but not later than January 1, 1980, each mill with lime kiln(s) not in compliance with the 1983 limits shall submit a program and schedule for achieving compliance.~~ Each mill with any recovery furnace or lime kiln not in compliance with the 1988 averaging period or smelt dissolving tanks not in

compliance with the July 1, 1990 limit shall submit a program and schedule for achieving compliance as soon as practicable but no later than January 1, 1990.

(2) Particulate Matter:

(a) Recovery Furnaces. The emissions of particulate matter from each recovery furnace stack shall not exceed: ~~[a monthly arithmetic average of:]~~

(A) 2.0 kilograms per metric ton ~~[four (4)]~~ 4.0 pounds per ton) of production as a daily arithmetic average; ~~[and]~~

(B) 0.30 gram~~[s]~~ per dry standard cubic meter (0.13 grain~~[s]~~ per dry standard cubic foot); and

(C) Exhibit 35 percent opacity or greater based on a path length of 10 feet, if greater than 10 feet, for periods exceeding six (6) percent of the six (6) minute average opacities in a quarter (excluding periods when the facility is not operating).

(b) Lime Kilns. The emissions of particulate matter from each lime kiln stack shall not exceed ~~[a monthly arithmetic average of]~~:

(A) 0.50 kilogram per metric ton ~~[one (1)]~~ 1.00 pound per ton) of production as a daily arithmetic average; ~~[and]~~

(B) 0.46 gram~~[s]~~ per standard cubic meter (0.20 grain~~[s]~~ per standard cubic foot)~~[.]~~ ; and

(C) The visible emission limitations in section 340-25-165(4).

(c) Smelt Dissolving Tanks. The emission of particulate matter from each smelt dissolving tank stack shall not exceed: ~~[a~~

~~monthly arithmetic average of 0.25 Kg/metric ton (one-half (1/2) pound per ton of production).~~

(A) A daily arithmetic average of 0.25 kilogram per metric ton (0.50 pound per ton) of production; and

(B) The visible emission limitations in section 340-25-165(4).

(d) Replacement or Significant Upgrading of existing particulate pollution control equipment after July 1, 1988 shall result in more restrictive standards as follows:

(A) Recovery Furnaces. The emission of particulate matter from each affected recovery furnace stack shall not exceed 0.67 kilogram per metric ton (1.35 pounds per ton) of production as a daily arithmetic average and 0.10 gram per dry standard cubic meter (0.044 grain per dry standard cubic foot).

(B) Lime Kilns. The emission of particulate matter from each affected lime kiln stack shall not exceed 0.17 kilogram per metric ton (0.34 pound per ton) of production as a daily arithmetic average and 0.15 gram per dry standard cubic meter (0.067 grain per dry standard cubic foot) when burning gaseous fossil fuel; or 0.33 kilogram per metric ton (0.65 pound per ton) of production as a daily arithmetic average and 0.30 gram per dry standard cubic meter (0.13 grain per dry standard cubic foot) when burning liquid fossil fuel.

(C) Smelt Dissolving Tanks. The emissions of particulate matter from each smelt dissolving tank vent stack shall

not exceed 0.15 kilogram per metric ton (0.30 pound per ton) of production as a daily arithmetic average.

(3) Sulfur Dioxide (SO_2). Emissions of sulfur dioxide from each recovery furnace stack shall not exceed a daily arithmetic average of 300 ppm on a dry-gas basis except during start-up and shut-down periods.

(4) [New Facility Compliance. As soon as practicable, but not later than within 180 days of the start-up of a new kraft mill or of any new or modified facility having emissions limited by these regulations, that facility shall be operated, controlled, or limited to comply with the applicable provisions of these regulations and the mill shall conduct source sampling or monitoring as appropriate to demonstrate compliance.] All kraft mill sources with the exception of recovery furnaces shall not exhibit an opacity equal to or greater than 20 percent for a period exceeding three (3) minutes in any one (1) hour.

(5) New Source Performance Standards

(a) New or significantly modified sources that commenced construction after September 24, 1976 are subject to New Source Performance Standards, see section 340-25-630.

Stat. Auth.: ORS Ch. 468

Hist.: DEQ 50, f. 2-9-73, ef. 3-1-73; DEQ 137, f. & ef. 6-10-77

OAR25165 (2/89)

MORE RESTRICTIVE EMISSION LIMITS

340-25-170

The Department may establish more restrictive emission limits than the numerical emission standards contained in rule 340-25-165 and maximum allowable daily mill site emission limits in kilograms per day for an individual mill upon a finding by the Department ~~[Commission]~~ that: ~~[the individual mill is located or is proposed to be located in a special problem area or an area where ambient air standards are exceeded or are projected to be exceeded.]~~

(1) The individual mill is located or is proposed to be located in a special problem area or an area where ambient air standards are exceeded or are projected to be exceeded; or

(2) When an odor or nuisance problem has been documented at any mill the TRS emission limits may be reduced below the regulatory limits.

Stat. Auth.: ORS Ch. 468

Hist.: DEQ 50, f. 2-9-73, ef. 3-1-73; DEQ 137, f. & ef. 6-10-77

OAR25170 (1/89)

PLANS AND SPECIFICATIONS

340-25-175

Prior to construction of new kraft mills or modification of facilities affecting emissions at existing kraft mills, complete and detailed engineering plans and specifications for air pollution control devices and facilities and such other data as may be required to evaluate projected emissions and potential effects on air quality shall be submitted to and approved by the Department. All construction shall be in accordance with plans as approved in writing by the Department.

Stat. Auth.: ORS Ch. 468

Hist.: DEQ 50, f. 2-9-73, ef. 3-1-73; DEQ 173, f. & ef. 6-10-77

OAR25175 (1/89)

MONITORING

340-25-180

(1) General:

(a) The details of the monitoring program for each mill shall be submitted to and approved by the Department. This submittal shall include diagrams and descriptions of all monitoring systems, monitoring frequencies, calibration schedules, descriptions of all sampling sites, data reporting formats and duration of maintenance of all data and reports. Any changes that are subsequently made in the approved monitoring program shall be submitted in writing to the Department for review and approved in writing prior to change;

(b) All records associated with the approved monitoring program including, but not limited to, original data sheets, charts, calculations, calibration data, production records and final reports shall be maintained for a continuous period of at least 365 days and shall be furnished to the Department upon request.

(2) Total Reduced Sulfur (TRS). Each mill shall continually monitor TRS in accordance with the following:

(a) The monitoring equipment shall determine compliance with the emission limits and reporting requirements established by these regulations, and shall continually sample and record concentrations of TRS;

(b) The sources monitored shall include, but are not limited to, the recovery furnace stacks and the lime kiln stacks;

(c) At least [one] once per year, vents from other sources as required in subsection 340-25-165(1)[(d)](e), Other Sources, shall be sampled to demonstrate the representativeness of the emissions of TRS and the results shall be reported to the Department.

(3)[(a)] Particulate Matter

(a) [Particulate Matter.--]Each mill shall sample the recovery furnace(s), lime kiln(s) and smelt dissolving tank(s) for particulate emissions with:

(A) The sampling method; and

(B) The analytical method approved in writing by the Department.

(b) Each mill shall provide continual monitoring of opacity of emissions discharged to the atmosphere from [the] each recovery furnace or particulate matter from [the] each recovery furnace[(s)] [in a manner] using an alternate method approved in writing by the Department.

(c) Recovery furnace particulate source tests shall be performed quarterly except that when the preceding six (6) samples were less than 0.097 gr/dscf the sampling frequency may be semi annual.

(4) Sulfur Dioxide (SO_2). Representative sulfur dioxide emissions from the recovery furnace(s) shall be determined at least once each month.

(5) Combined Monitoring. The Department may allow the monitoring of a combination of more than one emission stream if each individual emission stream has been demonstrated to be in compliance with all

the emission limits of rule 340-25-165. The emission limits for the combined emission stream shall be established by the Department.

Stat. Auth.: ORS Ch. 468

Hist.: DEQ 50, f. 2-9-73, ef. 3-1-73; DEQ 137, f. & ef. 6-10-77

OAR25180 (2/89)

REPORTING

340-25-185

Unless otherwise authorized or required by permit, data shall be reported by each mill for each calendar month by the fifteenth day of the subsequent calendar month as follows:

(1) Applicable daily or 12-hour average emissions of TRS gases expressed in parts per million of H_2S on a dry gas basis with oxygen concentrations, if oxygen corrections are required, for each source included in the approved monitoring program;

(2) ~~[Monthly]~~ Daily average emissions of TRS gases in kilograms of total reduced sulfur per metric ton of ~~pulp processed, expressed as H_2S,~~ for each source included in the approved monitoring program;

(3) ~~[Monthly]~~ Daily average emission of SO_2 based on all samples collected in any one day from the recovery furnace(s), expressed as ppm, dry basis:

(4) ~~[Monthly average emission of particulates in grams per standard cubic meter; and kilograms per metric ton of pulp produced based upon the sampling conducted in accordance with the approved monitoring program;]~~ All daily average opacities for each recovery furnace where the utilization of transmissometers for the measurement of opacity is used;

(5) ~~[Average monthly equivalent kraft pulp production;]~~All 6-minute average opacities that exceed 35 percent.

(6) ~~[Average daily and the value of the maximum hourly opacity; and/or the average daily and the value of the maximum hourly particulate emissions in grams per standard cubic meter for each recovery~~

~~furnace-stack-on-a-daily-basis;~~ Daily average kilograms of particulate per metric ton of pulp produced for each recovery furnace where the utilization of transmissometers for the measurement of opacity is not feasible and the mass emission rate is determined based upon alternative sampling conducted in accordance with the approved monitoring programs.

(7) The results of each recovery furnace particulate source test in grams per dry standard cubic meter and for the same source test period the ~~continual~~ hourly average opacity or the particulate monitoring record obtained in accordance with the approved ~~continual~~ alternate monitoring program required in section 340-25-180(3).

(8) Unless otherwise approved in writing, ~~the cumulative number of hourly averages each day that the recovery furnace particulate and TRS, and lime kiln TRS emissions exceed the numerical regulatory or permit limits;~~ all periods of non-condensible gas bypass shall be reported.

(9) Upset conditions shall be reported in accordance with section 340-25-190(3);

(10) Each kraft mill shall furnish, upon request of the Department, such other pertinent data as the Department may require to evaluate the mill's emission control program.

(11) Monitoring data reported shall reflect actual observed levels corrected for oxygen, if required, and analyzer calibration.

(12) Oxygen concentrations used to correct pollutant data shall reflect oxygen concentrations at the point of measurement of pollutants.

(13) The Department shall be notified at least ten (10) days in advance of all scheduled reference method testing including all scheduled changes.

Stat. Auth.: ORS Ch. 468

Hist.: DEQ 50, f. 2-9-73, ef. 3-1-73; DEQ 137, f. & ef. 6-10-77

OAR25185 (2/89)

UPSET CONDITIONS

340-25-190

(1) Each mill shall immediately report abnormal mill operations including control and process equipment maintenance, or breakdowns which result in violations of regulatory or air contaminant discharge permit limits. The mill shall also take immediate corrective action to reduce emission levels to regulatory or permit levels.

(2) Significant upsets shall be reported in writing with an accompanying report on measures taken or to be taken to correct the condition and prevent its reoccurrence.

(3) Each mill shall report the cumulative duration in hours each month of the upsets reported in section (1) of this rule and classified as to:

(a) Recovery Furnace:

(A) TRS;

(B) Particulate.

(b) Lime Kiln:

(A) TRS;

(B) Particulate.

(c) Smelt Tank Particulate.

Stat. Auth.: ORS Ch. 468

Hist.: DEQ 50, f. 2-9-73, ef. 3-1-73; DEQ 137, f. & ef. 6-10-77

OAR25190 (1/89)

OTHER ESTABLISHED AIR QUALITY LIMITATIONS

340-25-195 [DEQ 50, f. 2-9-73, ef. 3-1-73;

Repealed by DEQ 137, f. & ef. 6-10-77]

OAR25195 (1/89)

PUBLIC HEARING

340-25-200 [DEQ 50, f. 2-9-73, ef. 3-1-73;

Repealed by DEQ 137, f. & ef. 6-10-77]

OAR25200 (1/89)

CHRONIC UPSET CONDITIONS

340-25-205

If the Department determines that an upset condition is chronic and correctable by installing new or modified process or control procedures or equipment, a program and schedule to effectively eliminate the deficiencies causing the upset conditions shall be submitted. Such reoccurring upset conditions causing emissions in excess of applicable limits may be exempted from rules 340-21-065 and 340-21-070 through 340-21-075 and may be subject to civil penalty or other appropriate action.

Stat. Auth.: ORS Ch. 468

Hist.: DEQ 50, f. 2-9-73, ef 3-1-73

OAR25205 (1/89)

NEUTRAL SULFITE SEMI-CHEMICAL (NSSC) PULP MILLS

Definitions

340-25-220

As used in these regulations, unless otherwise required by context:

(1) "Continual Monitoring" means sampling and analysis, in a continuous or timed sequence, using techniques which will adequately reflect actual emission levels or concentrations on a continuous basis.

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

(3) "Emission" means a release into the atmosphere of air containments.

(4) "BLS" means black liquor solids, dry weight.

(5) "Neutral Sulfite Semi-Chemical (NSSC) Pulp Mill" means any industrial operation which uses for cooking, a liquor prepared from a sodium carbonate solution and sulfur dioxide at a neutral PH, range 6-8.

(6) "Particulate Matter" means all solid material in an emission stream as measured by EPA Method 5, if the stack temperature is no greater than 205°C (400°F).

(7) "Parts per Million (ppm)" means parts of a contaminant per million parts of gas by volume on a dry-gas basis (one ppm equals 0.0001% by volume).

(8) "Production" means the daily average amount of virgin air-dried unbleached NSSC pulp, or equivalent, produced as determined by dividing the monthly total production by the number of days

specific production equipment operates, and expressed in air-dried metric tons (ADMT) per day. The corresponding English unit is air-dried tons (ADT) per day.

(9) "Spent Liquor Incinerator" means the combustion device in which pulping chemicals are subjected to high temperature to evaporate the water, incinerate organics and reclaim the sodium sulfate (saltcake) and sodium carbonate.

(10) "Acid Absorption Tower" means the device where the sodium carbonate and sulfur dioxide react to form a sodium sulfite solution prior to use as the cooking liquor.

(11) "Standard Dry Cubic Meter" means the amount of gas that would occupy a volume of one cubic meter, if the gas were free of uncombined water, at a temperature of 20°C.(68°F.) and a pressure of 760 mm of mercury.

(12) "Total Reduced Sulfur (TRS)" means the sum of the sulfur compounds hydrogen sulfide, methyl mercaptan, dimethyl sulfide, and dimethyl disulfide, and any other organic sulfides present in an oxidation state of minus two.

Highest and Best Practicable Treatment and Control Required

340-25-222

(1) Notwithstanding the specific emission limits set forth in rule 340-25-224, in order to maintain the lowest possible emission of air contaminants, the highest and best practicable treatment and control currently available shall in every case by provided, with consideration being given to the economic life of the existing equipment.

(2) All installed process and control equipment shall be operated at full effectiveness and efficiency at all times, such that emissions of contaminants are kept at lowest practicable levels.

OAR25-222(2-2-89)

Emission Limitations

340-25-224

(1). Emission of Total Reduced Sulfur (TRS):

(a) Spent Liquor Incinerator. The emissions of TRS from any spent liquor incinerator stack shall not exceed 10 ppm and 0.07 g/kg BLS (0.14 lb/ton BLS) as daily arithmetic averages.

(2) Particulate Matter:

(a) Spent Liquor Incinerator. The emissions of particulate matter from any spent liquor incinerator shall not exceed:

(A) 3.6 g/kg BLS (7.2 lb/ton BLS) as a daily arithmetic average; and

(B) Exhibit an opacity equal to or greater than 35 percent for a period exceeding 3 minutes in any one hour.

(b) Acid Absorption Tower. Visible emissions shall not exceed the limitations in section 340-25-224 (4).

(3) Sulfur Dioxide (SO_2):

(a) Spent Liquor Incinerator. The emissions of sulfur dioxide from each spent liquor incinerator stack shall not exceed a daily arithmetic average of 10 ppm except during start-up and shut-down periods.

(b) Acid Absorption Tower: The emissions of sulfur dioxide from the acid absorption tower stack shall not exceed 20ppm as a daily arithmetic average.

(4) All NSSC sources with the exception of spent liquor incinerators shall not exhibit an opacity equal to or greater than 20 percent for a period exceeding three (3) minutes in any one hour.

More Restrictive Emission Limits

340-25-226 The Department may establish more restrictive emission limits than the numerical emission standards contained in rule 340-25-224 and maximum allowable daily mill site emission limits in kilograms per day for an individual mill upon a finding by the Department that:

(1) The individual mill is located or is proposed to be located in a special problem area or an area where ambient air standards are exceeded or are projected to be exceeded; or

(2) When an odor or nuisance problem has been documented at any mill the TRS emission limits may be reduced below the regulatory limits.

OAR25-226(2-2-89)

Plans and Specifications

340-25-228

Prior to construction of new neutral sulfite semi-chemical (NSSC) pulp mills or modification of facilities affecting emissions at existing NSSC mills, complete and detailed engineering plans and specifications for air pollution control devices and facilities and such data as may be required to evaluate projected emissions and potential effects on air quality shall be submitted to and approved by the Department. All construction shall be in accordance with plans as approved in writing by the Department.

OAR25-228(2-2-89)

Monitoring

340-25-230 (1) General

(a) The details of the monitoring program for each mill shall be submitted to and approved by the Department. This submittal shall include diagrams and descriptions of all monitoring systems, monitoring frequencies, calibration schedules, descriptions of all sampling sites, data reporting formats and duration of maintenance of all data and reports. Any changes that are subsequently made in the approved monitoring program shall be submitted in writing to the Department for review and approved in writing prior to change.

(b) All records associated with the approved monitoring program including, but not limited to, original data sheets, charts, calculations, calibration data, production records and final reports shall be maintained for a period of at least one yeaar and shall be furnished to the Department upon request.

(2)(a) Total Reduced Sulfur (TRS). Each mill shall sample the spent liquor incinerator for TRS emissions with:

(A) The sampling method; and

(B) The analytical method approved in writing by the Department.

(b) Spent liquor incinerator TRS source tests shall be performed quarterly except when the preceding six (6) samples demonstrated that the concentrations were less than 7.5 ppm the sampling frequency may be semi-annual.

(c) Flow rate measurements used to determine TRS mass emission rates shall be corrected for cyclonic flow, where applicable.

(3)(a) Particulate Matter. Each mill shall sample the spent liquor incinerator for particulate emissions with:

(A) The sampling method; and

(B) The analytical method approved in writing by the Department.

(b) Spent liquor incinerator particulate source tests shall be performed quarterly except when he preceding six (6) samples demonstrated that the emissions rates were less than 0.10 lb/ton BLS, the sampling frequency may be semi annual. All sampling data shall be corrected for cyclonic flow, where applicable.

(4)(a) Sulfur Dioxide (SO_2). Representative sulfur dioxide emissions from spent liquor incinerators and from the acid absorption towers shall be determined at least once every six (6) months with:

(A) The sampling method; and

(B) The analytical method approved in writing by the Department.

OAR25-230(2-2-89)

Reporting

340-25-232

Unless otherwise authorized by permit, data shall be reported by each mill for each sampling period by the fifteenth day of the first month following the applicable sampling period as follows:

(1) Daily average emissions of TRS gases in grams of total reduced sulfur per kilogram of black liquor solids, expressed as H_2S based on all samples collected in any one day from the spent liquor incinerator.

(2) Daily average emissions of particulate in grams per kilogram of black liquor solids based on all samples collected in any one day from the spent liquor incinerator.

(3) Daily average concentration of sulfur dioxide in ppm for each source included in the approved monitoring program based on all samples collected in any one day.

(4) Daily average amount of virgin air-dried unbleached NSSC pulp produced expressed as air dried metric tons per day (ADMT/day).

(5) Daily average amount of black liquor solids, dry weight, fired in the spent liquor incinerator during periods of operation.

(6) Upset conditions shall be reported in accordance with section, 340-25-234 (3).

(7) Each mill shall furnish, upon request of the Department, such other pertinent data as the Department may require to evaluate the mills emission control program.

(8) The Department shall be notified at least ten (10) days in advance of all scheduled reference method testing including all scheduled changes.

(9) Data reported shall reflect actual observed levels.

OAR25-232(2-2-89)

Upset Conditions

340-25-234

(1) Each mill shall immediately report abnormal mill operations including control and process equipment maintenance, or breakdowns which result in violation of regulatory or air containment discharge permit limits. The mill shall also take immediate corrective action to reduce emission levels to regulatory or permit levels.

(2) Significant upsets shall be reported in writing with an accompanying report on measures taken or to be taken to correct the condition and prevent its reoccurrence

(3) Each mill shall report the cumulative duration in hours each month of the upsets reported in section (1) of this rule and classified as to:

(a) Spent Liquor Incinerator

(A) TRS

(B) Particulate

(C) SO_2

(b) Acid Absorption Tower

(A) SO_2

(B) Opacity

OAR25-234(2-2-89)

Chronic Upset Conditions

340-25-236

If the Department determines that an upset condition is chronic and correctable by installing new or modified process or control procedures or equipment, a program and schedule to effectively eliminate the deficiencies causing the upset conditions shall be submitted. Such reoccurring upset conditions causing emissions in excess of applicable limits may be exempted from rules 340-21-065 and 340-21-070 through 340-21-075 and may be subject to civil penalty or other appropriate action.

OAR25-236(2-2-89)

ATTACMENT B

RULEMAKING STATEMENTS

for
Kraft Pulp Mills OAR 340-25-150
through 340-25-205 and Neutral
Sulfite Semi-Chemical (NSSC) Pulp Mills
OAR 340-25-220 through OAR 340-25-236

Pursuant to ORS 183.335, these statements provide information on the intended action to amend a rule.

STATEMENT OF NEED:

Legal Authority

This proposal amends OAR 340-25-150 through 340-25-205 and adds OAR 340-25-220 through 340-25-236.
It is proposed under authority of ORS 468.295 Air Purity Standards;

Need for the Rule

1. To comply with EPA guidelines on the control of TRS emissions from Kraft mills, EPA regulations requiring opacity standards and EPA requirements limiting emission standards to 24-hour averaging periods or 12-hour averaging periods.

2. To add regulations specific for the Neutral Sulfite Semi-Chemical Pulp mills which contain opacity standards, 24-hour averaging periods and emission standards consistent with the pulping process.

Principal Documents Relied Upon

1. EPA 450/2-78-003b Kraft Pulping, Control of TRS Emissions from existing Mills.

2. Kraft Mill and Neutral Sulfite Mill monitoring data.

3. Section 110 and 111 of the Clean Air Act.

FISCAL AND ECONOMIC IMPACT STATEMENT:

These amendments will result in varying degrees of impact on the Kraft Pulp Mills, depending upon additional control requirements and control methods. There is little or no impact on the Neutral Sulfite Mills as a result of the proposed regulation.

AX323 (2/89)

LAND USE CONSISTENCY STATEMENT:

The proposed rule revision OAR 340-25-150 through 340-25-205 Kraft Pulp Mills and the addition of OAR 340-25-220 through 340-25-236 does not affect land use and is consistent with the statewide planning goals.

With regard to Goal 6 (air, water, and land resources quality) the rules are designed to enhance and preserve air quality in the affected area and are considered consistent with the goal.

Goal 11 (public facilities and services) is deemed unaffected by the rule. The rule does not appear to conflict with other goals.

Public comment on any land use issue involved is welcome and may be submitted in the same fashions as are indicated for testimony in this notice.

It is requested that local, state, and federal agencies review the proposed action and comment on possible conflicts with their programs affecting land use and with Statewide Planning Goals within their expertise and jurisdiction.

The Department of Environmental Quality intends to ask the Department of Land Conservation and Development to mediate any apparent conflict brought to our attention by local, state, or federal authorities.

Oregon Department of Environmental Quality

A CHANCE TO COMMENT ON...

NOTICE OF PUBLIC HEARING

Hearing Date: April 26, 1989
Date Prepared: February 2, 1989
Comments Due: May 3, 1989

WHO IS AFFECTED: Seven Kraft pulp mills, one of which also operates a neutral sulfite semi-chemical pulp production line and one neutral sulfite semi chemical pulp mill.

WHAT IS PROPOSED: The Department of Environmental Quality is proposing to amend OAR 340 25-150 through 340-25-205 "Kraft Pulp Mills" and to add OAR 340-25-220 through 340-25-236 "Neutral Sulfite Semi-Chemical (NSSC) Pulp Mills, as amendments to the Oregon State Implementation Plan OAR 340-20-047.

WHAT ARE THE HIGHLIGHTS: Revised Kraft mill TRS standards to conform with EPA guidelines for existing Kraft Mills, addition of opacity standards, implementation of daily averaging in lieu of monthly averaging for particulate and SO_2 standards and the addition of regulations specifically for the neutral sulfite semi-chemical pulp mills.

HOW TO COMMENT: Copies of the complete proposed rule package may be obtained from the Air Quality Division in Portland 811 S.W. Sixth Avenue or the regional office nearest you. For further information contact William J. Fuller at 229-5749.

A public hearing will be held before a hearings officer at:

9:00 am
April 26, 1989
811 SW 6th Avenue, Room 4A
Portland, OR 97204

Oral and written comments will be accepted at the public hearing. Written comments may be sent to the DEQ, but must be received by no later than May 3, 1989.

811 S.W. 6th 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.

WHAT IS THE NEXT STEP:

After public hearing the Environmental Quality Commission may act to rule amendments identical to the proposed amendments, adopt modified rule amendments on the same subject matter, or decline to act. The adopted rules will be submitted to the U. S. Environmental Protection Agency as part of the State Clean Air Act Implementation Plan. The Commission's deliberation should come in July 1989 as part of the agenda of a regularly scheduled Commission meeting.

A Statement of Need, Fiscal and Economic Impact Statement, and Land Use Consistency Statement are attached to this notice.

AX322:x (2/89)

(1) Agricultural operations and the growing or harvesting of crops and the raising of fowls or animals, except field burning which shall be subject to regulation pursuant to ORS 468.140, 468.150, 468.455 to 468.480 and this section;

(2) Use of equipment in agricultural operations in the growth of crops or the raising of fowls or animals, except field burning which shall be subject to regulation pursuant to ORS 468.140, 468.150, 468.455 to 468.480 and this section;

(3) Barbecue equipment used in connection with any residence;

(4) Agricultural land clearing operations or land grading;

(5) Heating equipment in or used in connection with residences used exclusively as dwellings for not more than four families, except woodstoves which shall be subject to regulation under this section and ORS 468.630 to 468.655;

(6) Fires set or permitted by any public agency when such fire is set or permitted in the performance of its official duty for the purpose of weed abatement, prevention or elimination of a fire hazard, or instruction of employes in the methods of fire fighting, which in the opinion of the agency is necessary;

(7) Fires set pursuant to permit for the purpose of instruction of employes of private industrial concerns in methods of fire fighting, or for civil defense instruction; or

(8) The propagation and raising of nursery stock, except boilers used in connection with the propagation and raising of nursery stock. [Formerly 449.775; 1975 c.559 §3; 1983 c.333 §2; 1983 c.730 §3]

468.295 Air purity standards; air quality standards. (1) By rule the commission may establish areas of the state and prescribe the degree of air pollution or air contamination that may be permitted therein, as air purity standards for such areas.

(2) In determining air purity standards, the commission shall consider the following factors:

(a) The quality or characteristics of air contaminants or the duration of their presence in the atmosphere which may cause air pollution in the particular area of the state;

(b) Existing physical conditions and topography;

(c) Prevailing wind directions and velocities;

(d) Temperatures and temperature inversion periods, humidity, and other atmospheric conditions;

(e) Possible chemical reactions between air contaminants or between such air contaminants and air gases, moisture or sunlight;

(f) The predominant character ment of the area of the state, as residen highly developed industrial area, commerci other characteristics;

(g) Availability of air-cleaning devices;

(h) Economic feasibility of air-clea devices;

(i) Effect on normal human health of part lar air contaminants;

(j) Effect on efficiency of industrial opera resulting from use of air-cleaning devices;

(k) Extent of danger to property in the reasonably to be expected from any particula contaminants;

(L) Interference with reasonable enjoym of life by persons in the area which can reas bly be expected to be affected by the air cont nants;

(m) The volume of air contaminants emi from a particular class of air contamina source;

(n) The economic and industrial deve ment of the state and continuance of pu enjoyment of the state's natural resources; ar

(o) Other factors which the commission find applicable.

(3) The commission may establish air qua standards including emission standards for entire state or an area of the state. The stand shall set forth the maximum amount of air po tion permissible in various categories of air c taminants and may differentiate betw different areas of the state, different air conta nants and different air contamination source classes thereof. [Formerly 449.785]

468.300 When liability for violat not applicable. The several liabilities wh may be imposed pursuant to ORS 448.3 454.010 to 454.040, 454.205 to 454.255, 454. 454.425, 454.505 to 454.535, 454.605 to 454. and this chapter upon persons violating provisions of any rule, standard or order of commission pertaining to air pollution shall be so construed as to include any violation wh was caused by an act of God, war, strife, rio other condition as to which any negligence wilful misconduct on the part of such person not the proximate cause. [Formerly 449.825]

468.305 General comprehensive pl Subject to policy direction by the commiss the department shall prepare and develop a g eral comprehensive plan for the control or abat ment of existing air pollution and for the con or prevention of new air pollution in any area

ATTACHMENT E

Department Report

Background Information:

The Department has concluded that the existing Kraft Mill regulations are not approvable by EPA in their present form. This became apparent after a review of the current regulations by the EPA and subsequent discussion between the agencies. The EPA, however, has not formally disapproved the regulations.

The Department is proposing to amend the Kraft Mill regulations to correct these deficiencies. The revisions include the following:

1. Adoption of daily averaging in lieu of monthly averaging for TRS, SO_2 and particulate emissions from recovery furnaces. EPA has indicated that monthly averaging is not adequate to protect the environment and therefore not approvable.

2. Implement the NSPS opacity standard (35%) for existing recovery furnaces. EPA regulations require visible emission limitations or other means to ensure continual compliance to be approvable.

3. Implement a 12-hour averaging period in lieu of daily averaging for lime kiln TRS emissions. EPA regulations require TRS emission limitations to be as stringent or more stringent than the proposed standards in the EPA guidelines document, "control of TRS emissions from existing mills", the proposed standard meets this criteria.

4. Revise the lime kiln particulate standard to reflect daily averaging in lieu of monthly averaging. This change is required to protect the environment on a daily basis and to obtain EPA approval.

5. Implement a 20% opacity standard for lime kilns and smelt dissolving tank vents. EPA regulations require visible emission limitations or other means to ensure continual compliance to be approvable.

6. Adopt the NSPS standard of 0.033 g/kg of black liquor solids as a 12-hour average for TRS emissions from smelt dissolving tank vents. This standard is identical to the proposed standard, in the EPA guidelines document.

7. Revise the smelt dissolving tank vent particulate standard to reflect daily averaging in lieu of monthly averaging. This is required to protect the environment on a daily basis and to obtain EPA approval.

These changes have been discussed with industry representatives who acknowledge that changes are required to circumvent disapproval by EPA of the Kraft Mill regulations. Industry is currently studying the impact of the proposed regulations on the various mills. It is anticipated that the impact on each mill will become known during the public hearing process.

Neutral Sulfite Mills

The implementation of regulations for neutral sulfite mills is desirable to more effectively control the industry. At the present time the sources are regulated under the sulfite regulations, a different chemical pulping process. To more adequately address emissions from the neutral sulfite industry a regulation tailored to their specific process is required. These changes will also address EPA concerns regarding daily averaging in lieu of monthly averaging and implementation of opacity standards.

The proposed regulations for the Neutral Sulfite Semi-Chemical Pulp mills was developed jointly with representatives of the industry. The proposed regulations are more stringent than existing standards, however, they do not present any problem to the industry.

HEARINGS OFFICER'S REPORT ON RULE ADOPTION

Modifications to Correct Deficiencies, Add Opacity Standards, and Clarify Monitoring Requirements.

Neutral Sulfite Semi-Chemical (NSSC) Pulp Mills
Addition of Regulations Specific to this Source Class.

After the required public notice period, a public hearing was held April 26, 1989 in Portland. The hearing began at 9:00 AM in Room 4A at the DEQ offices, with William J. Fuller as the Hearing Officer. A summary of all oral and written testimony received by the Department at the Hearing and during the comment period, which was extended to June 9, 1989 at the request of industry, follows.

The only oral testimony received was from Douglas S. Morrison of Northwest Pulp & Paper, representing all of the affected Kraft mills. The hearing was attended by twelve industry representatives and one EPA representative. Personnel from individual mills also submitted written comments related primarily to their respective mill.

Concerns were voiced on the topics listed below. The concerns appear to center on the effect of the rules on the ability of some or all of the mills to demonstrate and maintain compliance:

1. Test procedures and methods to document compliance.

2. Continuous emission monitoring practices, including the interpretation of continuous emission monitoring records as it relates to compliance determination.

3. Consideration of emissions from multiple emission points that are combined and discharged from a common stack.

4. Opacity, as well as the interpretation of this emission parameter to determine compliance with particulate standards and as a visible emission limitation similar to other source classes.

5. Specific language changes in response to EPA comments that were still under consideration by the Department at the time of the hearing.

6. Preparation of a draft for public review prior to submittal to the EQC for approval.

7. 24 hour averaging in lieu of monthly averaging.

8. Compatibility of the proposed 35% opacity limitation with the particulate mass emission rate and grain loading requirements.

9. The proposed odor or nuisance condition allowing DEQ to control an odor or nuisance condition at an individual mill upon documentation of the condition.

10. No provisions for an alternate particulate monitoring system where opacity monitoring is not feasible due to excessive stack moisture.

11. Lack of provisions for alternate 24 hour monitoring periods corresponding to individual mill schedules in lieu of calendar day.

12. Potential problems related to the 20% lime kiln opacity limitation for kilns burning fuel oil.

Comments submitted by Lane Regional Air Pollution Authority (LRAPA) supported an hourly opacity standard, elimination of the one hour changeover time allowed to switch from the primary Total Reduced Sulfur incineration system to the secondary system, and more stringent standards for mills that may impact poor air quality areas.

Comments received from the EPA were directed toward the required revisions necessary to make the proposed rules approvable. The comments were made on individual rule subsections. In general, these comments addressed the following:

1. Need for standards to be written in a federally-enforceable manner.

2. Need for time frames in standards which are adequate to monitor and demonstrate compliance with both short term and long term National Ambient Air Quality Standards.

3. Need to meet EPA TRS guidelines unless an alternate demonstration of acceptability is made.

4. The latest Kraft Pulp Mill Rules, approved by EPA, as adopted by EQC on January 26, 1973, will be used by EPA to ensure that no unacceptable relaxations in emission limits are made.

PO\AR1744
Attachments: Excerpts from written testimony. (Additional testimony will be sent separately to the Commission and is availble for review at the Air Quality Division office).

COMMENTS OF THE OREGON KRAFT PULPING INDUSTRY ON REVISIONS OF THE KRAFT MILL EMISSION RULES

(PRESENTED AT THE ODEQ PUBLIC HEARING OF APRIL 26, 1989)

HISTORICAL REVIEW

The kraft pulping industry in Oregon and Washington has been at the leading edge of technology for TRS and particulate emission control. Oregon and Washington adopted the first emission rules or regulations for the industry to comply with in 1969, about 20 years ago. These served as a model that was used by other states. The information developed to document compliance with these rules served as the technical basis for the adoption of the "Kraft Pulping Process New Source Performance Standards" by the EPA which became effective in 1976.

RECENT INDUSTRY COOPERATION

The Oregon mills have been working with the Air Quality Staff of the ODEQ to provide input to this rule making process. The objective is to assure that advances made in control technology are either practiced or implemented in a timely manner while not placing undue stress on the mills. This input has been to some degree focused along fine lines since most of this industry's major emission sources are controlled to levels where the monitoring equipment is operating at or near detection levels. The direction initially taken by the Oregon mills for the control of minor TRS emission sources differs in practice from that published some ten years latter in an EPA document which we are told is now a regulatory requirement. We believe this document is identified as a guideline. Most of the changes that are proposed to the existing Rule are designed to satisfy the EPA State Implementation Plan (SIP) requirements rather than implement changes that will substantially reduce current emission levels and impact on the environment.

In reference to the Kraft Pulp Emission Rule Revision Process the Department must be applauded for involving the Oregon mills. In August of 1988, the kraft mills were notified of the upcoming rule revision. Subsequently, the Department and Oregon Kraft Technical Committee have met and/or exchanged correspondence six times. On February 27, 1989, the Technical Committee submitted precise changes to language in reference to the Proposed Draft distributed by the Department at the end of January. The Committee was extremely disappointed to find that none of the recommended changes were incorporated into the draft included in the Request for EQC Action dated March 3. The

Technical Committee believes that substantial changes must be made to the existing Draft Regulations and that a Public Hearing is premature at this time. Certainly, the Department should not become a slave to a proposed adoption schedule that will compromise the quality and efficacy of the final regulations.

EPA REQUIREMENTS

This revision process is more cumbersome and difficult to the DEQ than similar past efforts. ODEQ must now satisfy EPA Region X while trying to adopt numerical values which are realistic and can be consistently achieved by the industry. In some instances the past exemplary record of the Oregon mills in the control of Kraft pulping process emissions has made this rule revision process more difficult.

As an example of difficulties faced by the ODEQ, the EPA has recently accepted a TRS limit of 40 ppm on a 12-hour averaging basis for some existing DCE kraft recovery furnaces located in a southern state. This higher emission rate was justified on the basis of economic hardships that would have resulted for individual mills. The EPA requirement/guideline to be satisfied for existing DCE recovery furnaces is 20 ppm on a 12-hour averaging basis. The Kraft recovery furnace is potentially the highest emission source of TRS in the Kraft pulping process.

For the past 15 years, the Oregon mills have been complying with a limit of 10 ppm on a 24-hour averaging basis for some DCE recovery furnaces. Those built after 1970 have had to satisfy a 5 ppm 24 hour average TRS emission limit. This longer averaging time has been questioned by the EPA and the need for a change to a shorter time interval indicated. Data developed by the Oregon mills using monitoring records submitted to the DEQ have shown that more excursions above the emission level were reported under the current ODEQ limit than under the EPA requirement/guideline. The truth of the matter is that the current ODEQ TRS emission limit for DCE kraft recovery furnaces is more stringent than that presented as "required". The Department should be praised for its initiative rather than questioned. Hopefully such discrepancies can be resolved without the Oregon Industry being placed at a disadvantage due to past and present exemplary performance and cooperation with the Department.

TIMELINESS OF PUBLIC HEARING AND DISTRIBUTION OF DRAFT DOCUMENT

As previously mentioned, the kraft pulp mills have worked closely with the ODEQ Air Quality Staff to upgrade the existing Rule. In the process the industry has developed technical input that may be of help to address some of the questions posed by the EPA on the Draft Document distributed less than 60 days ago. No questions or comment were received on the technical input provided the ODEQ. A representative from the EPA was present at all three ODEQ/Industry meetings.

Adding to the question of timeliness, the EPA comments which include over 40 questions were made available officially about three weeks ago. We therefore see no reason for the scheduling of this Public Hearing at this time. This is too soon in the process for a meaningful Public Hearing in view of the industry concerns and recent EPA comments to this effort.

MAJOR UNRESOLVED POINTS

There are major questions that resulted from the EPA review and comments that are of concern to the Oregon mills. Some of these were not addressed in the ODEQ/Industry cooperative review.

These include:

1) test procedures and methods to document compliance,
2) continuous emission monitoring practices,
3) the interpretation of continuous emission monitoring records,
4) the considering of emissions that are combined and discharged via a common stack (a practice that was encouraged by the ODEQ and resulted in considerable expenditures that now could penalize the source),
5) opacity as well as the interpretation of this emission parameter, and
6) response to specific language changes suggested by the Oregon Mills.

The Oregon Kraft mills encouraged use of the philosophies in the EPA Kraft Pulping Process New Source Performance Standard to document operation and maintenance in a manner consistent with good air pollution control practices giving consideration to the age of the source. The Draft ODEQ Rule Revision Document covers more than is required by the EPA. This may be the reason for some of the comments from the EPA.

INDUSTRY PRESENT AND PAST COMMITMENT

The mills recognize that Oregon is ahead of other states in the control of emissions from the Kraft pulping process and will retain that distinction. Some of the points of concern to the EPA and the industry might be better addressed in the "Air Contaminant Discharge Permit Process" than in the rule revisions. Together we can satisfy the ODEQ goals, protect the environment, address the EPA requirements, and ensure the continued viability of the Kraft pulping industry.

Enclosed for the record are copies of pertinent correspondence between the Industry Technical Committee and the Air Quality Section of the ODEQ.

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 SIXTH AVENUE
SEATTLE, WASHINGTON 98101

APR 26 1989

REPLY TO ATTN OF: AT-082

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
APR 28 1989
AIR QUALITY CONTROL

Bill Fuller
Air Quality Division
Oregon Department of Environmental Quality
811 S.W. Sixth
Portland, Oregon 97204

Dear Mr. Fuller:

We have reviewed the proposed revisions to Oregon's kraft pulp mill rules and the proposed rules for neutral sulfite semi-chemical pulp mills and have a number of serious concerns with them, primarily with respect to the enforceability of the emission limitations and the consistency of the emission limitation averaging times with the averaging periods of the national ambient air quality standards. These proposals do not comply with EPA's requirements for state implementation plan (SIP) regulations and as such, would not be approvable as revisions to the Oregon SIP if adopted as currently written.

We also have concerns with the emission limits for total reduced sulfur compounds (TRS). Neither the current rules nor the proposed revisions satisfy the Clean Air Act and EPA regulations (40 CFR 60.24) which require that emission limits for each designated facility be no less stringent than the section 111(d) emission guideline. Unless the emission limits are revised or an adequate demonstration is made by ODEQ pursuant to the provisions of 40 CFR 60.24(f), EPA would not be able to approve the TRS provisions as a section 111(d) plan for Oregon.

Enclosed are our detailed comments on these proposed rules and rule revisions. Our comments are in numerical order consistent with the Oregon rules. Furthermore, we have tried to clearly indicate with an asterisk which changes are required for the rules to be approvable, as opposed to comments which are simply questions regarding intent, or recommendations for clarification or improvement.

The currently-approved rules for kraft pulp mills in the Oregon SIP are those rules which were adopted by the Environmental Quality Commission on January 26, 1973 (effective on March 1, 1973) and approved by EPA on August 7, 1975. Please be aware that any revisions which would relax the emission limits in the currently-approved SIP must be accompanied by analyses which demonstrate that any increases in either actual or allowable emissions would not:

(1) cause or contribute to a violation of any national ambient air quality standard;
(2) cause or contribute to a violation of any prevention of significant deterioration increment; or
(3) cause or contribute to visibility impairment in any mandatory federal Class I area.

We are providing these comments for the official public hearing record on these proposed rules and rule revisions. I propose that we meet in the near future to discuss these comments and attempt to arrive at revisions to the pulp mill rules that meet your needs and are approvable by EPA. If you have any questions on our comments or concerns, please contact David Bray at (206) 442-4253.

Sincerely,

George Abel

George Abel, Chief
Air Programs Branch

Enclosure

cc: J. Herlihy, OOO
N. Nikkila, ODEQ

EFFECT OF PROPOSED RULES ON KRAFT MILLS

Mill	Recovery Furnace Stack Opacity: Stack I DIA	Recovery Furnace Stack Opacity: Observed Opacity	24-hour Averaging(4)	Alternate Part. Monitoring Procedure	Compliance Test Methods(6)	Proposed Odor and Nuisance Cond (7)
International Paper, Gardiner						
Rec Furn 1 & 3	8.0 ft	12.0-22.4%	Part of mill(5)	not applicable	minor (5)	slightly affected(5)
Georgia Pacific, Toledo						
Rec Furn 1,2, & 3	13.0 ft	unknown	yes	applicable	Minor or major (particulate impact TBD)	affected
James River, Wauna						
Rec Furn (East)	8.0 ft	11.0-19.0%	yes	not applicable	minor	slightly affected
(West)	8.0 ft	<10.0%				
Boise Cascade, St. Helens						
Rec Furn 2	8.0 ft	40.0-65.-0%(1)	Part of mill(5)	not applicable	minor (5)	slightly affected(5)
Rec Furn 3	13.0 ft	10.0-20.0%				
Willamette Industries, Albany						
Rec Furn 1 & 2(2)	13.3 ft	27.0-35.0%	yes	not applicable	minor	affected
Pope & Talbot, Halsey						
Rec Furn(3)	9.3 ft	15.0-25.0%	part of mill(5)	not applicable	minor (5)	slightly affected(5)
Weyerhaeuser, Springfield						
Rec Furn 3 & 4	13.0 ft	10.0-20.0%	yes	not applicable	minor unless smelt dis. tank TBD.	slightly affected

Notes:
(1) Boise Cascade is installing a new electrostatic precipitator to reduce particulate emissions from the no.2 recovery furnace.
(2) Willamette Industries 2 recovery furnaces share the exhaust stack with 2 lime kilns, 2 smelt dissolving tank vents, and 2 power boilers.
(3) The Pope & Talbot stack is used to exhaust recovery furnace and lime kiln emissions.
(4) Adoption of standards based on 24-hour averaging periods in lieu of 30 day averages increases the potential for exceedance.
(5) Some components of these mills are subject to Federal New Source Performance Standards and therefore are less affected.
(6) Extent to which mill may be effected by increased use of continuous emission monitors for compliance determination and shorter averaging periods.
(7) Potential for rule change to affect mills. Georgia-Pacific has recently made improvements to address nuisance conditions. Willamette Industries is likely to be affected because of the mill location.

PO\AR1746

NEIL GOLDSCHMIDT
GOVERNOR

Environmental Quality Commission

811 SW SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

REQUEST FOR EQC ACTION

Meeting Date: January 19, 1990
Agenda Item: J
Division: HSW
Section: SW/WTP

SUBJECT:

Waste Tires: Adoption of Rule Amendments Regarding Ocean Reefs, Beneficial Use Permits, Reimbursement for Demonstration Projects, Financial Assistance Criteria, and Other Housekeeping Amendments

(Note: the Secretary of State's Office has changed the Division number of the administrative rules for the Waste Tire Program to Division 64; this correction has been made in the proposed rule.)

PURPOSE:

- Deletes ocean reefs made of waste tires from reimbursement eligibility to comply with 1989 legislation.

- Regulates as waste tire "storage" tire fences and other beneficial uses of waste tires that pose environmental risks. (A beneficial use is a use to which whole waste tires are put which creates an on-site economic benefit for the user.)

- Establishes as rule waste tire guidelines which clarify circumstances under which permittees receive financial assistance to remove waste tires.

- Allows use of reimbursement funds in excess of one cent per pound for waste tire recycling demonstration projects to give such projects an additional incentive and to show that recycling uses are feasible.

ACTION REQUESTED:

___ Work Session Discussion
___ General Program Background

___ Potential Strategy, Policy, or Rules
___ Agenda Item ___ for Current Meeting
___ Other: (specify)

___ Authorize Rulemaking Hearing
_X_ Adopt Rules

Proposed Rules	Attachment A
Rulemaking Statements	Attachment B
Fiscal and Economic Impact Statement	Attachment C
Public Notice	Attachment D

___ Issue a Contested Case Order
___ Approve a Stipulated Order
___ Enter an Order

Proposed Order	Attachment ___

___ Approve Department Recommendation

___ Variance Request	Attachment ___
___ Exception to Rule	Attachment ___
___ Informational Report	Attachment ___
___ Other: (specify)	Attachment ___

DESCRIPTION OF REQUESTED ACTION:

The Environmental Quality Commission is requested to adopt proposed new rules and rule revisions pertaining to waste tire storage, hauling and cleanup, and reimbursement to persons using waste tires.

The Department of Environmental Quality (DEQ, Department) proposal includes the following changes from the previous draft:

1. Regulation of beneficial uses of waste tires: instead of a separate beneficial use storage permit category, refine the definition of "storage" to include waste tires being stored as fences and other uses with similar environmental risks. Such uses would then be regulated as waste tire storage sites.

2. Providing financial assistance for cleanup of waste tire piles:

   a) Increase the income threshold for receiving assistance from 80 percent of the U.S. Department of Housing and Urban Development (HUD) median income to 100 percent of the median income.

b) Increase the maximum amount of assistance for which an individual permittee may be eligible.

AUTHORITY/NEED FOR ACTION:

X	Required by Statute: ORS 459.785; 1989 SB 482 Enactment Date: 1987 (HB 2022); 1989	Attachment E
X	Statutory Authority: ORS 459.740, .770, .785	Attachment ___
___	Pursuant to Rule: _____	Attachment ___
___	Pursuant to Federal Law/Rule: _____	Attachment ___
___	Other:	Attachment ___
X	Time Constraints: (explain)	

- See Staff Report, Attachment H (Agenda Item U, October 20, 1989 EQC Meeting).

DEVELOPMENTAL BACKGROUND:

___	Advisory Committee Report/Recommendation	Attachment ___
X	Hearing Officer's Report/Recommendations	Attachment F
X	Response to Testimony/Comments	Attachment G
X	Prior EQC Agenda Items: (list) Agenda Item U, 10/20/89 EQC Meeting - Request for hearing authorization for present rulemaking. Agenda Item K, 4/14/89 EQC Meeting - Amendments to Permitting Requirements for Waste Tire Storage Sites and Waste Tire Carriers Agenda Item G, 7/8/88 EQC Meeting - Waste Tire Program Permitting Requirements	Attachment H
___	Other Related Reports/Rules/Statutes:	Attachment ___
X	Supplemental Background Information - Guidelines, Financial Assistance	Attachment I

Note: This staff report discusses only those changes made since the hearing authorization as a result of public testimony and staff discussion. For a complete discussion of the issues, please refer to Attachment H (Agenda Item U, 10/20/89 EQC Meeting, Request for Hearing Authorization).

REGULATED/AFFECTED COMMUNITY CONSTRAINTS/CONSIDERATIONS:

The regulation of waste tires being stored as beneficial uses generated the greatest amount of public comment, both from persons in favor of the new permit category, or simply commenting on the standards, and from persons opposed.

Persons favoring the concept of regulating "beneficial uses" of waste tires included a county planner, a solid waste permittee, and a county vector control official. These persons have had experience with problem tire sites, such as tire fences which have offered breeding places for vectors (insects such as mosquitoes which can spread disease). In general, they recommended stricter regulation of beneficial uses to avoid creating de facto tire dumps that will have to be cleaned up in the future.

Persons who would be required to obtain beneficial use permits (for tire fences, tires used for planters, tires used for holding down tarps) either opposed the concept altogether, or did not object to some sort of "registration," but were opposed to the fees and financial assurance requirements.

Several commented that their use of waste tires pre-dates the statute, and should be exempt from regulation. The Attorney General has advised us that that interpretation is not correct; although storage of waste tires may not have been regulated in the past, waste tires stored as of July 1, 1988 became subject to regulation. Other persons felt their beneficial use of tires should be rewarded through the reimbursement rather than penalized through regulation and fees. Several commented that they were using tires, not "storing" them, and should be exempt from regulation as waste tire storage sites on that basis. Nearly all commented that the fees were too high, and the financial assurance requirement would be prohibitive.

The Waste Tire Advisory Committee supported the waste tire beneficial use storage permit proposal as put forth by the Department in the draft rule. Earlier, the Committee had supported allowing an exemption to the permit requirement for beneficial uses that involved 1,000 or fewer passenger tires (if no environmental problems were created), while requiring a regular waste tire storage permit for uses with over 1,000 tires.

Two other persons commented on other aspects of the reimbursement program. A representative of Recycling Advocates supported the proposed higher reimbursement level

for demonstration projects recycling waste tires. Another person objected to removing waste tires in ocean reefs from eligibility from the reimbursement, stating that this is a promising use of waste tires; however 1989 legislation requires this exclusion.

No other comments were received within the comment period on the proposed rule changes.

The Department's current proposal for regulating waste tires stored as beneficial uses would have a slightly different fiscal impact on the general public than that analyzed in the Fiscal and Economic Impact Statement prepared for the draft rule. Changes include:

1. Application fee.

   a) Some people who were required to submit a fee in the proposed rules now are not subject to regulation, and do not have to submit a fee.

   b) For those who do have to submit a fee, there is no longer a range of $40 - $100; the fee is a flat $100.

2. Annual compliance fee.

   a) Same comment as 1.a) above.

   b) Instead of a range of $0 - $50, the annual compliance fee is a flat $50.

PROGRAM CONSIDERATIONS:

1. Regulation of Waste Tires Being Stored as Beneficial Uses. The Department was charged to regulate storage of waste tires. The statutory definition of "store" is broad: "the placing of waste tires in a manner that does not constitute disposal of the waste tires." The law does not address the issue of "beneficial use," and there are a number of different uses which could be defined as beneficial: fences, retaining walls, holding down tarps or plastic covers, or as planters.

The Department is particularly concerned about the unregulated use of waste tires as fences. Unless specific control measures are used (such as drilling or filling the

tires), fences serve as breeding grounds for mosquitoes and other vectors. In a fence, tires are placed next to and on top of each other, and may be subject to fire especially if not filled with dirt. Over time, fences may fall over, becoming simply a "pile" of waste tires. Tire fences are often overgrown with weeds such as blackberries, which makes removal difficult. The Department is aware of individuals who have charged a fee to accept waste tires, intending to "build a fence" some day but have simply accumulated large numbers of tires. We believe the Department should regulate the storage of waste tires being used beneficially when such uses create environmental risks, such as in fences.

If, however, storage of waste tires being used beneficially does not create environmental risks, the Department does not believe that such uses should be regulated as tire "storage."

Therefore, the Department proposes to refine the definition of "storage" and to withdraw the beneficial use permit category proposed in the draft rule.

"Storage" would include waste tires being stored as fences and for other uses creating similar environmental risks; such uses would then be regulated as waste tire storage sites. "Storage" would exclude from regulation other uses of waste tires, such as filled planters, unless the Department specifically determines such uses would cause environmental risks.

Tires stored for beneficial use which poses an environmental risk would be required to obtain a waste tire storage permit. However, we are proposing lower permit fees for storage as a beneficial use ($100 application fee and $50 annual compliance fee) reflecting lower administrative costs for this type of storage permit. Specific storage standards are proposed for tire fences (drilling or filling with dirt). Additional latitude is given the Department to waive other storage standards (such as maximum length of tire piles) which might not be appropriate for fences or other regulated beneficial uses. All persons storing over 100 tires and wanting to use them for a beneficial use would have to request a determination from the Department that such use is or is not regulated as "storage."

The Department has issued one "beneficial use exemption" (allowed under current program rules). About 40 persons have applied for beneficial use exemptions, most of them (23) for

tire fences. Fourteen persons have applied for uses such as planters and retaining walls; these would likely not be regulated under the proposed rule. If all of the others applied for waste tire storage permits as beneficial uses, it would generate $4,050 in fees in the first year, and $1,300 annually thereafter. However, it is likely that some of the persons interested in tire fences would withdraw if they had to pay application and annual fees.

2. Criteria for financial assistance to waste tire storage permittees for help in cleaning up waste tire piles. No testimony was received on this part of the proposed rule. However, since developing the draft rule, the Department has gained additional experience in applying the financial assistance criteria, and proposes changes from the draft.

The draft rule included an income threshold for determining when "financial hardship" is present. It required a permittee to "spend down" their own funds until they reached that threshold; then the Department would pay a percentage of the remaining cleanup cost. After reviewing several applications for financial assistance, the Department now believes that those requirements are too stringent. The applicant is hit with a "double whammy" -- the spend-down requirement, to reach a rather low income level; and, in addition, a requirement to pay a percentage of the remaining cleanup costs. To moderate this requirement, the Department is proposing to:

a) Raise the income threshold in the draft from 80 percent of median, as determined by the Department of Housing and Urban Development (HUD), to the HUD median income ($32,700), rather than 80% of the median. (Eighty percent of HUD median income varies with family size and county, but ranges from about $18,000 to $29,000.)

b) Drop the requirement for an additional percentage contribution to cleanup costs for those applicants subject to the spend-down.

We are also proposing to add provisions giving the Department discretion to further assist a permittee below the income level who also has especially modest assets or one with higher assets but age 65 or over; such a permittee's contribution to cleanup costs could be reduced to a flat fee of $1,500.

An example follows of how the criteria would be applied:

> A waste tire storage permittee is an individual with an average annual household income of $50,000. The cost of cleaning up the waste tires is estimated to be $40,000. The individual is required to contribute his own funds in the amount that his income exceeds the state median income ($50,000 - $32,700 = $17,300 contribution from permittee). The Department pays the remainder of the cleanup cost ($40,000 - $17,300 = $22,700 paid by the Department).

The Department discussed these changes with the Waste Tire Advisory Committee at their November 8 meeting; the Committee's consensus was to follow the Department's proposal.

ALTERNATIVES CONSIDERED BY THE DEPARTMENT:

1. Request adoption of the draft rules as proposed in Attachment A, including:

   a) Refining the definition of "storage" to include those beneficial uses of tires causing environmental risks (specifically, fences), but excluding uses without environmental risks; requiring fences and similar uses to obtain waste tire storage permits; and adding special permit requirements for such uses.

   b) Establishing general criteria for financial assistance to waste tire storage permittees, including raising the income threshold to HUD median (from 80 percent of HUD median), and reducing the permittee's required contribution to the cleanup under some circumstances.

2. Establish a waste tire beneficial use storage permit with requirements tailored to various types of beneficial use. (Draft rule as originally proposed)

3. Modify the proposed rule to exclude all "beneficial uses" of waste tires from the definition of tire "storage," thus excluding such uses entirely from Department regulation.

4. Modify the reimbursement part of the rule to allow reimbursement for some "beneficial" uses of whole tires now excluded, by rule, from the reimbursement.

DEPARTMENT RECOMMENDATION FOR ACTION, WITH RATIONALE:

The Department recommends that the Commission adopt Alternative 1.

The draft rule had the general support of the Advisory Committee[1], including the changes in the proposed rule concerning financial assistance criteria. It provides for appropriate provisions to regulate those "beneficial uses" of waste tires which create environmental risks, rather than exempting them from regulation. However, it excludes from Department regulation those beneficial uses of waste tires which do not create environmental risks. The proposed fees for storage permits allowing "beneficial uses" are lower than regular storage permit fees. If the fees were lowered further, the Department's administrative costs would not be covered.

Adopting the financial assistance guidelines as proposed will clarify for the public the criteria the Department will use in granting public benefits. The changes from the draft rule will make the criteria more equitable for lower-income permittees.

The Department does not propose to change the criteria in the reimbursement section (OAR 340-64-110(3)) which exclude most uses of whole tires from reimbursement eligibility. Several persons testified that such uses (planters, fences, etc.) should receive a reimbursement, as they contribute to finding uses for waste tires. The statute states that the object of the reimbursement is to "enhance the market for waste tires." The existing rule specifies that uses of whole waste tires "in which the user incurs little or no costs, the use is of limited economic value, and the use does not take place within a market" are not eligible for reimbursement. The Department believes that those characteristics apply to uses which do not enhance the market for waste tires, and thus should not be eligible for the reimbursement. As discussed above, such "uses" may to the contrary cause environmental problems.

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[1] See exception noted on pages 4 and 5 of Attachment H.

CONSISTENCY WITH STRATEGIC PLAN, AGENCY POLICY, LEGISLATIVE POLICY:

The proposed rule is consistent with legislative intent to regulate storage of waste tires (including storage when tires are being used beneficially if environmental risk may be created), while excluding from regulation beneficial uses of waste tires that do not cause environmental risks.

The rule follows agency policy on specifying by rule what criteria are to be used in determining public benefits.

ISSUES FOR COMMISSION TO RESOLVE:

1. Should tire fences and other beneficial uses that pose environmental risks be regulated as tire storage?

2. Should persons using whole waste tires for beneficial purposes be made eligible for the reimbursement rather than (or perhaps in addition to) being regulated?

3. In providing financial assistance to remove waste tires, should the Department fund the entire remaining cost of the cleanup after the permittee has been required to contribute their own funds up to the thresholds set by the Department?

INTENDED FOLLOWUP ACTIONS:

File adopted rules with the Secretary of State's Office.

Notify interested persons of the rule adoption.

Notify persons who had applied for a "beneficial use exemption" that they will be required to obtain a determination from the Department as to whether their proposed use creates environmental risks and is thus subject to regulation; if so, provide waste tire storage permit application forms and process applications as they are received.

For waste tire demonstration projects: notify potentially interested persons including local governments of the potential for higher reimbursement for waste tire recycling demonstration projects. Work with potential applicants to develop such projects.

Approved:

Section: Steve Greenwood

Division: Stephanie Hallock

Director: Tom Bispham for Fred Hansen

Report Prepared By: Deanna Mueller-Crispin

Phone: 229-5808

Date Prepared: January 4, 1990

dmc
reeffin.eqc
1/4/90

ATTACHMENT A

Proposed Revisions: 12/29/89

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY
ADMINISTRATIVE RULES
DIVISION 64 - SOLID WASTE MANAGEMENT: WASTE TIRES

Proposed additions to rule are underlined.
Proposed deletions are in brackets [].

Purpose

340-64-005 The purpose of these rules is to prescribe requirements, limitations and procedures for storage, collection, transportation, and disposal of waste tires; and to prescribe procedures for using the Waste Tire Recycling Account to reimburse users of waste tires, and to clean up tire piles.

Definitions

340-64-010 As used in these rules unless otherwise specified:

(1) "Abatement" -- the processing or removing to an approved storage site of waste tires which are creating a danger or nuisance, following a legal nuisance abatement procedure.

(2) "Beneficial use" -- storage of waste tires in a way that creates an on-site economic benefit, other than from processing or recycling, to the owner of the tires, such as in using the tires for raised-bed planters.

(3) [(2)] "Buffings" -- a product of mechanically scarifying a tire surface, removing all trace of the surface tread, to prepare the casing to be retreaded.

(4) [(3)] "Commission" -- the Environmental Quality Commission.

(5) [(4)] "Common carrier" -- any person who transports persons or property for hire or who publicly purports to be willing to transport persons or property for hire by motor vehicle; or any person who leases, rents, or otherwise provides a motor vehicle to the public and who in connection therewith in the regular course of business provides, procures, or arranges for, directly, indirectly, or by course of dealing, a driver or operator therefor.

(6) [(5)] "Department" -- the Department of Environmental Quality.

(7) [(6)] "Director" -- the Director of the Department of Environmental Quality.

(8) [(7)] "Dispose" -- to deposit, dump, spill or place any waste tire on any land or into any water as defined by ORS 468.700.

(9) "DMV" -- Oregon Department of Motor Vehicles.

(10) [(8)] "End user":

(a) For energy recovery: the person who utilizes the heat content or other forms of energy from the incineration or pyrolysis of waste tires, chips or similar materials.

(b) For other eligible uses of waste tires: the last person who uses the tires, chips, or similar materials to make a product with economic value. If the waste tire is processed by more than one person in becoming a

product, the "end user" is the last person to use the tire as a tire, as tire chips, or as similar materials. A person who produces tire chips or similar materials and gives or sells them to another person to use is not an end user.

(11) [(9)] "Energy recovery" -- recovery in which all or a part of the waste tire is processed to utilize the heat content, or other forms of energy, of or from the waste tire.

(12) [(10)] "Financial assurance" -- a performance bond, letter of credit, cash deposit, insurance policy or other instrument acceptable to the Department.

(13) [(11)] "Land disposal site" -- a disposal site in which the method of disposing of solid waste is by landfill, dump, pit, pond or lagoon.

(14) "Nonocean waters" -- fresh waters, tidal and nontidal bays and estuaries as defined in ORS 541.605.

(15) [(12)] "Oversize waste tire" -- a waste tire exceeding a 24.5-inch rim diameter, or which is excluded from Federal excise tax (except a passenger tire).

(16) [(13)] "Passenger tire" -- a tire with less than an 18-inch rim diameter.

(17) "Passenger tire equivalent" -- a measure of mixed passenger and truck tires, where five passenger tires are considered to equal one truck tire.

(18) [(14)] "Person" -- the United States, the state or a public or private corporation, local government unit, public agency, individual, partnership, association, firm, trust, estate or any other legal entity.

(19) [(15)] "Private carrier" -- any person who operates a motor vehicle over the public highways of this state for the purpose of transporting persons or property when the transportation is incidental to a primary business enterprise, other than transportation, in which such person is engaged.

(20) [(16)] "PUC" -- the Public Utility Commission of Oregon.

(21) "Recycle" or "recycling" -- any process by which solid waste materials are transformed into new products in such a manner that the original products may lose their identity.

(22) [(17)] "Retreader" -- a person engaged in the business of recapping tire casings to produce recapped tires for sale to the public.

(23) [(18)] "Rick" -- to horizontally stack tires securely by overlapping so that the center of a tire fits over the edge of the tire below it.

(24) [(19)] "Store" or "storage" -- the placing of waste tires in a manner that does not constitute disposal of the waste tires. "Storage" includes the beneficial use of waste tires as fences and other uses with similar potential for causing environmental risks. "Storage" does not include such beneficial uses as planters except when the Department determines such uses create environmental risks.

(25) [(20)] "Tire" -- a continuous solid or pneumatic rubber covering encircling the wheel of a vehicle in which a person or property is transported, or by which they may be drawn, on a highway. This does not include tires on the following:

(a) A device moved only by human power.

(b) A device used only upon fixed rails or tracks.

(c) A motorcycle.

(d) An all-terrain vehicle, including but not limited to, three-wheel and four-wheel ATVs, dune buggies and other similar vehicles. All-terrain vehicles do not include jeeps, pick-ups and other four-wheel drive vehicles that may be registered, licensed and driven on public roads in Oregon.

(e) A device used only for farming, except a farm truck.

(26) [(21)] "Tire carrier" -- a person who picks up or transports waste tires for the purpose of storage or disposal. This does not include the following:

(a) Solid waste collectors operating under a license or franchise from a local government unit and who transport fewer than 10 tires at a time.

(b) Persons who transport fewer than five tires with their own solid waste for disposal.

(27) [(22)] "Tire processor" -- a person engaged in the processing of waste tires.

(28) [(23)] "Tire retailer" -- a person in the business of selling new replacement tires at retail, whose local business license or permit (if required) specifically allows such sale.

(29) [(24)] "Tire derived products" -- tire chips or other usable materials produced from the physical processing of a waste tire.

(30) [(25)] "Truck tire" -- a tire with a rim diameter of between 18 and 24.5 inches.

(31) [(26)] "Waste tire" -- a tire that is no longer suitable for its original intended purpose because of wear, damage or defect, and is fit only for:

(a) Remanufacture into something else, including a recapped tire; or

(b) Some other use which differs substantially from its original use.

(32) [(27)] "Waste Tires Generated in Oregon" -- Oregon is the place at which the tire first becomes a waste tire. A tire casing imported into Oregon for potential recapping, but which proves unusable for that purpose, is not a waste tire generated in Oregon. Examples of waste tires generated in Oregon include but are not limited to:

(a) Tires accepted by an Oregon tire retailer in exchange for new replacement tires.

(b) Tires removed from a junked auto at an auto wrecking yard in Oregon.

Waste Tire Storage Permit Required

340-64-015 (1) After July 1, 1988, a person who stores more than 100 waste tires in this state is required to have a waste tire storage permit from the Department. The following are exempt from the permit requirement:

(a) A tire retailer who stores not more than 1,500 waste tires for each retail business location.

(b) A tire retreader who stores not more than 3,000 waste tires outside for each individual retread operation.

(2) Piles of tire derived products are not subject to regulation as waste tire storage sites if they have an economic value.

(3) If tire derived products have been stored for over six months, the Department shall assume they have no economic value, and the site operator must either:

(a) Apply for a waste tire storage site permit and comply with storage standards and other requirements of OAR 340-64-005 through 340-64-045; or

(b) Demonstrate to the Department's satisfaction that the tire derived products do have an economic value by presenting receipts, orders, or other documentation acceptable to the Department for the tire derived products.

(4) After July 1, 1988, a permitted solid waste disposal site which stores more than 100 waste tires, is required to have a permit modification addressing the storage of tires from the Department.

(5) The Department may issue a waste tire storage permit in two stages to persons required to have such a permit by July 1, 1988. The two stages are a "first-stage" or limited duration permit, and a "second-stage" or regular permit.

(6) Owners or operators of existing sites not exempt from the waste tire storage site permit requirement shall apply to the Department by June 1, 1988 for a "first-stage" permit to store waste tires. A person who wants to establish a new waste tire storage site shall apply to the Department at least 90 days before the planned date of facility construction. A person applying for a waste tire storage permit on or after September 1, 1988 shall apply for a "second-stage" or regular permit.

[(7) The Department may grant an exemption to the requirement to obtain a waste tire storage permit for whole waste tires if the applicant can demonstrate to the Department's satisfaction that:

[(a) The applicant is using the tires for a permanent useful purpose with a documented economic value; and

[(b) The waste tires used in this way will meet state and local government requirements for vector control, health, fire control, safety and other environmental concerns; and

[(c) The use otherwise is not in conflict with local ordinances and state and Federal laws and administrative rules.]

(7) A person who is using or wants to use over 100 waste tires for a beneficial use must request the Department to determine whether that use constitutes "storage" pursuant to OAR 340-64-010(24), and is thus subject to the waste tire storage site permit requirement.

(8) Use of waste tires which is regulated under ORS 468.750 or ORS 541.605 through 541.695 and for which a permit has been acquired is not subject to additional regulation under OAR 340-64.

(9) [(8)] Failure to conduct storage of waste tires according to the conditions, limitations, or terms of a permit or these rules, or failure to obtain a permit, is a violation of these rules and shall be subject to civil penalties as provided in OAR Chapter 340, Division 12 or to any other enforcement action provided by law. Each day that a violation occurs is a separate violation and may be the subject of separate penalties.

(10) [(9)] After July 1, 1988 no person shall advertise or represent himself/herself as being in the business of accepting waste tires for storage without first obtaining a waste tire storage permit from the Department.

(11) [(10)] Failure to apply for or to obtain a waste tire storage permit, or failure to meet the conditions of such permit constitutes a nuisance.

"Second-Stage" or Regular Permit

340-64-020 (1) An application for a "second-stage" or regular waste tire storage permit shall:

(a) Include such information as shall be required by the Department, including but not limited to:

(A) A description of the need for the waste tire storage site[;]_.

(B) The zoning designation of the site, and a written statement of compatibility of the proposed waste tire storage site with the acknowledged local comprehensive plan and zoning requirements from the local government unit(s) having jurisdiction.

(C) A description of the land uses within a one-quarter mile radius of the facility, identifying any buildings and surface waters.

(D) A management program for operation of the site, which includes but is not limited to:

(i) Anticipated maximum number of passenger and/or truck tires to be stored at the site for any given one year period.

(ii) Present and proposed method of disposal, and timetable.

(iii) How the facility will meet the technical tire storage standards in OAR 340-64-035 for both tires currently stored on the site, and tires to be accepted.

(iv) How the applicant proposes to control mosquitoes and rodents, considering the likelihood of the site becoming a public nuisance or health hazard, proximity to residential areas, etc.

(E) A proposed contingency plan to minimize damage from fire or other accidental or intentional emergencies at the site. It shall include but not be limited to procedures to be followed by facility personnel, including measures to be taken to minimize the occurrence or spread of fires and explosions.

(F) The following maps:

(i) A site location map showing section, township, range and site boundaries.

(ii) A site layout drawing, showing size and location of all pertinent man-made and natural features of the site (including roads, fire lanes, ditches, berms, waste tire storage areas, structures, wetlands, floodways and surface waters).

(iii) A topographic map using a scale of no less than one inch equals 200 feet, with 40 foot intervals on 7.5 minute series.

(b) Submit proof that the applicant holds financial assurance acceptable to the Department in an amount determined by the Department to be necessary for waste tire removal processing, fire suppression or other measures to protect the environment and the health, safety and welfare, pursuant to OAR 340-64-025 and 340-64-035.

(c) Submit an application fee of $250 (or for applications for a waste tire storage permit to operate a site where tires will be stored as a beneficial use, an application fee of $100), and an annual compliance fee as listed in OAR 340-64-025. Fifty dollars ($50) of the application fee shall be nonrefundable. The rest of the application fee may be refunded in whole or in part when submitted with an application if either of the following conditions exists:

(A) The Department determines that no permit will be required;

(B) The applicant withdraws the application before the Department has granted or denied the application.

(d) Demonstrate that the applicant has long-term control of the site.

(2) A "second-stage" permit may be issued for up to five years. "Second-stage" storage permits and combined tire carrier/storage permits shall expire on January 1.

(3) The Department may waive any of the requirements in subsections (1)(a)(E) (contingency plan), (1)(a)(F) (maps) or (1)(b) (financial assurance) of this rule for a waste tire storage site in existence on or before January 1, 1988, if it is determined by the Department that the site is not likely to create a public nuisance, health hazard, air or water pollution or other environmental problem. This waiver shall be considered for storage sites which are no longer receiving additional tires, and are under a closure schedule approved by the Department. The site must still meet operational standards in OAR 340-64-035.

(4) A permittee who wants to renew his/her "second-stage" storage permit or combined tire carrier/storage permit shall apply to the Department for permit renewal at least 90 days before the permit expiration date. The renewal shall include such information as required by the Department. It shall include a permit renewal fee of $125, or $50 in the case of a permittee storing tires as a beneficial use, and a written statement of compatibility of the beneficial use with the acknowledged local comprehensive plan and zoning requirements from the local government unit(s) having jurisdiction.

(5) A permittee may request from the Department a permit modification to modify its operations as allowed in an unexpired permit. A permit modification initiated by the permittee shall include a permit modification fee of $25.

Financial Assurance

340-64-022 (1) The Department shall determine for each applicant the amount of financial assurance required under ORS 459.720(c) and OAR 340-64-020 (1)(b) and 340-64-021 (1)(b). The Department shall base the amount on the estimated cost of cleanup for the maximum number of waste passenger tire[s] equivalents allowed by the permit to be stored at the storage site or the estimated cost of fire suppression. The amount of financial assurance required for permittees storing waste tires as a beneficial use could be as low as $0 if the use meets applicable operational and storage standards in OAR 340-64-035, and the Department determines that there will no need to remove the tires.

(2) The Department will accept as financial assurance only those instruments listed in and complying with requirements in OAR 340-61-034(3)(c)(A) through (G) or OAR 340-71-600(5)(a) through (c).

(3) The financial assurance shall be filed with the Department.

(4) The Department shall make any claim on the financial assurance within one year of any notice of proposed cancellation of the financial assurance.

Permittee Obligations

340-64-025 (1) Each person who is required by ORS 459.715 and 459.725, and OAR 340-64-015 and 340-64-055, to obtain a permit shall:

(a) Comply with the provisions of ORS 459.705 to 459.790, these rules and any other pertinent Department requirements.

(b) Inform the Department in writing within 30 days of company changes that affect the permit, such as business name change, change from individual to partnership and change in ownership.

(c) Allow to the Department, after reasonable notice, necessary access to the site and to its records, including those required by other public agencies, in order for the monitoring, inspection and surveillance program developed by the Department to operate.

(2) Each person who is required by ORS 459.715 and OAR 340-64-015 to obtain a permit shall submit to the Department by February 1 of each year an annual compliance fee for the coming calendar year in the amount of $250, except that the holder of a waste tire storage permit allowing operation of the site as a beneficial use, shall submit an annual compliance fee in the amount of $50, effective February 1, 1989. The permittee shall submit evidence of required financial assurance when the annual compliance fee is submitted. For the first year's operation, the full annual compliance fee shall apply if the waste tire storage site permit is issued on or before October 1. Any new waste tire storage site issued a permit after October 1 shall not owe an annual compliance fee until February 1 of the following year.

(3) Each waste tire storage site permittee whose site accepts waste tires after the effective date of these rules shall also do the following as a condition to holding the permit:

(a) Maintain records on approximate numbers of waste tires received and shipped, and tire carriers transporting the tires so as to be able to fulfill the reporting requirements in subsection (3)(c) of this rule. The permittee shall issue written receipts upon receiving loads of waste tires. Quantities may be measured by aggregate loads or cubic yards, if the permittee documents the approximate number of tires included in each. These records shall be maintained for a period of three years, and shall be available for inspection by the Department after reasonable notice.

(b) Maintain a record of the name (and the carrier permit number, if applicable) of the tire carriers not exempted by OAR 340-64-055(4) who deliver waste tires to the site and ship waste tires from the site, together with the quantity of waste tires shipped with those carriers.

(c) Submit a report containing the following information annually by February 1 of 1990 and each year thereafter:

(A) Number of waste tires received at the site during the year covered by the report;

(B) Number of waste tires shipped from the site during the year covered by the report;

(C) A list (and tire carrier permit number, if applicable) of the tire carriers not exempted by OAR 340-64-055(4) delivering waste tires to the site and shipping waste tires from the site.

(D) The number of waste tires located at the site at the time of the report.

(d) Notify the Department within one [working day] month of the [name] vehicle license plate number and name, if possible, of any unpermitted tire carrier (who is not exempt under OAR 340-64-055(4)) who delivers waste tires to the site after January 1, 1989.

(e) If required by the Department, prepare for approval by the Department and then implement:

(A) A plan to remove some or all of the waste tires stored at the site. The plan shall follow standards for site closure pursuant to OAR 340-64-045. The plan may be phased in, with Department approval.

(B) A plan to process some or all of the waste tires stored at the site. The plan shall comply with ORS 459.705 through 459.790 and OAR 340-64-035.

(f) Maintain the financial assurance required under OAR 340-64-020(1)(b) and 340-64-022.

(g) Maintain any other plans and exhibits pertaining to the site and its operation as determined by the Department to be reasonably necessary to protect the public health, welfare or safety or the environment.

(4) The Department may waive any of the requirements of subsections (3)(a) through (3)(c) (D) of this rule for a waste tire storage site in existence on or before January 1, 1988. This waiver shall be considered for storage sites which are no longer receiving additional tires and are under a closure schedule approved by the Department.

Department Review of Applications for Waste Tire Storage Sites

340-64-030 (1) Applications for waste tire storage permits shall be processed in accordance with the Procedures for Issuance, Denial, Modification and Revocation of Permits as set forth in OAR Chapter 340, Division 14, except as otherwise provided in OAR Chapter 340, Division 64.

(2) Applications for permits shall be complete only if they:

(a) Are submitted on forms provided by the Department, accompanied by all required exhibits, and the forms are completed in full and are signed by the applicant and the property owner or person in control of the premises;

(b) Include plans and specifications as required by OAR 340-64-018, and 340-64-020.

(c) Include the appropriate application fee pursuant to OAR 340-64-020(1)(c).

(3) An application may be accepted as complete for processing if all required materials have been received with the exception of the financial assurance required under OAR 340-64-020(1)(b) and 340-64-022, and the written statement of compatibility of the proposed site with the acknowledged local comprehensive plan and zoning requirements from the local government unit(s) having jurisdiction. However, the Department shall not issue a "second-stage" waste tire storage permit unless required financial assurance and land use compatibility have been received.

(4) Following the submittal of a complete waste tire storage permit application, the director shall cause notice to be given in the county where the proposed site is located in a manner reasonably calculated to notify interested and affected persons of the permit application.

(5) The notice shall contain information regarding the location of the site and the type and amount of waste tires intended for storage at the

site. In addition, the notice shall give any person substantially affected by the proposed site an opportunity to comment on the permit application.

(6) The Department may conduct a public hearing in the county where a proposed waste tire storage site is located.

(7) Upon receipt of a completed application, the Department may deny the permit if:

(a) The application contains false information.

(b) The application was wrongfully accepted by the Department.

(c) The proposed waste tire storage site would not comply with these rules or other applicable rules of the Department.

(d) There is no clearly demonstrated need for the proposed new, modified or expanded waste tire storage site.

(e) The proposed waste tire storage site would in the Department's opinion cause environmental, safety or health hazards.

(8) Based on the Department's review of the waste tire storage site application, and any public comments received by the Department, the director shall issue or deny the permit. The director's decision shall be subject to appeal to the Commission and judicial review under ORS 183.310 to 183.550.

Standards for Waste Tire Storage Sites

340-64-035 (1) All permitted waste tire storage sites must comply with the technical and operational standards in this [part] rule.

(2) The holder of a "first-stage" waste tire storage permit shall comply with the technical and operational standards in this part if the site receives any waste tires after the effective date of these rules.

(3) A waste tire storage site shall not be constructed or operated in a wetland, waterway, floodway, 25-year floodplain, or any area where it may be subjected to submersion in water.

(4) Operation. A waste tire storage site shall be operated in compliance with the following standards:

(a) An outdoor waste tire pile shall have no greater than the following maximum dimensions:

(A) Width: 50 feet.

(B) Area: 15,000 square feet.

(C) Height: 6 feet.

(b) A 50-foot fire lane shall be placed around the perimeter of each waste tire pile. Access to the fire lane for emergency vehicles must be unobstructed at all times.

(c) Waste tire piles shall be located at least 60 feet from buildings.

(d) [(c)] Waste tires to be stored for one month or longer shall be ricked, unless the Department waives this requirement.

(e) [(d)] The permittee shall operate and maintain the site in a manner which controls mosquitoes and rodents if the site is likely to become a public nuisance or health hazard and is close to residential areas.

(f) [(e)] A sign shall be posted at the entrance of the storage site stating operating hours, cost of disposal and site rules if the site receives tires from persons other than the operator of the site.

(g) [(f)] No operations involving the use of open flames or blow torches shall be conducted within 25 feet of a waste tire pile.

(h) [(g)] An approach and access road to the waste tire storage site shall be maintained passable for any vehicle at all times. Access to the site shall be controlled through the use of fences, gates, or other means of controlling access.

(i) [(h)] If required by the Department, the site shall be screened from public view.

(j) [(i)] An attendant shall be present at all times the waste tire storage site is open for business, if the site receives tires from persons other than the operator of the site.

(k) [(j)] The site shall be bermed or given other adequate protection if necessary to keep any liquid runoff from potential tire fires from entering waterways.

(L) [(k)] If pyrolytic oil is released at the waste tire storage site, the permittee shall remove contaminated soil in accordance with applicable rules governing the removal, transportation and disposal of the material.

(m) In the case of tire fences, the following are also required:

(A) For vector control:

(i) Drilling a two-inch hole into each quadrant of the downside of each tire used in the fence; or

(ii) Filling each individual waste tire with dirt; or

(iii) Another treatment approved in advance by the Department.

(B) A 20-foot fire lane shall be maintained on land under control of the permittee along the entire length of the tire fence. Access to the fire lane for emergency vehicles must be unobstructed and clear of vegetation at all times.

(C) Weeds shall not be allowed to grow on or over the tire fence.

(D) A tire fence shall not be constructed wider than one tire width.

(n) In the case of waste tires stored for seasonal agricultural uses: during the annual period(s) during which the waste tires are not being used for the beneficial use, they shall be stored to meet the standards in this rule.

(5) The Department may impose additional storage requirements for an individual site which are reasonably necessary to protect the public health or the environment.

[(5)] (6) Waste tires stored indoors shall be stored under conditions that meet those in The Standard for Storage of Rubber Tires, NFPA 231D-1986 edition, adopted by the National Fire Protection Association, San Diego, California.

[(6)] (7) The Department may approve exceptions to the preceding technical and operational standards for a company processing waste tires if:

(a) The average time of storage for a waste tire on that site is one month or less; and

(b) The Department and the local fire authority are satisfied that the permittee has sufficient fire suppression equipment and/or materials on site to extinguish any potential tire fire within an acceptable length of time.

[(7)] (8) Tire-derived products subject to regulation under OAR 340-64-015 (3) shall be subject to standards in this rule except that piles of such products may be up to 12 feet high if approved by local fire officials.

[(8)] (9) A permittee may petition the [Commission] director to grant a variance to the technical and operational standards in this [part] rule for a waste tire storage site in existence on or before January 1, 1988, or

for a waste tire storage site using tires for a beneficial use. The [Commission] director may by specific written variance waive certain requirements of these technical and operational standards when circumstances of the waste tire storage site location, operating procedures, and fire control protection indicate that the purpose and intent of these rules can be achieved without strict adherence to all of the requirements.

Modification of Solid Waste Disposal Site Permit Required

340-64-050 (1) After July 1, 1988, a solid waste disposal site permitted by the Department shall not store over 100 waste tires unless the permit has been modified by the Department to authorize the storage of waste tires.

(2) A solid waste disposal site permittee who accumulates fewer than [1,500] 2,000 waste tires at any given time and has a contract with a tire carrier to transport for proper disposal all such tires whenever sufficient tires have been accumulated to make up a truckload of not more than [1,500] 1,800 tires from that site, is not subject to the permit modification required by section (1) or to the requirements of section (5) of this rule. However, such permittee's solid waste operating plan shall be modified to include such activity. Nevertheless, if such permittee stores over 100 tires on-site for more than six months, permit modification pursuant to section (3) shall be required to allow such storage.

(3) A solid waste disposal site permittee currently storing over 100 waste tires at its site shall apply to the Department by June 1, 1988, for a permit modification to store over 100 waste tires. A solid waste disposal site permittee who wants to begin storing over 100 waste tires at its site shall apply to the Department for a permit modification at least 90 days before the planned date of such storage.

(4) The permittee shall apply to store a maximum number of waste tires which shall not be exceeded in one year.

(5) In storing waste tires, the permittee shall comply with all rules for waste tire storage sites in OAR 340-64-015 through 340-64-025, and 340-64-035 through 340-64-045, including a management plan for the waste tires, record keeping for waste tires received and sent, contingency plan for emergencies, and financial assurance requirements.

(6) Modification of an existing solid waste permit to allow waste tire storage does not require submission of a solid waste permit filing fee or application processing fee under OAR 340-61-115.

(7) The solid waste permittee should consider storing the waste tires or tire-derived products in a manner that will not preclude their future recovery and use, should that become economically feasible.

Chipping Standards for Solid Waste Disposal Sites

340-64-052 (1) After July 1, 1989, a person may not dispose of waste tires in a land disposal site permitted by the Department unless:

(a) The waste tires are processed in accordance with the standards in section (2) of this rule; or

(b) The waste tires were located for disposal at that site before July 1, 1989; or

(c) The Commission finds that the reuse or recycling of waste tires is not economically feasible pursuant to OAR 340-64-053; or

(d) The waste tires are received from a person exempt from the requirement to obtain a waste tire carrier permit under OAR 340-64-055 (4) (a) and (b)[.]; and

(e) Such disposal is not prohibited by the land disposal site's solid waste permit.

(2) To be landfilled under subsection (1)(a) of this rule, waste tires must be processed to meet the following criteria:

(a) The volume of 100 unprepared randomly selected whole tires in one continuous test period must be reduced by at least 65 percent of the original volume. No single void space greater than 125 cubic inches may remain in the randomly placed processed tires; or

(b) The tires shall be reduced to an average chip size of no greater than 64 square inches in any randomly selected sample of 10 tires or more. No more than 40 percent of the chips may exceed 64 square inches.

(3) The test to comply with (2)(a) shall be as follows:

(a) Unprocessed whole tire volume shall be calculated by [multiplying the circular area, with a diameter equal to the outside diameter of the tire, by the maximum perpendicular width of the tire. The total test volume shall be the sum of the individual, unprocessed tire volumes] randomly placing the 100 unprepared randomly selected whole tires in a rectangular container and multiplying the depth of unprocessed tires by the bottom area of the container;

(b) Processed tire volume shall be determined by randomly placing the processed tire test quantity in a rectangular container and leveling the surface. It shall be calculated by multiplying the depth of processed tires by the bottom area of the container.

Economic Feasibility of Reuse or Recycling Waste Tires

340-64-053 (1) Reuse or recycling of oversize waste tires and solid rubber tires is not economically feasible, and they are thus exempt from the chipping requirement under OAR 340-64-052 (2).

(2) The standard for "economic feasibility" of tire reuse or recycling shall be based on the following:

(a) The Department shall conduct a survey at least once every biennium of the charges for accepting waste passenger and truck tires at each permitted land disposal site in the state.

(b) The Department shall use the survey results to determine the mean and modal charges for passenger and truck tire disposal in the state.

(c) Either the mean or the modal charge, whichever is greater, shall be used as the base for the standard.

(d) The standard for passenger tires shall be the base plus ten percent.

(e) The standard for truck tires shall be the base plus 25 percent.

(3) Reuse or recycling of a waste tire shall be deemed economically feasible if the cost to reuse or recycle the tire is not more than the standard.

(4) If the charge for waste tire disposal at the local land disposal site is more than the standard:

(a) The local per tire disposal charge shall be the standard used to determine whether the cost of reuse or recycling is economically feasible; and

(b) Reuse or recycling shall be deemed economically feasible if the cost to reuse or recycle the passenger or truck tire is equal to or less than the charge for tire disposal at the local land disposal site.

(5) The director shall determine whether it is economically feasible to reuse or recycle waste tires in the service area of a land disposal site permittee.

(6) Only a land disposal site permittee may apply to the director to make that determination. Such application may be made after the effective date of this rule. Application shall be made on a form provided by the Department.

(7) An applicant shall submit written documentation such as bids from contractors of the cost of at least two of the best available options to reuse or recycle waste tires in quantities which could reasonably be expected to be generated in the applicant's service area. Cost shall be determined for waste tires collected at the applicant's land disposal site. The applicant may also submit documentation for costs of reuse or recycling from one or more other locations within its service area where quantities of waste tires are generated.

(8) Reuse or recycling options whose costs should be considered include transporting the waste tires to:

(a) The nearest permitted waste tire storage site accepting waste tires.

(b) A waste tire processing site.

(9) If the Department knows of a reasonable alternative for reuse or recycling of waste tires that the applicant did not consider, it may require the applicant to document costs of that option.

(10) The Department may require any additional information necessary to act upon the application.

(11) If the Department requires additional information, the application shall not be considered complete until such information is received.

(12) The director shall approve or deny a complete application within 90 days of its receipt.

(13) Application for this exemption shall not be made more often than once a year.

(14) The Department may review biennially whether any exemption granted under this part should continue in force.

Waste Tire Carrier Permit Required

340-64-055 (1) After January 1, 1989, any person engaged in picking up, collecting or transporting waste tires for the purpose of storage or disposal is required to obtain a waste tire carrier permit from the Department.

(2) After January 1, 1989, no person shall collect or haul waste tires or advertise or represent himself/herself as being in the business of a waste tire carrier without first obtaining a waste tire carrier permit from the Department.

(3) After January 1, 1989, any person who gives, contracts or arranges with another person to collect or transport waste tires for storage or disposal shall only deal with a person holding a waste tire carrier permit from the Department, unless the person is exempted by subsection (4)(a) or (b) of this rule.

(4) The following persons are exempt from the requirement to obtain a waste tire carrier permit:

(a) Solid waste collectors operating under a license or franchise from any local government unit and who transport fewer than 10 tires at any one time.

(b) Persons transporting fewer than five tires.

(c) Persons transporting tire-derived products to a market.

(d) Persons who use company-owned vehicles to transport tire casings for the purposes of retreading between company-owned or company-franchised retail tire outlets and company-owned or company-franchised retread facilities while transporting casings between those retail tire outlets and those retread facilities.

(e) Tire retailers or retreaders who transport used tires between their retail tire outlet or retread operation and their customers, after taking them from customers in exchange for other tires, or for repair or retreading while transporting used tires between their retail tire outlet or retread operation and their customers.

(f) The United States, the State of Oregon, any county, city, town or municipality in this state, or any department of any of them except when vehicles they own or operate are used as a waste tire carrier for hire.

(5) Persons exempt from the waste tire carrier permit requirement under subsection (4)(d) of this rule shall nevertheless notify the Department of this practice on a form provided by the Department.

(6) A combined tire carrier/storage permit may be applied for by tire carriers:

(a) Who are subject to the carrier permit requirement; and

(b) Whose business includes or wants to establish a site which is subject to the waste tire storage permit requirement.

(7) The Department shall supply a combined tire carrier/storage permit application to such persons. Persons applying for the combined tire carrier/storage permit shall comply with all other regulations concerning storage sites and tire carriers established in these rules.

(8) Persons who transport waste tires for the purpose of storage or disposal must apply to the Department for a waste tire carrier permit within 90 days of the effective date of this rule. Persons who want to begin transporting waste tires for the purpose of storage or disposal must apply to the Department for a waste tire carrier permit at least 90 days before beginning to transport the tires.

(9) Applications shall be made on a form provided by the Department. The application shall include such information as required by the Department. It shall include but not be limited to:

(a) A description, license number and registered vehicle owner for each truck used for transporting waste tires.

(b) The PUC authority number under which each truck is registered.

(c) Where the waste tires will be stored or disposed of.

(d) Any additional information required by the Department.

(10) A corporation which has more than one separate business location may submit one waste tire carrier permit application which includes all the locations. All the information required in section (9) of this rule shall be supplied by location for each individual location. The corporation shall be responsible for amending the corporate application whenever any of the required information changes at any of the covered locations.

(11) An application for a tire carrier permit shall include a $25 non-refundable application fee and an annual compliance fee as listed in OAR 340-64-063.

(12) An application for a combined tire carrier/storage permit shall include a $250 application fee, $50 of which shall be nonrefundable, and an annual compliance fee as listed in OAR 340-64-063. The rest of the application fee may be refunded in whole or in part when submitted with an application if either of the following conditions exists:

(a) The Department determines that no permit will be required;

(b) The applicant withdraws the application before the Department has granted or denied the application.

(13) The application for a waste tire carrier permit shall also include a bond in the sum of $5,000 in favor of the State of Oregon. In lieu of the bond, the applicant may submit financial assurance acceptable to the Department. The Department will accept as financial assurance only those instruments listed in and complying with requirements in OAR 340-61-034(3)(c)(A) through (G) and OAR 340-71-600(5)(a) through (c).

(14) The bond or other financial assurance shall be filed with the Department and shall provide that:

(a) In performing services as a waste tire carrier, the applicant shall comply with the provisions of ORS 459.705 through 459.790 and of this rule; and

(b) Any person injured by the failure of the applicant to comply with the provisions of ORS 459.705 through 459.790 or this rule shall have a right of action on the bond or other financial assurance in the name of the person. Such right of action shall be made to the principal or the surety company within two years after the injury.

(15) Any deposit of cash, certificate of deposit, letter of credit, or negotiable securities submitted under sections (13) and (14) of this rule shall remain in effect for not less than two years following termination of the waste tire carrier permit.

(16) [(15)] A waste tire carrier permit or combined tire carrier/storage permit shall be valid for up to three years.

(17) [(16)] Waste tire carrier permits shall expire on March 1. Waste tire carrier permittees who want to renew their permit must apply to the Department for permit renewal by February 1 of the year the permit expires. The application for renewal shall include all information required by the Department, and a permit renewal fee.

(18) [(17)] A waste tire carrier permittee may add another vehicle to its permitted waste tire carrier fleet if it does the following before using the vehicle to transport waste tires:

(a) Submits to the Department:

(A) The information required in OAR 340-64-055 (9); and

(B) A fee of $25 for each vehicle added.

(b) Displays on each additional vehicle decals from the Department pursuant to OAR 340-64-063 (1)(b).

(19) [(18)] A waste tire carrier permittee may lease additional vehicles to use under its waste tire carrier permit without adding that vehicle to its fleet pursuant to section (18) [(17)] of this rule, under the following conditions:

(a) The vehicle may not transport waste tires when under lease for a period of time exceeding 30 days ("short-term leased vehicles"). If the lease is for a longer period of time, the vehicle must be added to the permittee's permanent fleet pursuant to section (18) [(17)] of this rule.

(b) The permittee must give previous written notice to the Department that it will use short-term leased vehicles.

(c) The permittee shall pay a $25 annual compliance fee in advance to allow use of short-term leased vehicles, in addition to any other fees required by OAR 340-64-055 (11), (12) and (18)[(17)], and 340-64-063 (7) and (9).

(e) Every permittee shall keep a daily record of all vehicles leased on short term, with beginning and ending dates used, license numbers, PUC authority, PUC temporary pass or PUC plate/marker, and person from whom the vehicles were leased. The daily record must be kept current at all times, subject to verification by the Department. The daily record shall be maintained at the principal Oregon office of the permittee. The daily record shall be submitted to the Department each year as part of the permittee's annual report required by OAR 340-64-063(5).

(f) The permittee's bond or other financial assurance required under OAR 340-64-055 (13) must provide that, in performing services as a waste tire carrier, the operator of a vehicle leased by the permittee shall comply with the provisions of ORS 459.705 through 459.790 and of this rule.

(g) The permittee is responsible for ensuring that a leased vehicle complies with OAR 340-64-055 through 340-64-063, except that the leased vehicle does not have to obtain a separate waste tire carrier permit pursuant to OAR 340-64-055 (1) while operating under lease to the permittee.

(20) (19) A holder of a combined tire carrier/storage permit may purchase special block passes from the Department. A person located outside of Oregon who is a holder of a waste tire carrier permit issued by the Department may also purchase special block passes from the Department if he or she also holds a valid permit allowing storage of waste tires issued by the responsible state or local agency of that state, and if such permit is deemed acceptable by the Department. The block passes will allow the permittee to use a common carrier or private carrier which does not have a waste tire carrier permit. Use of a block pass will allow the unpermitted common carrier or private carrier to haul waste tires under the permittee's waste tire carrier permit.

(a) Special block passes shall be available in sets of at least five, for a fee of $5 per block pass. Only a holder of a combined tire carrier/storage permit may purchase block passes. Any unused block passes

shall be returned to the Department when the permittee's waste tire permit expires or is revoked.

(b) The permittee is responsible for ensuring that a common carrier or private carrier operating under a block pass from the permittee complies with OAR 340-64-055 through 340-64-063, except that the common carrier or private carrier does not have to obtain a separate waste tire carrier permit pursuant to OAR 340-64-055(1) while operating under the permittee's block pass.

(c) A block pass may be valid for a maximum of ten days and may only be used to haul waste tires between the origin(s) and destination(s) listed on the block pass.

(d) A separate block pass shall be used for each trip hauling waste tires made by the unpermitted common carrier or private carrier under the permittee's waste tire permit. (A "trip" begins when waste tires are picked up at an origin, and ends when they are delivered to a proper disposal site(s) pursuant to OAR 340-64-063(4).)

(e) The permittee shall fill in all information required on the block pass, including name of the common carrier or private carrier, license number, PUC authority if applicable, PUC temporary pass or PUC plate/marker if applicable, beginning and ending dates of the trip, address(es) of where the waste tires are to be picked up and where they are to be delivered, and approximate numbers of waste tires to be transported.

(f) Each block pass shall be in triplicate. The permittee shall send the original to the Department within five days of the pass's beginning date, one copy to the common carrier or private carrier which shall keep it in the cab during the trip, and shall keep one copy.

(g) The permittee shall be responsible for ensuring that any common carrier or private carrier hauling waste tires under the permittee's waste tire permit has a properly completed block pass.

(h) While transporting waste tires, the common carrier or private carrier shall keep a block pass properly filled out for the current trip in the cab of the vehicle.

(i) An unpermitted common carrier or private carrier may operate as a waste tire carrier using a block pass no more than three times in any calendar quarter. Before a common carrier or private carrier may operate as a waste tire carrier more than three times a quarter, he or she must first apply for and obtain a waste tire carrier permit from the Department.

[(20) For the purposes of ORS 459.995(1), the transportation of waste tires under OAR 340-64-055 through 340-64-063 is deemed to be collection of solid waste, and violations of these rules are subject to a civil penalty under the Solid Waste Management Schedule of Civil Penalties, OAR 340-12-065.]

Waste Tire Carrier Permittee Obligations

340-64-063 (1) Each person required to obtain a waste tire carrier permit shall:

(a) Comply with OAR 340-64-025(1).

(b) Display current decals with his or her waste tire carrier identification number issued by the Department when transporting waste

tires. The decals shall be displayed on the sides of the front doors of each truck used to transport tires.

(c) Maintain the financial assurance required under ORS 459.730(2)(d).

(2) When a waste tire carrier permit expires or is revoked or suspended, the former permittee shall immediately remove all waste tire permit decals from its vehicles[.] and remove the permit from display. The permittee shall surrender a revoked or suspended permit, and certify in writing to the Department within fourteen days of revocation or suspension that all Department decals have been removed from all vehicles.

(3) Leasing, loaning or renting of permits is prohibited. No permit holder shall engage in any conduct which falsely tends to create the appearance that services are being furnished by the holder when in fact they are not.

(4) A waste tire carrier shall leave waste tires for storage or dispose of them only in a permitted waste tire storage site, at a land disposal site permitted by the Department, or at another site approved by the Department, such as a site authorized to accept waste tires under the laws or regulations of another state.

(5) Waste tire carrier permittees shall record and maintain for three years the following information regarding their activities for each month of operation:

(a) The approximate quantity of waste tires collected. Quantities may be measured by aggregate loads or cubic yards, if the carrier documents the approximate number included in each load;

(b) Where or from whom the waste tires were collected;

(c) Where the waste tires were deposited. The waste tire carrier shall keep receipts or other written materials documenting where all tires were stored or disposed of.

(6) Waste tire carrier permittees shall submit to the Department an annual report that summarizes the information collected under section (5) of this rule. The information shall be broken down by quarters. This report shall be submitted to the Department annually as a condition of holding a permit together with the annual compliance fee or permit renewal application.

(7) A holder of a waste tire carrier permit shall pay to the Department an annual fee in the following amount:

Annual compliance fee (per company or corporation)	$175
Plus annual fee per vehicle used for hauling waste tires	25

(8) A holder of a waste tire carrier permit who is a private carrier meeting requirements of subsection (8)(b) of this rule shall, instead of the fees under section (7) of this rule, pay to the Department an annual fee in the following amount:

(a) Annual compliance fee	$25

(b) To qualify for the fee structure under subsection (8)(a) of this rule, a private carrier must:

(A) Use a vehicle with a combined weight not exceeding [8,000] 26,000 lbs;

(B) Transport only such waste tires as are generated incidentally to his business; and

(C) Use the vehicle to transport the waste tires to a proper disposal site.

(c) If a vehicle owned or operated by a private carrier is used for hire in hauling waste tires, the annual fee structure under section (7) of this rule shall apply.

(9) A holder of a combined tire carrier/storage permit shall pay to the Department by February 1 of each year an annual compliance fee for the coming calendar year in the following amount:

Annual compliance fee (per company or corporation)	$250
Plus annual fee per vehicle used for hauling waste tires	$ 25

(10) A holder of a waste tire carrier permit shall pay to the Department by February 15 of each year an annual compliance fee for the coming year (March 1 through February 28) as required by sections (7) through (9) of this rule. The permittee shall provide evidence of required financial assurance when the annual compliance fee is submitted. For the first year's operation, the full fee(s) shall apply if the carrier permit is issued on or before December 1. Any new waste tire carrier permit issued after December 1 shall not owe an annual compliance fee(s) until March 1.

(11) The fee is $10 for a decal to replace one that was lost or destroyed.

(12) The fee for a waste tire carrier permit renewal is $25.

(13) The fee for a permit modification of an unexpired waste tire carrier permit, initiated by the permittee, is $15. Adding a vehicle to the permittee's fleet pursuant to OAR 340-64-055 (18) [(17)] does not constitute a permit modification.

(14) A waste tire carrier permittee should check with the PUC and DMV to ensure that he or she complies with all PUC and DMV regulations.

Uses of Waste Tires Eligible for Reimbursement

340-64-110 (1) Uses of waste tires which may be eligible for the reimbursement include:

(a) Energy recovery. Energy recovery shall include:

(A) Burning of whole or chipped tires as tire-derived fuel. The tire-derived fuel shall be burned only in boilers which have submitted test burn data to the Department and whose air quality permits are not violated by burning tire-derived fuel in the quantities for which reimbursement is requested. If the fuel is burned out of state, such burning shall be eligible for the reimbursement only if it does not cause an air quality permit issued by the competent out-of-state authority to be violated.

(B) Incineration or pyrolysis of whole tires or tire chips to produce electricity or process heat or steam, either for use on-site, or for sale.

(b) Other eligible uses. Other eligible uses shall include:

(A) Pyrolysis of tires to produce combustible hydrocarbons and other salable products.

(B) Use of tire chips as road bed base[, driveway cover,] and the like.

(C) Recycling of waste tire strips, chips, shreds, or crumbs to manufacture a new product. The new product may be produced by physical or chemical processes such as:

(i) Weaving from strips of waste tires.

(ii) Stamping out products from the tire casing.

(iii) Physically blending tire chips with another material such as asphalt.

(iv) Physically or chemically bonding tire chips or crumbs with another material to form a new product such as tire chocks.

(D) Use of whole tires:

(i) In artificial fishing reefs in nonocean waters of this state, pursuant to OAR 340-46, and subject to review by the Oregon Department of Fish and Wildlife.

(ii) For the manufacture of new products which have a market value such as buoys.

(2) If a proposed use of waste tires would in the Department's opinion cause environmental, safety or health hazards, the Department may disallow the partial reimbursement. An example of a health hazard would be use of tire chips for playground cover without removing the steel shreds.

(3) The following uses are not considered appropriate for use of the reimbursement, and shall not be eligible for the reimbursement:

(a) Reuse as a vehicle tire.

(b) Retreading.

(c) Use of tires as riprap.

(d) Use of whole or split tires for erosion control or retaining walls.

(e) Use of whole or split tires for tire fences, barriers, dock and racetrack bumpers, ornamental planters, agricultural uses such as raised beds, or other uses in which the user incurs little or no cost, the use is of limited economic value, and the use does not take place within a market.

(f) Use of tire buffings.

Application for Reimbursement

340-64-120 (1) Application for reimbursement for use of waste tires shall be made on a form provided by the Department.

(2) An applicant may apply in advance for certification ("advance certification") from the Department that his or her proposed use of waste tires shall be eligible for reimbursement.

(a) Such advance certification may be issued by the Department if the applicant proves to the Department's satisfaction that:

(A) The use being proposed is an eligible use under OAR 340-64-110;

(B) The applicant is an eligible end user under OAR 340-64-010(10) [(6)] and OAR 340-64-115;

(C) The applicant will be able to document that the waste tires used were generated in Oregon; and

(D) The applicant will be able to document the number of net pounds of waste tires used.

(b) The applicant must still apply to the Department for reimbursement for waste tires actually used, and document the amount of that use, pursuant to sections (3) and (4) of this rule.

(c) Advance certification issued by the Department to an applicant shall not guarantee that the applicant shall receive any reimbursement funds. The burden of proof shall be on the applicant to document that the use for which reimbursement is requested actually took place, and corresponds to the use described in the advance certification.

(3) An applicant may apply to the Department directly for the reimbursement each quarter without applying for advance certification. The application shall be on a form provided by the Department.

(4) To apply for reimbursement for the use of waste tires an applicant shall:

(a) Apply to the Department no later than thirty (30) days after the end of the quarter in which the waste tires were used.

(b) Unless the applicant holds an advance certification for the use of waste tires for which they are applying, prove to the Department's satisfaction that:

(A) The use being proposed is an eligible use under OAR 340-64-010; and

(B) The applicant is an eligible end user under OAR 340-64-010(10) [(6)] and OAR 340-64-115.

(c) Provide documentation acceptable to the Department, such as bills of lading, that the tires, chips or similar materials used were from waste tires generated in Oregon.

(d) Provide documentation acceptable to the Department of the net amount of pounds of waste tires used (including embedded energy from waste tires) in the quantity of product sold, purchased or used. Examples of acceptable documentation are:

(A) For tire-derived fuel: receipts showing tons of tire-derived fuel purchased.

(B) For incineration of whole tires producing process heat, steam or electricity: records showing net tons of rubber burned.

(C) For pyrolysis plants producing electricity or process heat or steam: billings showing sales of kilowatt hours or tons of steam produced by the tire pyrolysis, calculations certified by a professional engineer showing how many net pounds of tires were required to generate that amount of energy, and receipts or bills of lading for the number of waste tires actually used to produce the energy.

(D) For pyrolysis technologies producing combustible hydrocarbons and other salable products: billings to customers showing amounts of pyrolysis-derived products sold (gallons, pounds, etc.) with calculations certified by a professional engineer showing the number of net pounds of waste tires, including embedded energy, used to produce those products.

(E) For end users of tire strips, chunks, rubber chips, crumbs and the like in the manufacture of another product: billings to purchasers for the

product sold, showing net pounds of rubber used to manufacture the amount of product sold.

(F) For end users of tire chips in rubberized asphalt, or as road bed material[, driveway cover] and the like: billings or receipts showing the net pounds of rubber used.

(G) For end users of whole tires: documentation of the weight of the tires used, exclusive of any added materials such as ballast or ties.

(5) The Department may require any other information necessary to determine whether the proposed use is in accordance with Department statutes and rules.

(6) An applicant for a reimbursement for use of waste tires, and the person supplying the waste tires, tire chips or similar materials to the applicant, for which the reimbursement is requested, are subject to audit by the Department (or Secretary of State) and shall allow the Department access to all records during normal business hours for the purpose of determining compliance with this rule.

(7) In order to apply for a reimbursement, an applicant must have used an equivalent of at least 10,000 pounds of waste tires or 500 passenger tires after the effective date of this rule. Waste tires may be used in more than one quarter to reach this threshold amount.

Basis of Reimbursement

340-64-130 (1) In order to be eligible for reimbursement, the use of waste tires must occur after the effective date of this rule.

(2) Any one waste tire shall be subject to only one request for reimbursement.

(3) The amount of the reimbursement shall be based on $.01 per pound for rubber derived from waste tires which is used by an applicant.

(4) The Department may authorize reimbursement funds for demonstration projects at a rate exceeding the above per pound amount if:

(a) The waste tires are recycled or reused, rather than processed for energy recovery;

(b) There is no established market in Oregon for the use which is to be demonstrated;

(c) The total funds spent on any given project does not exceed $100,000 per project;

(d) The project is located in Oregon; and

(e) Advance certification for the project is obtained from the Department.

(5) [(4)] The amount of rubber used shall be based on sales of product containing the rubber; or if the applicant is an end user who consumes and does not further sell the tires, chips or similar materials, the reimbursement shall be based on net pounds of materials purchased or used.

(6) Notwithstanding (3) above, the amount of reimbursement to an end user for an eligible use of tires shall not exceed the cost to the end user of using the tires.

Criteria for Use of Funds to Clean Up Permitted Waste Tire Sites

340-64-155 (1) The Department shall base its recommendations on use of cleanup funds on potential degree of environmental risk created by the tire pile. The following special circumstances shall serve as criteria in determining the degree of environmental risk. The criteria, listed in priority order, include but are not limited to:

(a) Susceptibility of the tire pile to fire. In this, the Department shall consider:

(A) The characteristics of the pile that might make it susceptible to fire, such as how the tires are stored (height and bulk of piles), the absence of fire lanes, lack of emergency equipment, presence of easily combustible materials, and lack of site access control;

(B) How a fire would impact the local air quality; and

(C) How close the pile is to natural resources or property owned by third persons that would be affected by a fire at the tire pile.

(b) Other characteristics of the site contributing to environmental risk, including susceptibility to mosquito infestation.

(c) Other special conditions which justify immediate cleanup of the site.

(d) A local fire district or a local government deems the site to be a danger or nuisance, or an environmental concern that warrants immediate removal of all waste tires.

(2) In determining the degree of environmental risk involved in the two criteria above, the Department shall consider:

(a) Size of the tire pile (number of waste tires).

(b) How close the tire pile is to population centers. The Department shall especially consider the population density within five miles of the pile, and location of any particularly susceptible populations such as hospitals.

(3) In the case of a waste tire storage permittee which is also a local government:

(a) The following special circumstances may also be considered by the Department in determining whether financial assistance to remove waste tires is appropriate:

(A) The tire pile was in existence before January 1, 1988.

(B) The waste tires were collected from the public, and the local government did not charge a fee to collect the tires for disposal.

(b) If both the above conditions are present, the Department may assist the local government with up to 80 percent of the net cost of tire removal.

(4) [(3)] Financial hardship on the part of the permittee or responsible party shall be an additional criterion in the Department's determination of the amount of cleanup funds appropriate to be spent on a site. Financial hardship means that strict compliance with OAR 340-64-005 through 340-64-045 would result in substantial curtailment or closing of the permittee's business or operation, or the bankruptcy of the permittee. The burden of proof of such financial hardship is on the permittee. In interpreting when "financial hardship" may result, the Department may use the following as guidelines:

(a) In the case of a permittee who is not a corporation or a local government, the cost of cleaning up the tires:

(A) Would cause the permittee's annual gross household income to fall below the state median income as determined by the U.S. Department of Housing and Urban Development; and/or

(B) Would reduce the permittee's net assets (excluding one automobile and homestead) to below $20,000.

(b) In the case of a permittee which is a corporation, the cost of complying with the tire removal schedule required by the Department:

(A) Would cause the annual gross household income of each of the corporate officers who are also corporate stockholders to fall below the state median income as determined by the U.S. Department of Housing and Urban Development; and

(B) Would reduce the net assets (excluding basic assets of building, equipment and inventory) of the corporation to below $20,000; and

(C) Would, as certified in a statement from the corporation's accountant or attorney, cause substantial curtailment or closing of the corporation, or bankruptcy.

(5) The Department may assist a permittee with the cost of tire removal to the following extent:

(a) For a permittee whose income and/or assets are above the thresholds in section (4) of this rule: the permittee is required to contribute its own funds to the cost of tire removal up to the point where "financial hardship," as specified in section (4), would ensue. The Department may pay the remaining cost of the cleanup.

(b) For a permittee whose income and assets fall below the thresholds in section (4) of this rule, the Department may pay up to the following percentage of the cost of cleanup:

(A) For an individual or a partnership: up to 90 percent of the cost (plus any cost of waste tire storage permit fees paid by the permittee);

(b) For a corporation: up to 80 percent of the cost.

(6) The Department may reduce to $1,500 the permittee's required contribution to the cleanup cost in the case of a permittee whose net equity in assets exempt under section (4) of this rule is less than $50,000, or who is over 65 years of age and whose net exempt assets are less than $100,000.

(7) A permittee may receive financial assistance for no more than one complete waste tire removal or processing job.

Procedure for Use of Cleanup Funds for a Permitted Waste Tire Storage Site

340-64-160. (1) The Department may recommend to the Commission that cleanup funds be made available to partially pay for cleanup of a permitted waste tire storage site, if all of the following are met:

(a) The site ranks high in the criteria making it an environmental risk, pursuant to OAR 340-64-155.

(b) The permittee submits to the Department a compliance plan to remove or process the waste tires. The plan shall include:

(A) A detailed description of the permittee's proposed actions;

(B) A time schedule for the removal and or processing, including interim dates by when part of the tires will be removed or processed.

(C) An estimate of the net cost of removing or processing the waste

tires using the most cost-effective alternative. This estimate must be documented.

(c) The plan receives approval from the Department.

(2) A permittee claiming financial hardship under OAR 340-64-155(4) [(3)] must document such claim through submittal of the permittee's state and federal tax returns for the past three years, business statement of net worth, and similar materials. If the permittee is a business, the income and net worth of other business enterprises in which the principals of the permittee's business have a legal interest must also be submitted.

(3) If the Commission finds that use of cleanup funds is appropriate, the Department shall agree to pay part of the Department-approved costs incurred by the permittee to remove or process the waste tires. Final payment shall be withheld until the Department's final inspection and confirmation that the tires have been removed or processed pursuant to the compliance plan.

Note: The Division number of these rules has been changed to Division 64.

oar62.889

ATTACHMENT B

RULEMAKING STATEMENTS
for
Proposed New Rules and Revisions to Existing Rules
Pertaining to Storage and Transportation of Waste Tires,
Cleanup of Tire Piles,
and Eligibility for Reimbursement for Use of Waste Tires

OAR Chapter 340, Division 62

Pursuant to ORS 183.335, these statements provide information on the intended action to adopt a rule.

STATEMENT OF NEED:

Legal Authority

The 1987 Oregon Legislature passed the Waste Tire Act regulating the disposal, storage and transportation of waste tires, and establishing a fund to clean up waste tire piles and reimburse persons who use waste tires. ORS 459.785 requires the Commission to adopt rules and regulations necessary to carry out the provisions of ORS 459.705 to 459.790. ORS 459.770 requires the Commission to adopt rules to carry out the provision of that section pertaining to reimbursement for use of waste tires. The Commission is adopting two new rules, and revisions to existing rules which are necessary to carry out the provisions of the Waste Tire Act.

Need for the Rule

Improper storage and disposal of waste tires represents a significant problem throughout the State. The Waste Tire Act establishes a comprehensive program to regulate the disposal, storage and transportation of waste tires. The purpose of the reimbursement is to stimulate the market for waste tires, providing an alternative to landfill disposal. The new rule is needed to properly regulate storage of tires. The rule revisions are needed to make changes the Department has found necessary in administering this program.

Principal Documents Relied Upon

a. Oregon Revised Statutes, Chapter 459.
b. Oregon Administrative Rules, Chapter 340, Division 62.

LAND USE CONSISTENCY STATEMENT:

The proposed rules appear to affect land use and appear to be consistent with Statewide Planning Goals and Guidelines.

With regard to Goal 6 (Air, Water and Land Resources Quality), the rules provide for the proper storage and disposal of waste tires. The law provides that anyone storing 100 waste tires after July 1, 1988 must obtain a waste tire storage permit from the Department of Environmental Quality. The new rule creates a new category of storage permit, Waste Tire Beneficial Use Storage Permit, for persons who are storing tires but using them for a beneficial purpose. Storage standards are established for this permit category. The rule also incorporates a prohibition, passed by the 1989 Legislature, for ocean reefs made of waste tires to receive the waste tire program reimbursement. This use of waste tires can be problematic in turbulent waters. The rule also establishes criteria for financial assistance to waste tire storage site permittees to help remove their waste tires. This will promote proper cleanup and disposal of waste tires.

With regard to Goal 11 (Public Facilities and Services), criteria are also established for financial assistance for municipalities which have waste tire storage permits. This would assist local governments to properly dispose of waste tires.

The rules do not appear to conflict with other Goals.

Public comment on any land use issue involved is welcome and may be submitted in the manner described in the accompanying NOTICE OF PUBLIC HEARING.

It is requested that local, state and federal agencies review the proposed action and comment on possible conflicts with their programs affecting land use and with Statewide Planning Goals within their expertise and jurisdiction.

The Department of Environmental Quality intends to ask the Department of Land Conservation and Development to mediate any apparent conflicts brought to our attention by local, state or federal authorities.

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With regard to Goal 11 (Public Facilities and Services), criteria are also established for financial assistance for municipalities which have waste tire storage permits. This would assist local governments to properly dispose of waste tires.

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rmkgst.ref

ATTACHMENT C

FISCAL AND ECONOMIC IMPACT STATEMENT

I. Introduction

The rule establishes a new permit category of waste tire storage permit, Waste Tire Beneficial Use Storage Permit. ORS 459.715 requires persons storing over 100 waste tires after July 1, 1988 to obtain a storage permit from the Department of Environmental Quality. This new permit category would apply to persons who store tires but use them for a beneficial purpose. It establishes lower permit fees than for "regular" waste tire storage permits, and sets appropriate standards for storage.

The rule also establishes criteria for granting financial assistance to waste tire storage permittees (individuals, corporations and municipalities) to assist in removal or processing of waste tires. Demonstration of financial hardship is required.

The rule also would allow the Department to reimburse persons using waste tires in recycling demonstration projects at a higher rate than that already established by rule for other uses of waste tires.

II. General Public

The general public is not directly affected economically by these rule changes. In cases where the Department assists a municipality to remove waste tires, the taxpayers in that municipality may benefit indirectly by not having to pay additional rates to clean up the tires.

Members of the public who are storing or want to store over 100 tires as a "beneficial use" will be required to obtain a Waste Tire Beneficial Use Storage Permit, while under the existing rule they could possibly have obtained an exemption to the permit requirement. They will be required to submit an application fee ($40 - $100, depending on the use), and annual compliance fees, ranging from $0 to $50. They may also be required to present financial assurance (a bond, for example) to the Department that the tires will be properly removed when the beneficial use is ended. Some additional expense will be required to submit plans, maps, proof of land use compatibility, and other materials to the Department. Time required could range from four to 10 hours to prepare these materials. Total first-year cost of obtaining the beneficial use permit (including administrative time) could be from $80 to $350. Annual costs thereafter could run from $0 to $175. There may be 50 to 100 potentially affected persons in the

State; the Department currently has 21 applications on file. Persons may also choose to remove or not collect the tires rather than apply for a permit.

Members of the public who also hold regular Waste Tire Storage Permits may be eligible for financial assistance in removing tires under the new criteria. The statute provides that such financial assistance may be given if tire cleanup as required of a permittee by the Department would cause substantial curtailment of the permittee's business or operation, or bankruptcy. The rule would allow the Department to pay for up to 90% of the cost of tire cleanup if the permittee's income is below 80% of the U.S. Department of Housing and Urban Development's median area income; and has less than $20,000 in assets. If the permittee's income and assets are higher, financial assistance would be correspondingly less. The permittee would remain responsible for the portion of the cleanup costs not paid by the Department. The Department estimates that there may be from five to 20 potentially eligible persons (not all of whom are currently permittees) in the State. Cleanup costs for their tire piles range from approximately $5,000 to $200,000.

III. Small Business

Some farmers who store waste tires to use them for agricultural purposes may need to apply for the Waste Tire Beneficial Use Storage Permit. The same economic analysis applies to them as to the General Public (above). Some small businesses may want to use tires for fences; they would be subject to the same requirement and analysis.

Small businesses which are also waste tire storage permittees may also receive financial assistance to remove tires under the criteria in this rule. Very similar criteria apply to a sole proprietor as those for individuals (see General Public, above). If the small business is a corporation, slightly different criteria apply. The corporate officers' income and the corporation's net assets are taken into account. If financial hardship criteria are met, the Department could pay 80% of the remaining cost of the tire cleanup. The Department estimates that there may be from five to 10 potentially eligible small businesses in the State (not all of whom are now waste tire storage permittees). The small business would be required to pay for the remaining cost of cleanup.

A small business supplying or using waste tires in a recycling demonstration project approved by the Department could be eligible for the increased amount of reimbursement (over $.01 per pound of rubber used). The magnitude of the subsidy would depend on the amount of rubber used, and the increased level of reimbursement deemed appropriate by the Department. The Department would

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anticipate reimbursement levels of $.02 to $.04 per net pound of rubber used.

IV. Large Business

The criteria for financial assistance to waste tire storage permittees are also applicable to large businesses. Criteria are as outlined for corporations (see Small Business, above). The Department is not aware of any large businesses that may be eligible for assistance as a permittee for tire pile cleanup.

A large business could also receive the increased subsidy (over $.01 per pound of rubber used) in a waste tire recycling demonstration project.

V. Local Governments

The rule also establishes criteria for financial assistance to waste tire storage permittees which are also municipalities. If a municipality has a waste tire pile that was in existence before January 1, 1988, and for which the municipality charged no fee to the public to accept waste tires, the Department could provide up to 80% of the cost of removing the tires.

Currently there are two such potentially eligible permittees, one with about 15,000 tires and one with over 600,000. Cost of tire removal from these sites could be up to $25,000 and $700,000 respectively. The local government would have to cover the remaining costs of tire removal.

Local governments would also be eligible for the increased subsidy (over $.01 per pound of rubber used) in waste tire recycling demonstration projects.

VI. State Agencies

A state agency involved in a waste tire recycling demonstration project would be eligible for the increased subsidy, either directly or indirectly. For example, if the Department of Transportation were involved in a demonstration paving project using rubber-modified paving, the subsidy would go to the paving contractor, but would presumably be passed through at least in part to ODOT.

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Oregon Department of Environmental Quality

Attachment D

A CHANCE TO COMMENT ON...

Proposed Rules Relating to Regulating Storing, Transportation and Disposal of Waste Tires; Cleanup of Waste Tire Piles; and Reimbursement of Persons Using Waste Tires

Hearing Dates: 9/15/89
9/16/89
Comments Due: 9/27/89

WHO IS AFFECTED:

Persons storing over 100 waste tires, including when the storage of such tires creates a benefit for the person storing them. Persons hauling waste tires. Waste tire storage permittees. Persons using waste tires for recycling. Solid waste disposal site operators.

WHAT IS PROPOSED:

The Department proposes to adopt two new administrative rules, OAR 340-62-021 and 340-62-036 to establish Waste Tire Beneficial Use Storage Permits. The Department also proposes to revise existing administrative rules OAR 340-62-005, 340-62-010, 340-62-015, 340-62-020, 340-62-022, 340-62-025, 340-62-030, 340-62-035, 340-62-050, 340-62-052, 340-62-053, 340-62-055, 340-62-063, 340-62-110, 340-62-120, 340-62-130, 340-62-155, and 340-62-160, which establish procedures and standards governing waste tire storage site permits and waste tire carrier permits, and procedures for tire pile cleanup and reimbursement to persons using waste tires.

WHAT ARE THE HIGHLIGHTS:

The new rules would establish a new waste tire storage permit category for persons storing over 100 tires when the storage of such tires constitutes a "beneficial use." A separate fee schedule and storage standards would be established for this Waste Tire Beneficial Use Storage Permit. Rule revisions would add eligibility criteria for waste tire storage permittees to receive financial assistance from the Department to clean up tire piles. They would remove waste tires used in ocean reefs from eligibility for the reimbursement for use of waste tires. They would also allow the Department to reimburse persons using waste tires in recycling demonstration projects at a rate higher than the established $.01 per pound of rubber used. They would raise the combined weight for a waste tire carrier who is a "private carrier" from 8,000 to 27,000 lbs.

HOW TO COMMENT:

Public hearings will be held before a hearings officer at:

4:00 - 7:30 p.m.
Wed., November 15, 1989
School Administration Bldg.
Bond St. Conf. Room, 330
520 N.W. Wall St.
Bend, OR

4:00 - 7:30 p.m.
Wed., November 15, 1989
Marion Co. Courthouse
Court Administrator's Off.
1st Floor Conference Room
148 High St. NE
Salem, OR

(over)

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

FOR FURTHER INFORMATION:

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

11/1/86

Public hearings (continued)

4:00 - 7:30 p.m. Thurs., November 16, 1989 Blue Mountain Com. College Pioneer Bldg., Room 12 N.W. Carden St. Pendleton, OR	4:00 - 7:30 p.m. Thurs., November 16, 1989 Jackson Co. Education Serv. Boardroom, 1st Fl. Jackson ESD 101 N. Grape Medford, OR

Written or oral comments on the proposed rule changes may be presented at the hearings. Written comments may also be sent to the Department of Environmental Quality, Waste Tire Program, Hazardous and Solid Waste Division, 811 S. W. 6th Avenue, Portland, OR 97402, and must be received no later than 5:00 p.m., Monday, November 27, 1989.

Copies of the complete proposed rule package may be obtained from the DEQ Hazardous and Solid Waste Division. For further information, contact Deanna Mueller-Crispin at 229-5808, or toll-free at 1-800-452-4011.

WHAT IS THE NEXT STEP:

The Environmental Quality Commission may adopt new rules identical to the ones proposed, adopt modified rules as a result of testimony received, or may decline to adopt rules. The Commission will consider the proposed new rule and rule revisions at its January, 1990 meeting .

GB8935

Public hearings (continued)

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GB8935

65th OREGON LEGISLATIVE ASSEMBLY--1989 Regular Session

House Bill 3055

Sponsored by Representatives BURTON, CARTER, Senators OTTO, ROBERTS (at the request of Oregon Transit 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 as introduced.

Imposes tax on certain retail sales of automotive batteries and new tires. Defines terms. Fixes amount of tax. Distributes proceeds to Department of Transportation Transit Equipment Acquisition Fund.

Takes effect January 1, 1990.

A BILL FOR AN ACT

Relating to excise taxes; and prescribing an effective date.

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

SECTION 1. Sections 2 to 7 of this Act are added to and made a part of ORS 184.670 to 184.733.

SECTION 2. It is hereby declared to be the policy of the State of Oregon to promote efficient use of transportation resources, promote alternatives to commuting by private automobile, reduce traffic congestion and increase mobility options for all citizens of this state.

SECTION 3. As used in this 1989 Act unless the context otherwise requires:

(1) "Automotive battery" means a group of electric cells used as a source of current in a motorcycle, automobile or bus.

(2) "Retail dealer" means every person who is engaged in the business of selling to ultimate consumers new tires or new automotive batteries.

(3)(a) "Sales price" means the total amount for which new tires or new automotive batteries are valued in money, whether paid in money or otherwise, without any deduction on account of any of the following:

(A) The cost of the property sold.

(B) The cost of materials used, labor or service cost, interest charged, losses or any other expenses.

(C) The cost of transportation of the property, except as otherwise excluded under this subsection.

(b) The total amount for which the property is sold includes all of the following:

(A) Any services that are a part of the sale.

(B) Any amount for which credit is given to the purchaser by the seller.

(c) "Sales price" does not include any of the following:

(A) Cash discounts allowed and taken on sales.

(B) The amount charged for property returned by a customer when that entire amount is refunded either in cash or credit, but this exclusion does not apply in any instance when the customer, in order to obtain the refund, is required to purchase other property at a price greater than the amount charged for the property that is returned. For purposes of this subparagraph, refund or credit of the entire amount shall be deemed to be given when the sales price less rehandling and

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

restocking costs is refunded or credited to the customer. The amount withheld for rehandling and restocking costs may be a percentage of the sales price determined by the average cost of rehandling and restocking returned merchandise during the previous accounting cycle.

(C) The amount charged for labor or services rendered in installing or applying the property sold.

(D) The amount of any tax (not including, however, any manufacturers' or importers' excise tax) imposed by the United States upon or with respect to retail sales, whether imposed upon the retailer or the consumer.

(E) The amount charged for finance charges, carrying charges, service charges, time-price differential or interest on deferred payment sales, if such charges are not used as a means of avoiding imposition of the use tax upon the actual purchase price of the tangible personal property.

(F) Separately stated charges for transportation from the retailer's place of business or other point from which shipment is made directly to the purchaser, but the exclusion shall not exceed a reasonable charge for transportation by facilities of the retailer or the cost to the retailer of transportation by other than facilities of the retailer; provided, that if the transportation is by facilities of the retailer, or the property is sold for a delivered price, this exclusion shall be applicable solely with respect to transportation which occurs after the purchase of the property is made.

(G) Discounts allowed and taken in consideration of the transfer of other tangible personal property by the purchaser to the seller, commonly known as "trade-ins," but only if the property "traded-in" is of like kind to that acquired by the purchaser. "Trade-in" does not include property transferred by barter or exchange, but has its common meaning of property of like kind to that acquired in a retail sale which is applied, in part, toward the selling price.

(4) "Tire" has the meaning given that term in ORS 459.705.

SECTION 4. (1) An excise tax of five percent of the sales price is hereby imposed upon the retail sale of all new tires and new automotive batteries in this state. The tax shall be imposed on retail dealers at the time the retail dealer sells a new replacement tire or automotive battery to the ultimate consumer.

(2) The amount remitted to the Department of Revenue by the retail dealer for each quarter shall be equal to 95 percent of the total tax due and payable by the retail dealer for the quarter.

SECTION 5. The tax imposed by section 4 of this 1989 Act shall not apply to new tires or automotive batteries for:

(1) Any vehicle used exclusively in farm work.

(2) Any vehicle used exclusively off-road.

(3) Heavy freight vehicles (over 24,000 GVW).

(4) Any device moved exclusively by human power.

(5) Any vehicle owned and operated by the Federal Government.

(6) Boats and airplanes.

SECTION 6. (1) The tax imposed by section 4 of this 1989 Act shall be paid by each retail dealer to the Department of Revenue on or before the last day of January, April, July and October of each year for the preceding calendar quarter.

(2) With each quarterly payment, the retail dealer shall submit a return to the Department of Revenue, in such form and containing such information as the department shall prescribe.

(3) The tax, penalties and interest imposed by this 1989 Act shall be a personal debt, from the time liability is incurred, owed by the retail dealer to the State of Oregon until paid.

(4) The Department of Revenue may extend for not to exceed one month the time for making any return and paying any tax due with the return under this 1989 Act. The extension may be granted at any time if a written request therefor is filed with the Department of Revenue prior to the period for which the extension may be granted. When the time for filing a return and payment of tax is extended at the request of a retail dealer, interest at the rate established under ORS 305.220, for each month, or fraction of a month, from the time the return was originally required to be filed to the time of payment, shall be added and paid.

SECTION 7. Except where the context requires otherwise, ORS 459.524 to 459.609 and 459.619 apply to a retail dealer of tires and automotive batteries and to the tax imposed under sections 5 and 6 of this 1989 Act.

SECTION 8. After the payment of administrative expenses of the Department of Revenue, all moneys received by the department from the tax imposed by this Act shall be credited to the Department of Transportation Transit Equipment Acquisition Fund established in ORS 184.733 for any purpose authorized by law.

SECTION 9. This Act takes effect on January 1, 1990.

ATTACHMENT F

MEMORANDUM

TO: Environmental Quality Commission **DATE:** December 4, 1989

FROM: Bradford D. Price, Hearing Officer

SUBJECT: Public Hearing, Proposed Amendments to Waste Tire Program Rules

Bend, 4:00 p.m., November 15, 1989
Pendleton, 4:00 p.m., November 16, 1989

On November 15 and 16, 1989, public hearings regarding proposed new rules and revisions to existing rules pertaining to waste tire storage, hauling and cleanup and reimbursement to persons using waste tires (OAR 340-62) were held in Bend, Oregon, and Pendleton, Oregon, respectively. Two people attended the Bend public hearing and were interested in information pertaining to the waste tire program. Six people attended the Pendleton hearing and testimony was given by three people.

A summary of the testimony (all given in Pendleton) follows:

Daniel A. Banke of C&B Livestock, Inc. expressed concerns about the new Beneficial Use Rule. Mr. Banke provided verbal and written testimony. Mr. Banke works for C&B Livestock in Hermiston, Oregon. The business is a custom feedyard and farming operation. C&B Livestock stores 20,000 tons of silage and 10,000 tons of corn a year in pits. They use 13,000 tires to hold down plastic laid over the pits. Mr. Banke does not object to the beneficial use permit or filing fee. However, he objects to annual compliance fees, and bonding and financial assurance requirements.

Mr. Banke feels that "agriculturalists have for years been making use of an unwanted commodity in an environmentally safe manner" and that his business should not be penalized with annual fees for providing a beneficial use for a limited number of waste tires. Mr. Banke states that their "beneficial use is a benefit to all and that we should not be a target of random fee assessment."

Mr. Banke believes the bonding and financial assurance requirements are unwarranted. "The tendency has always been to hurt the ones that are visible yet innocent. Agriculturists that are using waste tires on silage pits do not own that large a percentage of the waste tires." He feels the tires are being used beneficially on their own property as an asset without public complaint. "As an ongoing agricultural operation, these tires are an asset and are tied to the operation in the same way as any other piece of equipment."

Mr. Banke vehemently opposes financial assurance. He feels the bond or other form financial assurance is unwarranted and intrusive. He mentioned that if the farming operation ceases, the waste tire inventory remains with the land as does the other equipment, which would be recognized as either a liability or asset, that would be factored into the value of the land and operation at time of sale.

John W. O'Brian and Gary McClellan of the Snake River Sportsmen group provided verbal testimony concerning the Department's denial of their request for reimbursement for using waste tires as a rifle range protection structure. They felt there is a market for their structure and the use of their structure also has a market. They will be requesting an appeal of the Department's decision based on markets and value of their waste tire structure.

DMC:k
WT\SK2429

STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY INTEROFFICE MEMO

TO: Environmental Quality Commission DATE: November 20, 1989

FROM: Deanna Mueller-Crispin
Hearing Officer

SUBJECT: Public Hearing, Proposed Amendments to Waste Tire Program Rules
Salem, 4:00 p.m., November 15, 1989

On November 15, 1989, a public hearing regarding proposed new rules (OAR 340-62-021 and -036) and revisions to existing rules pertaining to waste tire storage, hauling and cleanup and reimbursement to persons using waste tires (OAR 340-62) was held in Salem, Oregon. Two people attended, and one person testified.

A summary of the testimony follows:

Marvin Schneider, a garbage hauler and recycler from Newberg, commented on the confusion created by the terminology used for the categories of waste tire carrier permit. He noted that the "private carrier" category does not correspond to the definition of "private carrier" used by the Public Utility Commissioners' (PUC) office.

He suggested that the Department change the terminology to something like "private individuals" instead of "private carrier." Another possibility would be "not-for-hire carrier" and "for-hire (or commercial) carrier" (for the Department's "regular carrier" category).

DMC:k
WT\SK2401

ATTACHMENT F

STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY INTEROFFICE MEMO

TO: Environmental Quality Commission DATE: November 20, 1989

FROM: Deanna Mueller-Crispin
Hearing Officer

SUBJECT: Public Hearing, Proposed Amendments to Waste Tire Program Rules
Medford, 4:00 p.m., November 16, 1989

On November 16, 1989, a public hearing regarding proposed new rules (OAR 340-62-021 and -036) and revisions to existing rules pertaining to waste tire storage, hauling and cleanup and reimbursement to persons using waste tires (OAR 340-62) was held in Medford, Oregon. Eight persons attended (plus two who did not sign the sign-up sheet), and eight testified.

A summary of the testimony follows:

Six of the persons testifying were mainly concerned about the proposed new Waste Tire Beneficial Use Storage permit category. All these people use waste tires for beneficial purposes such as fences, planters or agriculture (raised beds). They all said uses of waste tires in existence before the 1987 tire program law was passed should be "grandfathered" in. Most said they felt such an ex post facto law was unconstitutional. They also commented that if tires are filled in with dirt (such as use as raised beds, or for fences), they no longer pose a fire hazard, and the proposed requirement for 50-foot fire lanes should be dropped. William Atkins also mentioned that the 50-foot fire lane requirement around tire fences was not reasonable, as a fence needs to be on your property line. Filling with dirt also eliminates the potential for mosquito problems.

Several also mentioned that people making beneficial use of tires should not be penalized by having to pay permit fees, but rather should be rewarded (with reimbursement funds) for helping solve the waste tire problem. In general, it was felt that if people were using the tires, they should not have to pay to do so; that this interferes with their right to use private property. Most said that the proposed fee structure was too high; they already pay high taxes.

Richard Busk, who is using tires for growing vegetables, pointed out that waste tires used as raised bed planters for growing food would offer some special advantages in the event of future climatic changes. Mr. Busk quoted several articles dealing with depletion of the ozone layer and the expanding ozone "hole." Some authorities predict this will cause dramatic swings between day and nighttime temperatures, creating conditions in which many

food crops could not survive. The heat-absorbing qualities of tires could help modify those temperature swings, providing conditions under which food could continue to be grown. He requested that unreasonable restrictions not be imposed on this use of tires.

Eugene Papineau, manager of the Jackson County Vector Control District, said that the District supported the two proposed methods in our rule for controlling vectors in tire fences.

Chuck Haas of C & S Tire Recycling (a tire carrier and applicant for a waste tire storage site) supported most of the comments of the persons using tires beneficially. He supported the proposed regulation requiring holes to be drilled in tires in fences. He commented that tires stacked in a straight line (such as a fence) do not pose a greater fire hazard than a wooden fence--so the same restrictions (if any) should apply to tire fences as to wooden fences, unless DEQ can prove they are more dangerous.

Mr. Haas also said that several years ago when he started building tire fences for people he went to the county and the state and asked what regulations applied. He was told, none--go ahead and build. He felt you just can't come back in later and tell the person they are no longer allowed to do that; those uses should be grandfathered in. Tire fences perhaps shouldn't be allowed everywhere; but they should be allowed somewhere. He also felt (probably in regard to the financial assurance requirement to cover removal of the tires from a beneficial use situation) that if the property is sold and the new owner doesn't want the tire fence, the new owner could simply remove the tires; this is what happens with other unwanted structures when properties change hands.

In discussion following the hearing, Carol Danz took exception to existing rule criteria excluding most uses of whole waste tires from eligibility for the reimbursement (there being little or no cost involved in the use of the tires, and the use being of little economic value). She said that making raised agricultural beds out of waste tires "cost" her a great deal of time and effort; and that most of her food was produced in the tires, and that represented a considerable economic value to her.

DMC:k
WT\SK2402

ATTACHMENT F

STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY INTEROFFICE MEMORANDUM

DATE: December 6, 1989

TO: Environmental Quality Commission

FROM: Deanna Mueller-Crispin, Hearing Officer

SUBJECT: Written Testimony: Proposed Amendments to Waste Tire Program Rules

Written testimony was received by the Department in response to a request for public comment regarding proposed new rules and revisions to existing rules pertaining to waste tire storage, hauling and cleanup and reimbursement to persons using waste tires.

A summary of the written testimony follows.

Susan E. McHenry of Pendleton Sanitary Service, Inc. commented that the proposed new permit category (waste tire beneficial use storage permit) should not be implemented in its present form. She feels that "agricultural beneficial uses" are merely an excuse not to clean up waste tire piles, and that a permit allowing such an activity would effectively create a waste tire dump site. She also commented that the proposal to issue a permit for beneficial uses involving burying tires [such as a retaining wall] could constitute long-term problems, as buried tires almost always rise to the surface. Ms. McHenry also objects to the elimination of artificial ocean reefs from reimbursement eligibility. She suggests that this is a promising use of waste tires, and that no realistic use of tires should be discouraged in the present market.

Dennis R. Rittenback, Douglas County Planning Department, suggested that zoning compatibility be required not only for the issuance of a beneficial use permit, but also for their renewal. He also recommended we define "structure" (in storage standards); does it include a fence? He also recommended that the setback requirement for a beneficial use be the same from structures on the subject property as on adjacent property.

Daniel A. Banke of D&B Livestock, Inc. in Hermiston testified on the proposed beneficial use permit as it concerns seasonal agricultural uses of waste tires. D&B Livestock uses 13,000 tires to seasonally hold down plastic over silage pits. He does not

object to the permit requirement or the application fee; however he strongly objects to an annual compliance fee and requirements for financial assurance. He notes that agriculturalists have been using tires in this way in an environmentally safe manner for years. This constitutes a good use for a limited number of waste tires; agriculturists are not the ones causing the waste tire problem. Financial assurance is meant to cover eventual tire removal from the site; Mr. Banke believes that the tires used by agriculturists are an asset, tied to the operation of the company. If the land is sold, the tires remain on the land; the new owner would recognize them as either an asset or a liability, as any other piece of equipment, and their value would be factored into the value of the land at the time of the sale.

Jeanne Roy of Recycling Advocates wrote to support the proposed rule change allowing an increase reimbursement rate for recycling demonstration projects, and recommended that such funds be used for rubber-modified asphalt concrete.

Ellie and Floyd Keeland of the Loon Lake Ash Valley Volunteer Fire Department suggested that waste tires be used for erosion control on creek banks.

Copies of the written comments are attached.

Attachments
wrtest.mem

Pendleton Sanitary Service, Inc.

P.O. Box 1405
Pendleton, Oregon 97801
(503) 276-1271

November 13, 1989

Department of Environmental Quality
Waste Tire Program
Hazardous and Solid Waste Division
811 SW Sixth Avenue
Portland OR 97402

Re: Proposed Rules Relating to Regulating Storing, Transportation and Disposal of Waste Tires; Cleanup of Waste Tire Piles; and Reimbursement of Persons of Persons Using Waste Tires

We believe that your new rule proposed to establish a new waste tire storage permit category for persons storing over 100 tires for "beneficial use" should not be implemented in its present form. Having served for eight years on the Umatilla County Solid Waste Committee, we have found that other than the occasional livestock feeder, most "agricultural beneficial uses" are merely an excuse not to clean up a tire pile, or to avoid costs for proper disposal of the tires. The proposed rules will merely delay the long overdue cleanup of many tires piles around the State, and will grandfather many more, freeing the violators of the burden of cleaning up their own sites.

While your proposed regulation imposes the requirement for detailed operational information and financial assurance from applicants, it also provides that the requirements can be waived. The proposed rule appears to give anyone granted this permit the freedom to accept additional tires, effectively operating a dump site for tires, according to 340-62-021 D iii, regardless of existing franchised disposal site operations.

The regulation specifies that "a beneficial use permit may be issued in perpetuity ... for a use in which all tires are permanently buried or otherwise covered...so that the tires cannot reasonably be removed." The reasonableness of removal should be considered in determination of whether or not the proposed use is beneficial. Buried tires can constitute occasional long-term problems under the best of conditions, even using the best landfill management techniques, equipment and operational plans. Any beneficial use of buried tires should certainly have to meet these kinds of standards, and those requirements should be specified in the regulations, not subject to waiver. Regardless of whether or not they are reasonable to remove, buried tires in almost any situation will rise to the surface unless buried with other material, covered at regular intervals, etc.

Pendleton Sanitary Service, Inc.

P.O. Box 1405
Pendleton, Oregon 97801
(503) 276-1271

We also object to the elimination of artificial ocean reefs as eligible for the waste tire uses reimbursement program. This is one of the most promising uses potentially available for used tires. To remove the availability of funds for a program which has been successful in other areas and has good potential in Oregon, a coastal state, is defeating the purpose of the taxes we pay to develop markets for recycled tires. We must bear in mind that the present "market" for recycled tires still requires the supplier to pay the user. Until markets are developed which create a demand, including a complete reversal of the present economic structure of the present tire recycling program, recycling of waste tires will continue to be economically infeasible and therefore only marginally successful at best. The ultimate success of the tire recycling program will depend, after all, on financial incentives for all participants, which can only be accomplished by considerable improvement in present markets.

We agree that there should be some modifications to tire regulations, but the modifications must be fair and consistent, and should not overlook or encourage failure to comply with existing standards by developing a new category of storage permit. If indeed these regulations are imposed, the manpower and associated costs for properly monitoring the sites covered by this "beneficial use" category would be astronomical. As poor as current markets are for recycled tires, the new regulations should not discourage development of realistic uses of recycled tires by disqualifying any potentially feasible use from reimbursement provisions.

Thank you for your consideration.

Susan E McHenry

Susan E. McHenry, Vice-President
PENDLETON SANITARY SERVICE, INC.

DOUGLAS COUNTY

PLANNING DEPARTMENT

Courthouse Annex No. 2 - 205 S.E. Jackson St.
Roseburg, Oregon 97470 - (503) 440-4289

November 22, 1989

Ms. Deanna Mueller-Crispin
Waste Tire Program Coordinator
Department of Environmental Quality
Waste Tire Program
Hazardous and Solid Waste Division
811 SW 6th Avenue
Portland, OR 97402

Re: Proposed Waste Tire Beneficial Use Storage Permit

Dear Ms. Mueller-Crispin:

The Douglas County Planning Department would like to make the following comments on the above referenced matter. Application for a Waste Tire Beneficial Use Storage Permit would require:

> 340-62-021(1) (B) The zoning designation of the site, and a written statement of compatibility of the proposed beneficial use of waste tires on this site with the acknowledged local comprehensive plan and zoning requirements from the local government unit(s) having jurisdiction.

I think this statement is appropriate and needed for the initial permit, however, I feel that under the permit renewal and permit modification process of the proposed rule (340-62-021(4) and (5)) that provision should be made for a land use compatibility statement as required in the initial permit process. This will assure that no local land use changes have occurred that may not permit the beneficial storage of waste tires.

Under proposed Section 340-62-036(1)(a) it states as follows:

> (a) A waste tire beneficial use shall be located at least 60 feet from a structure on adjoining property.

Comments on this item include:

1) What is a structure? Is a fence a structure? May need a definition or reference to a definition of structure.

2) Can the beneficial waste storage of tires be located next to a structure on the same property, but 60' away from a structure on adjoining property?

3) It appears that if a setback from a structure is required it should be the same on the subject property as adjacent property.

The Douglas County Planning department appreciates the opportunity to comment on the Beneficial Use of Waste Tires and I think this is a step in the right direction.

If you have any questions please feel free to call at 1-800-452-0991-Extension 290.

Sincerely,

D.R. Rittenback

Dennis R. Rittenback
Administrative Planner

DRR:jk:ADM
CRISPIN.LTR

C AND B Livestock, Inc.

P.O. Box 109 • Hermiston, Oregon 97838 Highway 207
503-567-5552

November 20, 1989

TO: Bradford D Price
Waste Tire Program, DEQ
811 S.W. Sixth Ave.
Portland, OR 97204

FROM: Daniel A. Banke
C&B Livestock, Inc.
P.O. Box 109
Hermiston, OR 97838

SUBJECT: Written Testimony - Proposed Waste Tire Beneficial Use Storage Permit.

I attended the public hearing in Pendleton on November 16, 1989 and received the Draft Proposal. At that time I also gave official testimony but was unprepared and I desire to submit the following as public testimony. I recognize that variances may be given as stated in proposed revision: (C3). However, variances tend to be arbitrary and can become unattainable depending on the philosophical view of regulators.

We are a custom feedyard and farming operation in Hermiston, Oregon. We put up 20,000 ton of silage a year and 10,000 tons of corn that is stored in pits. We use 13,000 tires to hold down plastic laid down on the pits.

I do not object to the permit or filing fee however, I do object to Agriculturists like us being required to shoulder annual compliance fees. And we are vehemently opposed to the additional burden of bonding or lien requirements.

Proposal #5 - Annual compliance fees. Agriculturists have for years been making use of an unwanted commodity in an environmentally safe manner. The State and DEQ are trying to develop means of utilizing waste tires and are providing financial enhancement programs for such. Why should we be penalized with annual fees for providing a beneficial use for a limited number of waste tires. It is enough for DEQ to have a permit on file. Agriculturists like ourselves are not the problem. I feel that our beneficial use is a benefit to all and that we should not be a target of random fee assessment.

Proposal #6 - Bonding or Lien Requirements. The stated purpose for this is to provide a means of paying for removal should that eventuality occur. I believe this to be a bad idea developed by bureaucratic adventurists. The tendency has always been to hurt the ones that are visible yet innocent. Agriculturists that are using waste tires on silage pits do not own that large a percentage of the waste tires. They are utilizing the tires and beneficially so on their own property. They own the waste tires as a private property and an asset. They are using the tires on their own land in rural areas without public complaint. As an ongoing agricultural operation these tires are an asset and are tied to the operation in the same way as any other piece of equipment.

I vehemently oppose Item #6 of the proposal as unwarranted and intrusive. Our operation could be required to pay hundreds of dollars a year in premiums in order to conduct recognized beneficial use. As for disposition of the tires if the business should close operations. I belive this is not the place for state intrusion. On farming operations the operator owns the land. If operations cease the tire inventory remains with the land as would other pieces of equipment. The equipment will be recognized as either an asset or a liability and the cost of disposing of the tires if indeed they would be disposed, of would be factored into the value of the land and operation at time of sale.

Sincerely,
C&B Livestock, Inc.

Daniel A. Banke
V. P.

RECYCLING ADVOCATES
2420 S.W. Boundary Street, Portland, Oregon 97201 (503)244-0026

November 9, 1989

Ms. Deanna Mueller-Crispen
DEQ Waste Tire Program
Hazardous and Solid Waste Division
811 SW 6th Ave.
Portland, Oregon 97204

Subject: Proposed Rules Regarding Waste Tires

Dear DEQ Staff:

Recycling Advocates supports the proposed rule change which would allow reimbursements above the per pound amount for recycling or reuse of waste tires.

We stated when the first rules were developed that recycling and resuse should be encouraged over burning.

We would like to see waste tire funds used for the development of rubber-modified asphalt concrete in Oregon. According to expert sources at Scientific Development in Eugene, such a use could become the market for all post-consumer tires in Oregon with just 30-40 miles of roadway application per year. We have already written Mr. Bill Quinn, materials research manager at the Department of Transportation, urging him to take this matter seriously. We hope that you will encourage the Department as well, possibly with the new funds generated from the proposed rule change.

Yours truly,

Jeanne Roy

Jeanne Roy, Chairman
Recycling Advocates

Monday NOV. 6

Toon Lake Ash Valley
Volunteer Fire Department's
suggestion for old tires:

Use them for stopping
erosion on crick banks.
It's been done before with success.

Ellis Keeland
Chief
Floyd Keeland
Chairman of Re
board

ATTACHMENT G

STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY INTEROFFICE MEMORANDUM

DATE: December 11, 1989

TO: Environmental Quality Commission

FROM: Deanna Mueller-Crispin, Hearing Officer

SUBJECT: Response to Testimony/Comments, Proposed Revisions in Waste Tire Rules

The Department held four public hearings on the proposed revisions to the waste tire program rules, and accepted written public comment on the rule until November 27, 1989.

Comments generally fell into three categories:

- Proposed Waste Tire Beneficial Use Storage Permit;
- Reimbursement eligibilities;
- Tire carrier permit (definitions).

1. Beneficial Use Storage Permit.

o "Grandfathering." Comment: Beneficial uses in existence before the passage of the law should be "grandfathered" -- that is, exempt from regulation. Several persons pointed out that ex post facto laws are unconstitutional.

Response: The Attorney General has advised us that the waste tire law (which requires a permit from anyone storing over 100 waste tires after July 1, 1988) does not operate retroactively, but rather prospectively. A use may not have been regulated in the past, but a new law was passed, and the use is regulated from that date on. The law has no provision for "grandfathering," as suggested by these persons.

o "Use" is not "storage." Comment: When waste tires are being used beneficially, this does not constitute "storage," and thus these beneficial uses of waste tires should be exempt from regulation as waste tire storage sites.

Response: The statutory definition of "storage" is very broad: "the placing of waste tires in a manner that does not constitute disposal of waste tires." The Attorney General

has advised us that the Department has some latitude in interpreting the statute. "Storage" could be interpreted broadly to mean that any time waste tires are placed in a manner that does not constitute disposal, they are being "stored," and are thus subject to the requirement to obtain a waste tire storage permit. The Department might also, by rule, refine the definition of "storage" to exclude certain uses of tires. It does not seem reasonable to require storage permits of some uses of tires, such as in retaining walls, where the tires are used in such a manner that they do not pose environmental risks. Other uses of tires, however, such as fences, have the potential to cause health and environmental problems. The Department believes that the potential problems of such uses of tires are too great to exclude them from regulation. The Department is proposing a middle position where the regulation of waste tires stored and being used for a beneficial use would depend on whether the use created environmental risks. The Department suggests that tire fences always have the potential to create environmental risks, and thus would always be regulated as storage of waste tires. Other uses, such as in filled planters, may not create such risks, and the Department is proposing to exclude such uses from regulation as a result of public comment.

o Fees. Comment: The fees are too high. Annual compliance fees should not be required.

Response: The Department is required by statute to charge an application fee covering its costs in processing the application. The Department is proposing lower waste tire storage permit fees for tires stored and used beneficially. The proposed application fee for such applications is less than for other storage applicants ($100 vs. $250), reflecting lower processing costs. That amount will cover less than one day of staff time. All permit applications will require at least one site visit, as well as other administrative tasks. The Department is required to monitor all permittees. The annual compliance fee is meant to cover monitoring costs. The proposed annual compliance fee for tires stored and used beneficially is also less than for other permittees ($50 vs. $250), again reflecting lower Department costs.

o Financial assurance. Comment: Financial assurance should not be required. Tires used for many beneficial uses (such as planters, which are filled with dirt) do not pose environmental risks; and there is no need for funds to cover

removal of the tires from the site in the future. Any future purchaser of the property will factor the value (positive or negative) of the tires into the purchase price of the property.

Response: The statute requires financial assurance of a waste tire storage permittee "in such amounts...reasonably necessary for waste tire removal processing, fire suppression or other measures to protect the environment and the health, safety and welfare of the people." (ORS 459.720) Financial assurance may be waived for sites in existence before January 1, 1988. It would also be possible to have financial assurance in the amount of $0 for a site which posed no environmental problems, and from which the tires would never have to be removed. Such a provision is proposed for addition to the rule for permittees storing waste tires as a beneficial use. The Department will review required amounts of financial assurance on a case by case basis.

o Storage standards. Comment: Tire fences should not have to have a 50 foot fire lane; fires are no harder to extinguish in a tire fence than in a wooden fence. Also, the setback is inappropriate because to be useful, a fence must be on the property line.

Response: The comment is reasonable. The Department is reducing the fire lane requirement to 20 feet for tire fences. The draft rule did not require a 50 foot fire lane on both sides of the fence; only on land controlled by the applicant. So no "setback" change is necessary.

Comment: The proposed rule seems to give anyone granted this permit [proposed Beneficial Use Storage Permit] the freedom to accept additional tires, effectively creating a new dump site.

Response: The Department is no longer proposing to establish a Beneficial Use Storage Permit category. Any waste tire storage permit issued has a maximum number of waste tires allowed for storage; an applicant must demonstrate a need for whatever number of tires he or she proposed to have under permit. Storing waste tires in excess of the number allowed in the permit is a permit violation, subject to civil penalty.

2. Reimbursement

o Comment: Reimbursement should be given for beneficial uses of waste tires, such as planters, fences and retaining walls in shooting ranges; these uses add to the solution of the waste tire problem.

Response: The intent of the reimbursement is to enhance markets for waste tires (ORS 459.770). The Department believes that most "beneficial uses" of waste tires do not contribute to a "market" for waste tires. These are generally scattered individual uses, with the user incurring little or no cost in using the tires, and in some cases charging a fee to accept the tires. Such uses would occur whether or not there is a reimbursement. The Department does not believe reimbursement of such uses was intended by the statute.

o Comment: The Department should not remove tires used in artificial ocean reefs from reimbursement eligibility. This is a promising use of waste tires.

o Response: The Department is required by 1989 SB 482 to exclude waste tires in ocean reefs from the reimbursement. Tires in reefs in non-ocean waters are still eligible for reimbursement.

o Comment: Tires should be used for erosion control in creek banks.

Response: This use is regulated by the Division of State Lands, and our rule exempts it from further regulation by the Waste Tire Program.

3. Waste Tire Carrier Permit

o Comment. The "private carrier" category that DEQ has established does not correspond with the PUC category, and is confusing. That carrier category should be changed to something like "private individual" or "not-for-hire carrier."

Response: The Department recognizes that the PUC "private carrier" category is broader than the waste tire carrier "private carrier" category. The Department's use of the term in fact corresponds to a subcategory of the PUC use. However, the PUC definition of "private carrier" (which is used in the Department's rule) describes the type of hauler targeted for the "private carrier" category. Therefore we propose to keep the definition, and make special efforts to

ensure that applicants understand the PUC category may be broader than DEQ's.

respns.mem

NEIL GOLDSCHMIDT
GOVERNOR

Environmental Quality Commission

811 SW SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

REQUEST FOR EQC ACTION

Meeting Date: October 20, 1989
Agenda Item: U
Division: HSW
Section: SW/WTP

SUBJECT:

Waste Tire Rules -- Deleting reimbursement eligibility of ocean reefs. Establishing Waste Tire Beneficial Use Storage Permit. Establishing criteria for financial assistance. Allowing use of reimbursement funds in excess of one cent per pound for waste tire recycling Demonstration Projects. Other housekeeping changes in waste tire storage and carrier permitting, reimbursement and cleanup rules.

PURPOSE:

- The purpose of the deletion of ocean reefs made of waste tires from reimbursement eligibility is to comply with legislation passed by the 1989 Legislature.

- The purpose of establishing a Waste Tire Beneficial Use Storage Permit category is to regulate storage of tires which are used for a beneficial purpose, such as tire fences.

- The purpose of establishing criteria for financial assistance to waste tire storage permittees is to incorporate Department guidelines into rule clarifying circumstances under which permittees may be assisted in removing waste tires.

- The purpose of allowing use of reimbursement funds in excess of the one cent per pound for waste tire recycling Demonstrations Projects is to give such projects an additional incentive and to show that recycling uses are feasible.

ACTION REQUESTED:

___ Work Session Discussion
___ General Program Background
___ Potential Strategy, Policy, or Rules

___ Agenda Item ___ for Current Meeting
___ Other: (specify)

_X_ Authorize Rulemaking Hearing
___ Adopt Rules

Proposed Rules	Attachment A
Rulemaking Statements	Attachment B
Fiscal and Economic Impact Statement	Attachment C
Public Notice	Attachment D

___ Issue a Contested Case Order
___ Approve a Stipulated Order
___ Enter an Order

Proposed Order	Attachment ___

___ Approve Department Recommendation

___ Variance Request	Attachment ___
___ Exception to Rule	Attachment ___
___ Informational Report	Attachment ___
___ Other: (specify)	Attachment ___

DESCRIPTION OF REQUESTED ACTION:

A public hearing is requested to receive public comment on the proposed rule changes listed above, and on the proposed new rules establishing procedures, storage standards and fees for Waste Tire Beneficial Use Storage Permits. Notice of the public hearing will be mailed to known interested persons, including waste tire permittees, and will be published in newspapers of general circulation in Oregon.

AUTHORITY/NEED FOR ACTION:

_X_ Required by Statute: ORS 459.785; 1989 SB 482	Attachment ___
Enactment Date: 1987 (HB 2022); 1989	
_X_ Statutory Authority: ORS 459.750, .770, .785	Attachment ___
___ Pursuant to Rule: _____	Attachment ___
___ Pursuant to Federal Law/Rule: _____	Attachment ___
___ Other:	Attachment ___

_X_ Time Constraints: (explain)

- Senate Bill 482 excluding waste tires in ocean reefs from the waste tire reimbursement becomes effective on October 3, 1989. The rule needs to be amended to reflect that change.

- The Department has several applications from persons wanting an exemption from the waste tire storage permit requirement for their "beneficial use" of stored waste tires. These need to be acted on.

- Several waste tire storage permittees have requested financial assistance from the Department to remove waste tires. The Department has recommended approval of some requests to the Commission based on Department guidelines; we would like to adopt the essentials of the guidelines as rule to clarify eligibilities and level of assistance.

DEVELOPMENTAL BACKGROUND:

___ Advisory Committee Report/Recommendation — Attachment ___
___ Hearing Officer's Report/Recommendations — Attachment ___
___ Response to Testimony/Comments — Attachment ___
_X_ Prior EQC Agenda Items:
Agenda Item K, 4/14/89 EQC Meeting - Amendments to Permitting Requirements for Waste Tire Storage Sites and Waste Tire Carriers
Agenda Item G, 7/8/88 EQC Meeting - Waste Tire Program Permitting Requirements
— Attachment ___
___ Other Related Reports/Rules/Statutes: — Attachment ___
_X_ Supplemental Background Information — Attachment ___
- Guidelines, Financial Assistance — Attachment E

REGULATED/AFFECTED COMMUNITY CONSTRAINTS/CONSIDERATIONS:

1. Ocean reef exclusion. No one has applied for a reimbursement for use of waste tires in ocean reefs, although a few persons have expressed interested in this use. Use of tires for reefs in nonocean waters, estuaries and bays is still allowed.

2. Waste Tire Beneficial Use Storage Permit. A number of persons either are using or would like to use waste tires for beneficial purposes such as tire fences, or for holding down tarps. The proposed Beneficial Use Storage Permit has a lower fee schedule than regular storage permits, and more flexible storage standards for these "beneficial uses." Legislative committees have indicated that standard waste tire storage permits should not be required for beneficial uses.

3. Criteria for financial assistance to waste tire storage permittees. The current rule requires all sites receiving financial assistance to rank high in environmental risk and to demonstrate financial hardship. The proposed rule would add the following criteria defining financial hardship for individuals and corporate officers: a household income below 80 percent of the U. S. Department of Housing and Urban Development's (HUD) median area income, and $20,000 in assets.

   The proposed rules would require permittees who are individuals or corporations to spend their own funds up to the threshold; the Department would assist with up to 90 percent (for individuals) or 80 percent (for corporations) of expenses above the threshold. At its September 6, 1989 meeting, the Waste Tire Advisory Committee considered and reached consensus supporting the proposed levels of reimbursement for the several categories of permittee. The Committee felt strongly that all persons should contribute something toward the removal of waste tires from their site. In addition, the statute states that the Department may "assist" a permittee with tire removal. The Department has interpreted that to mean that no person should receive total funding.

   For a permittee which is a municipality, no financial hardship test is proposed. Rather, the Department would pay 80 percent of the cleanup cost if the following special circumstances exist: the tire pile existed before January 1, 1988; and the municipality did not charge to accept the tires for disposal.

4. A higher rate of reimbursement for "demonstration projects" involving waste tire recycling. The rate would be based on the cost difference between using material from waste tires, and using regular materials. The Department recommends that up to $100,000 per demonstration project be allowed at the higher rate. This should encourage recycling projects by providing an extra incentive over the regular reimbursement level of one cent per pound of rubber used from waste tires. For example, the reimbursement could assist a local government with a rubber-modified paving project, which is more expensive than conventional paving.

   The Waste Tire Advisory Committee considered these proposed rule revisions at their September 6, 1989 meeting. The Department's proposed revisions

incorporate all the Committee's recommendations, except the recommendation that demonstration projects be limited to a maximum of $20,000 each. The Department finds that too restrictive, since the purpose of the demonstration project is to add flexibility to the reimbursement to encourage recycling uses of waste tires.

PROGRAM CONSIDERATIONS:

1. Ocean reef exclusion. This meshes well with the Department's rule allowing exclusion of environmentally detrimental uses from the reimbursement.

2. Waste Tire Beneficial Use Storage Permit. The statute provides an exemption to the waste tire storage permit requirement for tire retailers storing under 1,500 tires, and for retreaders storing under 3,000. No other exemptions are foreseen in the statute. However, legislative intent as expressed by various Legislative committees was that persons using tires beneficially, such as for holding down tarps or in a fence, should not have the same requirements as persons simply storing tires. They should, to the extent possible, be relieved from storage and fee requirements.

The statutory definition of "store" is broad: "the placing of waste tires in a manner that does not constitute disposal of the waste tires." The Attorney General has advised us that the definition includes storage of waste tires even when such "storage" may be serving a useful purpose for the person storing tires.

The current rule attempted to meet the legislative intent by establishing a "beneficial use exemption" provision to provide regulation of these uses without requiring a full-blown permit (which would include a $250 application fee, $250 annual compliance fee, and compliance with storage standards which could prevent applicants from using the tires in the way they desire.)

The current rule allows the Department to grant an exemption to the waste tire storage permit requirement for persons storing whole waste tires but using them beneficially "if the applicant can demonstrate to the Department's satisfaction that:

(a) The applicant is using the tires for a permanent useful purpose with a documented economic value; and

(b) The waste tires used in this way will meet state and local government requirements for vector control, health, fire control, safety and other environmental concerns; and

(c) The use otherwise is not in conflict with local ordinances and state and Federal laws and administrative rules." (OAR 340-62-015(7))

Some problems have emerged in administering the current rule. Reviewing applications for beneficial use exemptions has taken more time than expected. The Department has required sign-offs from local governments on land use compatibility and health concerns. We have required applicants to submit sketches and maps showing how tires are being used. We have found it necessary to require certain actions (such as drilling holes in tires for drainage) to address environmental concerns. In many cases we will have to revisit a site to make sure it is not violating the terms of the exemption, and we would take action if it is. In fact, this procedure has been a permitting procedure in all but name. It has become clear that it is more appropriate to handle these uses under permit.

The Department's proposed solution is to establish a Waste Tire Beneficial Use Storage Permit, with a separate fee schedule and separate storage standards. The proposed fee schedule is lower than that for regular waste tire storage permits, which is appropriate since both the initial level of review and especially the annual compliance review will require less staff effort.

Additionally, most applicants are expected to be private citizens who cannot easily afford permit fees, rather than businesses. The regular permit storage standards were designed for large numbers of tires stored in a pile, and are not easily applied to "beneficial uses," which most often have individual configurations requiring variances to the standards. The proposed rule establishes standards applicable to most beneficial uses, and has a section specifically for tire fences.

3. Criteria for financial assistance to waste tire storage permittees. The statute allows use of the Waste Tire Recycling Account to assist a permittee with processing or removal of tires. The Commission must make a finding that special circumstances allow for use of the funds, or that strict compliance with a tire removal date set by the Department would result in "substantial

curtailment or closing of the permittee's business or operation or the bankruptcy of the permittee." (ORS 459.780 (2)(b) and OAR 340-62-150) Existing rules define "special circumstances" of a tire pile as those creating an environmental risk, and state that "financial hardship on the part of the permittee shall be an additional criterion in the Department's determination" of whether financial assistance for cleanup is warranted.

The Department developed guidelines to ensure equitable evaluation of a permittee's ability to pay for cleanup without causing "substantial curtailment" of the permittee's business or operation (Attachment E). The Attorney General advised us that the Department could give financial assistance on the basis of the statute and the existing rule. However, providing financial assistance is a public benefit, and the public needs to know the basis for granting or denying aid. The issue is to what extent details laid out in the guidelines should be adopted in rule. Adopting very detailed rules could limit the Department's ability to deal with unforeseen special circumstances as they arise. The Department proposes to adopt major points of the guidelines as rule.

No financial hardship criterion is proposed for municipalities on the advice of the Attorney General; rather, special circumstances are defined under which partial financial assistance to a municipality would be appropriate.

4. A higher rate of reimbursement for "demonstration projects" involving waste tire recycling. A reimbursement rate of one cent per pound was established by rule on November 8, 1988, for persons using rubber from waste tires. So far the reimbursement program has not substantially increased the use of waste tires, and 94 percent of the $121,000 in reimbursement funds distributed has been for energy recovery.

The one cent per pound constitutes a substantial subsidy for energy-recovery uses. However, for other uses one cent per pound is not high enough to overcome such barriers as concerns about product reliability and lack of experience with the use. In order to encourage uses which are considered higher in the Solid Waste hierarchy, such as road paving, the Department would

like the authority to provide a higher reimbursement rate for rubber recycling demonstration projects.

A limit of $100,000 per project would be set for such projects. The level of reimbursement would be based on the difference in cost between using rubber from waste tires and the cost of standard materials. It might differ from project to project, but the Department would not approve a rate which exceeded the state median cost of tire disposal ($1 per tire, or about five cents per gross pound). If the per-project limit were spent on one paving project using rubber-modified asphalt concrete, and if the Department offered five cents per pound of recycled rubber used, 14 miles of two-lane highway could be paved using the rubber from 165,000 tires. A demonstration project would be unlikely to involve more than 10 miles of paving.

A demonstration project would have to occur within the State. It would have to demonstrate a use of waste tires which does not yet have an established market in Oregon. The Department would allow one demonstration project per "use." However, if varying climatic or other conditions were a major concern in demonstrating the feasibility of the use, demonstration projects for one "use" might be approved in various geographic areas of the state, or where different conditions (such as traffic levels) prevail. No more than one project per applicant would be considered, unless the second project were for a different use.

This higher reimbursement rate should not pose a problem with respect to availability of funds for other purposes. The Department currently has about $1.5 million available for reimbursement and tire pile cleanups, and we expect that amount to grow to about $2.1 million by June 30, 1990.

ALTERNATIVES CONSIDERED BY THE DEPARTMENT:

1. Request public hearings to take testimony on the draft rules as proposed in Attachment A, including:

   a. Exclusion of waste tires in ocean reefs from reimbursement eligibility.

   b. Establishing a waste tire beneficial use storage permit.

c. Establishing general criteria for financial assistance to waste tire storage permittees.

d. Allowing increased rate of reimbursement for demonstration projects recycling tires.

2. Two other alternatives were considered to deal with "beneficial uses" of waste tires:

a. Modify the draft rule to exclude "beneficial uses" of waste tires from the definition of tire "storage," thus excluding them from Department regulation.

b. Modify the draft rule to remove the Beneficial Use Storage Permit option, and require all persons storing tires, even if they are used for a beneficial purpose, to obtain a "second-stage" waste tire storage permit.

4. One other alternative was considered for handling financial assistance for permittees: modify the draft rule to exclude specific references to criteria used to determine "financial hardship" of a permittee, and use the guidelines developed by the Department and the Advisory Committee to determine assistance eligibilities and levels.

5. Two other alternatives were considered for the level of reimbursement:

a. Modify the draft rule to allow a higher reimbursement amount (such as two or three cents per pound) for uses other than energy recovery.

b. Modify the draft rule to set a limit of $20,000 for each demonstration project, as recommended by the Waste Tire Advisory Committee.

DEPARTMENT RECOMMENDATION FOR ACTION, WITH RATIONALE:

The Department recommends that the Commission adopt Alternative 1.

The proposed rule has the support of the Advisory Committee (with the exception noted on page 4). It corresponds better to the statute in establishing a special permit category with appropriate provisions to regulate "beneficial uses" of waste tires rather than regulating them by exemption. Adopting essential parts of the financial assistance guidelines as rule will clarify for the public the criteria the Department

will use in granting public benefits. Allowing a higher level of reimbursement for recycling demonstration projects will encourage such projects without changing the basic structure of the reimbursement which has not been in place long enough to test its effectiveness in stimulating new/expanded uses of waste tires. Allowing the Department to spend up to $100,000 per year per project for demonstration projects will give the Department flexibility to work with existing larger tire piles on projects large enough to demonstrate the viability of a given recycling use. Other housekeeping changes will improve administration of the waste tire program.

CONSISTENCY WITH STRATEGIC PLAN, AGENCY POLICY, LEGISLATIVE POLICY:

The rule incorporates the change made by the 1989 Legislature excluding tires used in ocean reefs from eligibility for the reimbursement.

The proposed rule is consistent with legislative intent to regulate all storage of waste tires, but make appropriate provisions to allow legitimate "beneficial uses" of tires.

The rule follows agency policy on specifying by rule what criteria are to be used in determining benefits.

The rule takes the Solid Waste hierarchy into account by offering a bonus for waste rubber recycling demonstration projects.

ISSUES FOR COMMISSION TO RESOLVE:

1. Is the proposed Beneficial Use Storage Permit the appropriate way to regulate persons who are storing over 100 waste tires and using them for a beneficial purpose?

2. Should the Department adopt the major elements of its guidelines on financial assistance to permittees as rule? Or should the rule remain more general, leaving the Department more flexibility in dealing with individual cases?

3. In providing financial assistance to remove tires, should the Department give assistance for only part (80 or 90 percent) of the remaining costs of cleanup after the permittee has been required to contribute their own funds up to the threshold set by the Department?

4. Is allowing use of a higher reimbursement rate for tire recycling demonstration projects the proper way to give an extra push to uses higher on the Solid Waste hierarchy?

INTENDED FOLLOWUP ACTIONS:

Publication of intent to hold a hearing in the Secretary of State's Bulletin on November 1, 1989, and publication of notice of public hearing in newspapers.

Hold hearings on November 15, 1989 in Bend and Salem, and on November 16 in Pendleton and Medford.

Receive public comment until November 27, 1989.

Prepare a hearing officer's report for final rule adoption by the Commission in January, 1990.

Approved:

Section: Steve Greenwood

Division: Steve Greenwood for SH

Director: Fred Hansen

Report Prepared By: Deanna Mueller-Crispin

Phone: 229-5808

Date Prepared: October 4, 1989

dmc
reefrev.eqc
10/4/89

Attachment I

WASTE TIRE PROGRAM

GUIDELINES FOR USE OF CLEANUP FUNDS

POLICIES AND PROCEDURES

Incorporating recommendations agreed to by the Waste Tire Advisory Committee at their April 19, September 6 and November 8, 1989 meetings

DEPARTMENT OF ENVIRONMENTAL QUALITY

December 7, 1989

Contact Person: Deanna Mueller-Crispin
Waste Tire Program Coordinator
229-5808

I. Purpose

Help persons comply with the waste tire program statute while avoiding "substantial curtailment or closing" of the person's business, and avoiding bankruptcy of the person or business.

II. Program Summary

This program may partially reimburse waste tire storage site permittees for costs incurred in waste tire removal. It also provides funds to contract to abate (clean up) unpermitted tire piles, subject to cost recovery from the responsible person. It may partially reimburse the tire removal costs incurred by a local government in abating a waste tire pile.

III. Eligibility Criteria

a. In General. The law provides that cleanup funds may be used to assist in removing or processing waste tires from a permittee's site if special circumstances make such assistance appropriate, or if strict compliance with the waste tire law would:

- Result in substantial curtailment or closing of a waste tire permittee's business or operation; or

- Result in the bankruptcy of the permittee.

b. The "Applicant" must be the permittee holding a waste tire storage site permit from the Department.

c. For Individuals. DEQ will assume that waste tire removal would result in "substantial curtailment" of the individual's "operation," or in his/her bankruptcy, and thus financial assistance would be provided, if costs of such removal would:

- Result in the reduction of the individual's gross household income to below the state median income (as determined by the U.S. Department of Housing and Urban Development [HUD]); and/or

- Result in the reduction of the net household assets (excluding the primary residence, its contents, and one car) to below $20,000.

c. For Sole Proprietorships & Partnerships. DEQ will assume that waste tire removal would result in "substantial curtailment or closing" of the business's operation, or in

its bankruptcy, and thus financial assistance would be provided, if costs of such removal would:

- Result in the reduction of the gross household income (including all sources of income) of the owner(s) or officers to below the state median income (for sole proprietorships and partnerships only, based on "net income" to the owners from the business excluding depreciation); and/or

- Result in the reduction of the assets of the business to below $20,000 (excluding basic assets of building, equipment and inventory. Cash, investments, stock, real property and accounts receivable will be decreased by any outstanding liabilities [loans, wages payable to others than owner(s), and accounts payable]).

- Partners in a partnership will be held accountable for tire cleanup costs ("paydown" requirement) in proportion to their partnership share in the business.

d. Corporations. DEQ will assume that waste tire removal would result in "substantial curtailment" of the corporation's business, or in its bankruptcy, and thus financial assistance would be provided, if costs of such removal would:

- Result in the reduction of the corporate officers' (who are also corporate stockholders) gross household income to below the state median income (as determined by HUD); and/or

- Result in the reduction of the net corporate assets to below $20,000 (excluding basic assets of building, equipment and inventory. Cash, investments, stock, real property and accounts receivable will be decreased by any outstanding liabilities [loans, wages payable to others than officers and officers' household members, and accounts payable]); and

- If the corporation's accountant or attorney submits a certified statement that the cost would cause substantial curtailment or closing of the corporation, or bankruptcy.

- Corporate officers will be held accountable for tire cleanup costs ("paydown" requirement) in proportion to their share in the corporation.

e. Municipalities. DEQ will assume that the following special circumstances make it appropriate to provide financial assistance to municipalities:

- The tire pile to be cleaned up existed before January 1, 1988;

- The tires collected were from the public, and the municipality did not charge to collect them for disposal.

Summary:

Class:	Income Threshold	Asset Threshold
Individuals	gross household: median	household $20,000 (excl. homestead & family car)
Sole proprietor, partnership	modified gross (net from bus.) household: median	business $20,000 (excl. building, equip. & invent'y)
Corporation	gross household, all corporate officers: median	corporation $20,000 (excl. building, equip. & invent'y)
Municipalities	NA (see above)	NA (see above)

IV. **Definitions**

a. Gross Income: The average annual before-tax income for the most recent three years from all sources of all occupants of the household unless verified as a paying boarder, including but not limited to wages, commissions, bonus, overtime, Social Security and retirement benefits, Veteran's benefits, public assistance, child support and alimony, interest and dividends, rental or boarder rent income, support from a non-member of the household, unemployment compensation and disability payments, net profits from sole or joint proprietorship or home businesses, and the living expenses portion of student grants for those students residing in the home for the 12 months preceding the date of application.

An exception to the prior average annual income rule is allowed if the applicant is 65 or over and has retired during the prior 12 month period. In these cases, income is from the date of retirement and projected forward 12 months.

b. Allowable Deductions to Gross Income: All non-reimbursed medical, dental, optical expenses, including nursing home costs, home nursing costs; child support and alimony.

c. Net Assets: Resources that can be liquidated or used as collateral for a private loan in order to fund waste

tire removal, such as: real property, stocks and bonds, savings accounts, credit union shares, cash on hand, vehicles, equipment, less the principal balance of outstanding loans, excluding the mortgage(s) on the primary residence. Value of real property should be county assessor's appraisal; for the cleanup/abatement site, value should be the property's value with tires removed.

d. State Median Income: The current level of the state median income, as determined annually by the U.S. Department of Housing and Urban Development (HUD).

e. Household Members: All persons, regardless of relationship or age, who are considered dependents of the applicant as defined by the Internal Revenue Service. Those persons not determined to be dependents but who reside permanently in the household may be counted. Under these circumstances their gross annual income from all sources will be added to that of the applicant.

V. Application Process

1. DEQ assigns points to all sites on our list for cleanup or abatement funds. Sites with highest number of points are acted upon first. (Points are based on "Cleanup/Abatement of Waste Tire Piles Point System" paper, 12/28/88)

2. Permittee fills out application form for financial assistance. Application includes detailed description of proposed tire removal actions, time schedule, cleanup bids, etc. Application requires three years of appropriate Federal and State income tax returns, with all relevant Schedules.

3. DEQ approves plan (or returns to permittee for changes). DEQ determines amount of cleanup funds site would be allowed.

4. Staff prepares staff report to the Environmental Quality Commission for approval of determined amount of cleanup funds.

5. Permittee cleans up site; DEQ verifies cleanup; DEQ issues voucher for agreed-on amount.

VI. Amount of Financial Help to be Given

1. No financial help shall be given unless the applicant meets the "financial hardship" criteria.

2. For persons above the income and asset thresholds under III above:

a. "Paydown" requirement: The applicant is required to contribute his or her own funds to the tire cleanup up to the point at which household income (on an annual basis) and/or net assets would be reduced below the thresholds listed under III, Eligibility Criteria.

b. The Department will pay the remaining costs of the cleanup.

3. For persons below the income and/or asset thresholds under III above:

a. No "paydown" requirement.

b. For <u>individuals, sole proprietorships and partnerships:</u>

i. The Department will pay up to 90% of the cost of cleanup based on the following criteria:

<u>Criteria</u>	<u>% Cost to be Forgiven</u>
- Financial hardship	70%
- "Cooperative"	10%
- Unknowingly dumped on	10%
Maximum assistance:	90% (+ permit fees, but not to exceed 100%)

ii. For persons whose net equity in assets exempt under section III above is less than $50,000; or whose net exempt assets are less than $100,000 and who are over 65 years of age, the Department may reduce the person's required contribution to the cleanup to a flat amount of $1,500.

c. For <u>corporations:</u> The Department will pay up to 80% of the cost.

4. For <u>municipalities:</u> up to 80%.

5. The applicant's own in-kind contribution (such as labor) to the cleanup of his site may be considered by DEQ as part of applicant's required cost contribution. However, previous costs incurred by a permittee in removing tires from his site before January 1, 1989, should not be considered part of the permittee's own "financial contribution."

6. No applicant may receive financial assistance to clean up waste tires more than once under this program.

guidelin.per

NEIL GOLDSCHMIDT
GOVERNOR

Environmental Quality Commission

811 SW SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

REQUEST FOR EQC ACTION

Meeting Date: January 19, 1990
Agenda Item: K
Division: Water Quality
Section: Standards & Assessments

SUBJECT:

Water Quality Rules: Authorization for Hearing on Proposed Rule Amendments to Clarify Requirements for Designation and Management of Water Quality Limited Streams.

PURPOSE:

Identify the different water quality management approaches described in the federal Water Quality Act (WQA) and 40 Code of Federal Regulation (CFR) 130 for water quality limit receiving streams. Establish specific water quality management program requirements which must be met when considering waste load increase requests to the different water quality limited receiving stream categories. Establish in Oregon Administrative Rules (OARs) the definitions for water quality limited and effluent limited receiving streams.

ACTION REQUESTED:

___ Work Session Discussion
___ General Program Background
___ Potential Strategy, Policy, or Rules
___ Agenda Item ___ for Current Meeting
___ Other: (specify)

_X_ Authorize Rulemaking Hearing
___ Adopt Rules

Proposed Rules	Attachment A
Rulemaking Statements	Attachment B
Fiscal and Economic Impact Statement	Attachment C
Public Notice	Attachment D
Background Reports	Attachment E&F

___ Issue a Contested Case Order
___ Approve a Stipulated Order
___ Enter an Order
Proposed Order — Attachment ___

___ Approve Department Recommendation

___ Variance Request	Attachment ___
___ Exception to Rule	Attachment ___
___ Informational Report	Attachment ___
___ Other: (specify)	Attachment ___

DESCRIPTION OF REQUESTED ACTION:

The current rule does not clearly define the term "water quality limited". The proposed rules would establish in Oregon Administrative Rule definitions for water quality limited and effluent limited receiving streams (Attachment A). The proposed definition would identify different water quality limited categories that reflect the program described in the WQA and 40 CFR 130.

The proposed rule amendments also describe when and under what condition the Environmental Quality Commission (EQC) and Department of Environmental Quality (DEQ) can take actions to increase waste loads to water quality limited receiving streams. Attachment A contains three proposed rule options, while Attachment E provides an extensive background discussion.

Option 1 would restrict load increase actions for parameters causing receiving streams to violate and water quality standards be designated water quality limited until:

1. Total maximums daily loads (TMDLs), waste load allocations (WLAs), load allocations (LAs), and reserve capacity have been established;

2. Compliance plans under which enforcement actions can be taken are fully implemented; and

3. There is sufficient reserve capacity to handle the increased load.

Option 2 would restrict load increase actions for parameters causing receiving streams to violate and water quality standards be designated water quality limited until:

1. Total maximum daily loads (TMDLs), waste load allocation (WLAs), load allocations (LAs), and reserve capacity has been established;

2. Compliance plans under which enforcement actions can be taken have been established and are being implemented on schedule;

3. There is sufficient reserve capacity to handle the increased load at the time it will be discharged; and

4. Under extraordinary circumstances to solve an immediate and critical environmental problem that the Commission or Department may consider a waste load increase for an existing source on a waterbody designated water quality limited under proposed rule OAR 340-41-026(27)(a) based on the following conditions:

   a. That TMLDs, WLAs, LAs, and reserve capacity have been set;

   b. That compliance plans under which enforcement actions can be taken are being implemented on schedule;

   c. That an evaluation of the requested temporary increased load shows that this increment of load will not have a significant temporary or permanent adverse effect on beneficial uses; and

   d. That the temporary increase load will not prevent the receiving stream from meeting the compliance deadline for meeting that TMDL.

Option 3 would be the same as Option 2, but add one addition provision that would require the Department to establish a priority list for the collection of needed information.

AUTHORITY/NEED FOR ACTION:

___	Required by Statute: _____	Attachment ___
	Enactment Date: _____	
_X_	Statutory Authority: _____	Attachment _B_
___	Pursuant to Rule: _____	Attachment ___
___	Pursuant to Federal Law/Rule: _____	Attachment ___
___	Other:	Attachment ___
___	Time Constraints: (explain)	

DEVELOPMENTAL BACKGROUND:

___	Advisory Committee Report/Recommendation	Attachment ___
___	Hearing Officer's Report/Recommendations	Attachment ___
___	Response to Testimony/Comments	Attachment ___
___	Prior EQC Agenda Items: (list)	
		Attachment ___

___ Other Related Reports/Rules/Statutes: Attachment ___

_X_ Supplemental Background Information Attachment E&F

REGULATED/AFFECTED COMMUNITY CONSTRAINTS/CONSIDERATIONS:

Existing cities and industries that discharge wastewater may be affected by the proposed rules. The proposed rules would describe the conditions which must be met for these facilities to obtain a waste load increase if they are discharging to a water quality limited receiving stream.

PROGRAM CONSIDERATIONS:

The current rule restricts the Commission from granting waste load increase for a parameter causing a receiving streams to be classified as water quality limited. The federal Water Quality Act under section 303 and federal regulations under 40 CRF 130.7 describe the water quality management program (Attachment E) for water quality limited receiving streams. The various water quality limited receiving streams describes in these statutes and regulation could be summarized into the following general categories (Figure 1, Attachment E). This would be those waterbodies currently under study as a result of the NEDC/EPA law suit, those identified in the 305(b) report as not meeting standards, and those with confirmed toxic discharges.

Category A. Receiving streams that do not meet water quality standards even after the implementation of standard treatment technology, which is secondary treatment for municipal sewage sources and best practicable control technology (BPT) currently available for industrial sources;

Category B. Receiving streams that do meet water quality standards but higher than secondary treatment and BPT are being implemented; and

Category C. Receiving streams which are not expected to meet water quality standards or which may not be currently meeting standards but for which there is insufficient information to make a decision.

Most of the receiving streams in Oregon would at sometime during the year fall into one of these categories. The intent of the current rule was to restrict load increases to those waterbodies described in Category A where a

parameter(s) has caused the waterbody to be limited, thus the receiving stream is violating standards.

However, the current rule does not distinguish between the different water quality limited (WQL) receiving stream categories.

The proposed rules would provide a definition for water quality limited. The proposed rule options describe specifically what load increase actions could be taken under what conditions for the different WQL receiving stream categories.

ALTERNATIVES CONSIDERED BY THE DEPARTMENT:

The Department considered the following alternative:

1. Maintain the current rule.

2. Propose rule amendments which define water quality limited, and proposed rule amendment options which describe when and under what conditions the EQC and DEQ can take action on waste load increase discharge to water quality limited receiving streams.

DEPARTMENT RECOMMENDATION FOR ACTION, WITH RATIONALE:

The Department recommends that the Commission authorize the Department to conduct public rulemaking hearings on the proposed rule amendments for OAR 340-41-006 and OAR 340-41-026. The proposed rules would provide definitions for water quality and effluent limited, and establish requirements for considering waste load increases on water quality limited receiving streams.

CONSISTENCY WITH STRATEGIC PLAN, AGENCY POLICY, LEGISLATIVE POLICY:

The proposed rules were developed at the direction of the Commission to address issues which have been identified with the interpretation of the current rules.

ISSUES FOR COMMISSION TO RESOLVE:

The proposed rules attempt to address a number of issues related to water quality limited receiving streams. This includes:

1. Whether waste load increases can be considered for water quality limited receiving streams;

2. What categories of water quality limited are included in the load increase restrictions;

3. Whether load increases can occur during seasons when standards are not being violated on water quality limited receiving streams; and

4. Whether no load increase actions can be taken until full compliance with TMDL is achieved.

INTENDED FOLLOWUP ACTIONS:

Hold public hearings, evaluate public testimony, and propose final action on the proposed rules.

Approved:

Section: Neil J. Mullane

Division: _____

Director: _____

Report Prepared By: Neil J. Mullane

Phone: 229-5284

Date Prepared: December 27, 1989

Neil J. Mullane:hs
PM\WH3840
December 27, 1989

NOTE:

The **underlined** portions of text represent proposed additions made to the rules.

The [~~bracketed~~] portions of text represent proposed deletions made to the rules.

DEFINITIONS

340-41-006

Definitions applicable to all basins unless context requires otherwise:

(1) "BOD" means 5-day 20° C. Biochemical Oxygen Demand.

(2) "DEQ" or "Department" means the Oregon State Department of Environmental Quality.

(3) "DO" means dissolved oxygen.

(4) "EQC" means the Oregon State Environmental Quality Commission.

(5) "Estuarine waters" means all mixed fresh and oceanic waters in estuaries or bays from the point of oceanic water intrusion inland to a line connecting the outermost points of the headlands or protective jetties.

(6) "Industrial waste" means any liquid, gaseous, radioactive, or solid waste substance or a combination thereof resulting from any process of industry, manufacturing, trade, or business, or from the development or recovery of any natural resources.

(7) "Marine waters" means all oceanic, offshore waters outside of estuaries or bays and within the territorial limits of the State of Oregon.

(8) "mg/l" means milligrams per liter.

(9) "Pollution" means such contamination or other alteration of the physical, chemical, or biological properties of any waters of the state, including change in temperature, taste, color, turbidity, silt, or odor of the waters, or such radioactive or other substance into any waters of the state which either by itself or in connection with any other substance present, will or can reasonably be expected to create a public nuisance or render such waters harmful, detrimental, or injurious to public health, safety, or welfare, or to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses

or to livestock, wildlife, fish or other aquatic life, or the habitat thereof.

(10) "Public water" means the same as "waters of the state".

(11) "Sewage" means the water-carried human or animal waste from residences, buildings, industrial establishments, or other places together with such groundwater infiltration and surface water as may be present. The admixture with sewage as herein defined of industrial wastes or wastes, as defined in sections (6) and (13) of this rule, shall also be considered "sewage" within the meaning of this division.

(12) "SS" means suspended solids.

(13) "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.

(14) "Waters of the state" include lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon, and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters which do not combine or effect a junction with natural surface or underground waters), which are wholly or partially within or bordering the state or within its jurisdiction.

(15) "Low flow period" means the flows in a stream resulting from primarily groundwater discharge or baseflows augmented from lakes and storage projects during the driest period of the year. The dry weather period varies across the state according to climate and topography. Wherever the low flow period is indicated in the Water Quality Management Plans, this period has been approximated by the inclusive months. Where applicable in a waste discharge permit, the low flow period may be further defined.

(16) "Secondary treatment" as the following context may require for:

(a) "Sewage wastes" means the minimum level of treatment mandated by EPA regulations pursuant to Public Law 92-500.

(b) "Industrial and other waste sources" imply control equivalent to best practicable treatment (BPT).

(17) "Nonpoint Sources" refers to diffuse or unconfined sources of pollution where wastes can either enter into -- or be conveyed by the movement of water to -- public waters.

(18) Loading Capacity (LC): The greatest amount of loading that a water can receive without violating water quality standards.

(19) Load Allocation (LA): The portion of a receiving water's loading capacity that is attributed either to one of its existing or future nonpoint sources of pollution or to natural background sources. Load allocations are best estimates of the loading which may range from reasonably accurate estimates to gross allotments, depending on the availability of data and appropriate techniques for predicting loading. Wherever possible, natural and nonpoint source loads should be distinguished.

(20) Wasteload Allocation (WLA): The portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution. WLAs constitute a type of water quality-based effluent limitation.

(21) Total Maximum Daily Load (TMDL): The sum of the individual WLAs for point sources and LAs for nonpoint sources and background. If a receiving water has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure. If Best Management Practices (BMPs) or other nonpoint source pollution controls make more stringent load allocations practicable, then wasteload allocations can be made less stringent. Thus, the TMDL process provides for nonpoint source control tradeoffs.

(22) "Land Development" refers to any human induced change to improved or unimproved real estate, including but not limited to construction, installation or expansion of a building or other structure, land division, drilling, and site alteration such as that due to land surface mining, dredging, grading, construction of earthen berms, paving, improvements for use as parking or storage, excavation or clearing.

(23) "Jurisdiction" refers to any city or county agency in the Tualatin River and Oswego Lake subbasins that regulates land development activities within its boundaries by approving plats, site plans or issuing permits for land development.

(24) "Erosion Control Plan" shall be a plan containing a list of best management practices to be applied during construction to control and limit soil erosion.

(25) "Public Works Project" means any land development conducted or financed by a local, state, or federal governmental body.

(26) "Effluent Limited" can mean one of the following categories:

(a) A receiving stream which is meeting and/or is expected to meet water quality standards with the implementation of standard treatment technology which is secondary treatment for sewage wastes and best practicable treatment (BPT) for industrial and other waste sources.

(b) A receiving stream for which there is insufficient information to determine if water quality standards are being met with standard treatment technology.

(27) "Water Quality Limited" can mean one of the following categories:

(a) A receiving stream which does not meet instream water quality standards even after the implementation of standard technology.

(b) A receiving stream which achieves and is expected to continue to achieve instream water quality standard but utilizes higher than standard technology to protect beneficial uses.

(c) A receiving stream for which there is insufficient information to determine if water quality standards are being met with higher than standard treatment technology or where through professional judgment the receiving stream would not be expected to meet water quality standards without higher than standard technology.

PROPOSED OPTION NO. 1

POLICIES AND GUIDELINES GENERALLY APPLICABLE TO ALL BASINS

340-41-026

(1) (a) Existing high quality waters which exceed those levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water shall be maintained and protected unless the Environmental Quality Commission chooses, after full satisfaction of the intergovernmental coordination and public participation provisions of the continuing planning process, to lower water quality for necessary and justifiable economic or social development. The Director or his designee may allow lower water quality on a short-term basis in order to respond to emergencies or to otherwise protect public health and welfare. In no event, however, may degradation of water quality interfere with or become injurious to the beneficial uses of water within surface waters of the following areas:

(A) National Parks;
(B) National Wild and Scenic Rivers;
(C) National Wildlife Refuges;
(D) State Parks.

(b) Point source discharges shall follow policies and guidelines (2), (4), and (5), and nonpoint source activities shall follow guidelines (6), (7), (8), (9), and (10).

(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).

(3) The Commission or Director may grant exceptions to sections (2) and (5) and approvals to section (4) 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 Director 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 discharged load would not threaten or impair any recognized beneficial uses[;]. In making this determination the Commission or Department may rely upon the presumption that if water quality standards 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 standards 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 unless the pollutant parameters associated with the proposed discharge are unrelated either directly or indirectly to the parameter(s) causing the receiving stream to be water quality limited;and] 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(27)(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;

(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;

(iii) Compliance plans under which enforcement action can be taken are fully implemented; and

(iv) There is sufficient reserve capacity to handle the increased load under the established TMDL.

(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. The strategy that has been followed in stream management has hastened the development and application of treatment technology that would not have otherwise occurred. As a result, some waters in Oregon have assimilative capacity above that which would exist if only

the minimum level of waste treatment was achieved. This 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 Director shall consider the following:

(A) Environmental Effects Criteria.

(i) Adverse Out-of-Stream Effects. There may be instances where the nondischarge 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 loadings 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 increased loading.

(ii) Cost of Treatment Technology. The cost of improved treatment technology, nondischarge 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 standard 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(27)(a) or (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 subsections (3)(a)(C) of this rule for that portion of the interstate waterbody within the boundary of the state.

[~~(4)~~] (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.

[~~(5)~~] (6) No discharges of wastes to lakes or reservoirs shall be allowed except as provided in Section 3.

[~~(6)~~] (7) Log handling in public waters shall conform to current EQC policies and guidelines.

[~~(7)~~] (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.

[~~(8)~~] (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.

[~~(9)~~] (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.

[~~(10)~~] (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.

PROPOSED OPTION NO. 2

POLICIES AND GUIDELINES GENERALLY APPLICABLE TO ALL BASINS

340-41-026

(1) (a) Existing high quality waters which exceed those levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water shall be maintained and protected unless the Environmental Quality Commission chooses, after full satisfaction of the intergovernmental coordination and public participation provisions of the continuing planning process, to lower water quality for necessary and justifiable economic or social

development. The Director or his designee may allow lower water quality on a short-term basis in order to respond to emergencies or to otherwise protect public health and welfare. In no event, however, may degradation of water quality interfere with or become injurious to the beneficial uses of water within surface waters of the following areas:

(A) National Parks;
(B) National Wild and Scenic Rivers;
(C) National Wildlife Refuges;
(D) State Parks.

(b) Point source discharges shall follow policies and guidelines (2), (4), and (5), and nonpoint source activities shall follow guidelines (6), (7), (8), (9), and (10).

(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).

(3) The Commission or Director may grant exceptions to sections (2) and (5) and approvals to section (4) 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 Director 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 discharged load would not threaten or impair any recognized beneficial uses[~~;~~]. In making this determination the Commission or Department may rely upon the presumption that if standards 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 standards 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 unless the pollutant parameters associated with the proposed discharge are unrelated either directly or indirectly to the parameter(s)~~

~~causing the receiving stream to be water quality limited; and]~~

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(27)(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;

(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;

(iii) Compliance plans under which enforcement action can be taken have been established and are being implemented on schedule;

(iv) There is sufficient reserve capacity to handle the increased load under the established TMDL at the time of discharge; and

(v) 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(27)(a) based on the following conditions:

(I) That TMLDs, WLAs and LAs have been set;

(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 temporary increased load shows that this increment of load will not have a significant temporary or permanent adverse effect on beneficial uses.

(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. The strategy that has been followed in stream management has hastened the development and application of treatment technology that would not have otherwise occurred. As a result, some waters in Oregon have assimilative capacity above that which would exist if only the minimum level of waste treatment was achieved. This 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 Director shall consider the following:

(A) Environmental Effects Criteria.

(i) Adverse Out-of-Stream Effects. There may be instances where the nondischarge 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 loadings 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 increased loading.

(ii) Cost of Treatment Technology. The cost of improved treatment technology, nondischarge 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(27)(a) or (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 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 subsections (3)(a)(C) of this rule for that portion of the interstate waterbody within the boundary of the state.

[~~(4)~~] (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.

[~~(5)~~] (6) No discharges of wastes to lakes or reservoirs shall be allowed except as provided in Section 3.

[~~(6)~~] (7) Log handling in public waters shall conform to current EQC policies and guidelines.

[~~(7)~~] (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.

[~~(8)~~] (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.

[~~(9)~~] (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.

[~~(10)~~] (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.

PROPOSED OPTION NO. 3

POLICIES AND GUIDELINES GENERALLY APPLICABLE TO ALL BASINS

340-41-026

(1) (a) Existing high quality waters which exceed those levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water shall be maintained and protected unless the Environmental Quality Commission chooses, after full satisfaction of the intergovernmental coordination and public participation provisions of the continuing planning process, to lower water quality for necessary and justifiable economic or social development. The Director or his designee may allow lower water quality on a short-term basis in order to respond to emergencies or to otherwise protect public health and welfare. In no event, however, may degradation of water quality interfere with or become injurious to the beneficial uses of water within surface waters of the following areas:

(A) National Parks;
(B) National Wild and Scenic Rivers;
(C) National Wildlife Refuges;
(D) State Parks.

(b) Point source discharges shall follow policies and guidelines (2), (4), and (5), and nonpoint source activities shall follow guidelines (6), (7), (8), (9), and (10).

(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).

(3) The Commission or Director may grant exceptions to sections (2) and (5) and approvals to section (4) 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 Director 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 discharged load would not threaten or impair any recognized beneficial uses[;]. In making this determination the Commission or Department may rely upon the presumption that if standards 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 standards 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 unless the pollutant parameters associated with the proposed discharge are unrelated either directly or indirectly to the parameter(s) causing the receiving stream to be water quality limited;-and]

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(27)(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;

(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;

(iii) Compliance plans under which enforcement action can be taken have been established and are being implemented on schedule;

(iv) There is sufficient reserve capacity to handle the increased load under the established TMDL at the time of discharge; and

(v) 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(27)(a) based on the following conditions:

(I) That TMLDs, WLAs and LAs have been set;

(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 temporary increased load shows that this increment of load will not have a significant temporary or permanent adverse effect on beneficial uses.

(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. The strategy that has been followed in stream management has hastened the development and application of treatment technology that would not have otherwise occurred. As a result, some waters in Oregon have assimilative capacity above that which would exist if only the minimum level of waste treatment was achieved. This 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 Director shall consider the following:

(A) Environmental Effects Criteria.

(i) Adverse Out-of-Stream Effects. There may be instances where the nondischarge 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 loadings 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 increased loading.

(ii) Cost of Treatment Technology. The cost of improved treatment technology, nondischarge 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 standards are violated, 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(27)(a) or (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 subsections (3)(a)(C) 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(27)(c), the Department shall establish a priority list for future water quality monitoring activities to determine: if the waterbody should be designated WQL under OAR 340-41-006(27)(a) or (b), if estimated TMDLs need to be prepared, and if an implementation plan needs to be developed and implemented.

[~~(4)~~] (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.

[~~(5)~~] (6) No discharges of wastes to lakes or reservoirs shall be allowed except as provided in Section 3.

[~~(6)~~] (7) Log handling in public waters shall conform to current EQC policies and guidelines.

[~~(7)~~] (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.

[~~(8)~~] (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.

[~~(9)~~] (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.

[~~(10)~~] (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.

Agenda Item K, January 19, 1990 EQC Meeting

STATEMENT OF NEED FOR RULEMAKING

Pursuant to ORS 183.335(7), this statement provides information on the Environmental Quality Commission's intended action to adopt a rule.

1. Legal Authority

Oregon Revised Statute (ORS) 468.020 grants the Environmental Quality Commission the authority to, "adopt such rules and standards as it considers necessary and proper in performing the functions vested by law in the Commission." Further, ORS 468.705 provides the commission authority over water pollution.

2. Need for the Rule

Oregon Administrative Rule (OAR) 340-41-026(3) requires the Commission to consider approval of increase permitted discharge loadings. At the Commission's request, the Department has drafted rules to provide criteria to be used when considering a request by a permittee for an increase in discharge loading on a water quality limited receiving stream. These criteria will be used by the Commission and Department when considering requests from major and minor facilities respectively. The proposed rules also establish definitions for the terms "water quality limited" and "effluented limited".

3. Principal Documents Relied Upon it this Rulemaking

a. Oregon Administrative Rule 340-41.

b. Agenda Item K, June 2, 1989 EQC meeting, "To add environmental and economic decision-guiding criteria to existing water quality management policies in OAR 340-41-026, which require Environmental Quality Commission approval of increased discharges for existing sources, new discharges from significant sources and discharges to lakes."

c. The Clean Water Act.

d. Code of Federal Regulations, 40 CFR 130.

e. Agency Item O, March 13, 1987 EQC Meeting, Informational Report: Proposed Approach for Establishing Total Maximum Daily Loads as a Management Tool on Water Quality Limited Segments.

LAND USE COMPATIBILITY STATEMENT

Land Use Consistency

The Department has concluded that the proposal conforms with the Statewide Planning Goals and Guidelines.

Goal 6 (Air, Water and Land Resources Quality): The two proposed rule changes are procedural in nature and will not affect this goal. The Department believes that the change will better protect water quality resources and, therefore, concludes that this proposal is consistent with Goal 6.

Goal 11 (Public Facilities and Services): The two proposed rule changes are procedural in nature and will not affect this goal. The proposed rule change, in some cases, will require a higher level of treatment for new sewage treatment plants. Higher treatment levels will add to the cost of providing necessary sewage treatment and will probably add to the burdens of public agencies in charge of providing sewer service.

Public comment on any land use issue involved is welcome and may be submitted in the same manner as indicated for testimony in this notice.

FISCAL AND ECONOMIC IMPACT STATEMENT

Overall Impact

Existing Oregon Administrative Rule 340-41-026(3)(a)(C) restricts the Commission and Department from allowing waste load increases to water quality limited receiving streams until discharging sources are in full compliance with their established waste load allocations. The current rules therefore require higher levels of treatment at a cost to the source. The current rule also requires expansions and increased growth to be accommodated within current permitted loads. This would result in a higher level of treatment and a higher level of cost. Most likely, these added costs will be transferred to people by the owner of the sewerage facility through added user fees for sewer service. The costs to individuals and small businesses will depend upon the necessary equipment for achieving the higher treatment level, the amount of wastewater discharged into the new sewage treatment plant by the individual or small businesses, and the number of connections to the new sewage treatment plant that have to share the additional costs. An example of the potential added costs are demonstrated as follows. If the added treatment requirements would require the use of a sand filter to polish the effluent from a one millions gallon per day plant, the increased costs for a single family home could be an additional $2.00 to $3.00 per month. The increased costs for small businesses would depend on the amount of wastewater discharged into the sewerage facility and the particular rate structure used by the owner of the sewerage facility.

The proposed rules add definitions for "effluent limited" and "water quality limited" receiving streams and clarify the current rules to describe which water quality limited receiving streams are covered. These clarifications may allow the Commission and Department to grant load increases on some water quality limit receiving streams under certain conditions, and thus reduce potential costs.

The definitions in themselves do not impose additional costs. The sources which discharge to effluent limited or water quality limited receiving streams could however incur costs for treating wastes to the levels required by other rules and policies.

The proposed rule options for amending OAR 340-41-026(3)(a)(C) would have essentially the same costs that are associated with the existing rule. However, because there would be a better description of what receiving streams are affected and what conditions have to be met, there could be a potential reduction in costs. For example, this clarification could potentially save small businesses, municipalities, and industries resources by clarifying whether they can or can not increase waste loads. If they can not increase loads and they still want to grow, then there is the potential for increases in costs to increase the level of treatment provided. If, however, they could increase loads, they may not have to increase treatment.

The proposed options are described below:

Option 1 would restrict load increase actions for parameters causing receiving streams to violate and water quality standards be designated water quality limited until:

1. Total maximums daily loads (TMDLs), waste load allocations (WLAs), load allocations (LAs), and reserve capacity have been established;

2. Compliance plans under which enforcement actions can be taken are fully implemented; and

3. There is sufficient reserve capacity to handle the increased load.

Option 2 would restrict load increase actions for parameters causing receiving streams to violate and water quality standards be designated water quality limited until:

1. Total maximum daily loads (TMDLs), waste load allocation (WLAs), load allocations (LAs), and reserve capacity has been established;

2. Compliance plans under which enforcement actions can be taken have been established and are being implemented on schedule;

3. There is sufficient reserve capacity to handle the increased load at the time it will be discharged; and

4. Under extraordinary circumstances to solve an immediate and critical environmental problem that the Commission or Department may consider a waste load increase for an existing source on a waterbody designated water quality limited under proposed rule OAR 340-41-026(27)(a) based on the following conditions:

    a. That TMLDs, WLAs, LAs, and reserve capacity have been set;

    b. That compliance plans under which enforcement actions can be taken are being implemented on schedule;

    c. That an evaluation of the requested temporary increased load shows that this increment of load will not have a significant temporary or permanent adverse effect on beneficial uses; and

    d. That the temporary increase load will not prevent the receiving stream from meeting the compliance deadline for meeting that TMDL.

Option 3 would be the same as Option 2, but add one addition provision that would require the Department to establish a priority list for the collection of needed information.

Between the options, Option 1 would potentially have higher costs than either Option 2 or 3. This is because it would restrict load increases until full compliance with waste load allocations. Thus, all actions on proposed development would be delayed until the waste load allocations were achieved. Options 2 and 3 would allow actions to be taken but sources could not discharge until there was available reserve capacity. Costs associated with Option 1 and 2 may also be higher than Option 3 because they do not provide guidance on categories of water quality limited receiving streams. Therefore some sources may invest time and resources into information development which may or may not be useful.

The current rules may also have greater costs because they could potentially require greater levels of treatment than required by existing basin treatment standards during the winter time when in fact there is assimilative capacity in the receiving stream. The basin treatment standards may allow allocation of wintertime reserve capacity while the existing rules would not. The proposed rule options could correct this situation.

Oregon Department of Environmental Quality

A CHANCE TO COMMENT ON...

PROPOSED AMENDMENTS TO POLICY STATEMENTS RELATED TO WASTEWATER DISCHARGES

Hearing Date: _____
Comments Due: _____

WHO IS AFFECTED: Permitted municipal and industrial sources that discharge treated effluent to surface waters. Large and small businesses and the public served by municipal treatment facilities.

WHAT IS PROPOSED: The Department proposes to amend two existing rules: First, OAR 340-41-026 which provides the Commission and Director with a set of environmental and economic criteria to determine whether major dischargers and smaller dischargers, respectively, should be allowed to discharge increases loads to water quality limited receiving streams. The amendments specifically describe the conditions which must be considered by the Commission and Director when evaluating load request on water quality limited receiving streams. Second, the Department of Environmental Quality proposes to add to OAR 340-41-006 definitions for "water quality limited" and "effluent limited" receiving streams.

WHAT ARE THE HIGHLIGHTS: Under proposed amendments to OAR 340-41-026, dischargers requesting increased discharge loading would know whether or under what conditions the Commission or Department will consider approving an increase in permitted discharge load to a water quality limited receiving stream.

PUBLIC HEARINGS: Public Hearings will be held before a hearings officer at:

TIME: _____

DATE: _____

PLACE: Oregon Department of Environmental Quality (DEQ)
4th Floor Conference Room
811 S.W. Sixth Avenue
Portland, Oregon 97204

HOW TO COMMENT: Written or oral comments may be presented at the hearings. Written comments may also be sent to the Department of Environmental Quality, Water Quality Division, 811 S.W. Sixth Avenue, Portland, OR 97204, and must be received no later than 5:00 p.m., _____.

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

FOR FURTHER INFORMATION:

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

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OVER

Copies of the complete proposed rule package may be obtained from the DEQ, Water Quality Division. For further information, contact Neil Mullane at 229-5284 or toll-free (in Oregon) at 1-800-452-4011.

WHAT IS THE NEXT STEP:

The Environmental Quality Commission may adopt new rules identical to the ones proposed, adopt modified rules as a result of testimony received, or may decline to adopt rules. The Commission will consider the proposed new rule and rule revisions at its meeting

BACKGROUND REPORT

Meeting Date: January 19, 1990
Agenda Item: K
Division: Water Quality
Section: Standards and Assessments

SUBJECT:

Proposed Water Quality Rule Amendments for OAR 340-41-026(3)(c) and 340-41-006(26) & (27).

INTRODUCTION:

The Commission requested staff review of the language in OAR 340-41-026(3) and specifically the term "water quality limited" contained in subsection (c). The following report examines this language and suggests options for addressing several issues resulting from the current rule language.

OAR 340-41-026(3) was modified by the Commission on June 4, 1989. The expressed purpose of this modification was to provide the Commission and Department with specific criteria when reviewing and approval of pollutant load discharge increases for new discharges, expanding discharges at existing facilities, and discharges to lakes.

The rule was modified because the Commission had frequently been asked by several permittees to grant increased pollutant loadings to different waterbodies including the Columbia and Willamette Rivers. In reviewing these requests, the Commission felt it important to establish a set of criteria that would be useful in making these determinations. Information could then be provided by the permittee that would assist the Commission in making effective decisions. The information submitted would help to describe the effect of the increased loads on beneficial uses and the character of the receiving water.

Consequently, the Commission directed the Department to explore and recommend specific criteria to assist the Commission in evaluating waste load increase requests. The Commission would then review the proposed language and consider it for potential inclusion into Oregon Administrative Rules.

Proposed rule language was developed and taken to public hearing in the spring of 1989. The hearing process focused attention on the specific criteria. A review of the hearing record shows that there was no oral or written comment to indicate if there was any concern with or understanding of the water quality limited language used in the proposed rule.

Recently, the Commission and public have asked several questions regarding the water quality limited language contained in the increase loading rule. These questions indicate that there was not complete understanding of the term "water quality limited" used in the rule. These questions also indicate that there is considerable misunderstanding as to how this designation is made, when it applies to a specific waterbody, and if it always applies to a waterbody.

These recent discussions makes it imperative that some time be taken to further explain the term "water quality limited" if the increase loading rule and the Department's water quality limited program (total maximum daily load (TMDL) program) are to work together effectively to prevent, control and solve water quality problems in the state of Oregon.

The remainder of the report will examine the term water quality limited, its description in federal statue and regulation, and the ensuing requirements for receiving streams that fall into the different water quality limited categories. It will conclude with a review of three rule options that clarify when increased waste loads may be discharged to water quality limited receiving streams and how the current increasing load rule should be modified.

BACKGROUND:

In the spring of 1989 the Commission considered the specific criteria for load increase requests. Concurrently, the Department was completing an extensive and exhaustive process to define and identify water quality limited waterbodies in accordance with federal law and regulation. This information was being assembled to meet the requirements of Section 305(b) of the Water Quality Act (WQA) wherein each state must submit a report on a two year cycle to the US Environmental Protection Agency (EPA) which describes the water quality status of the states waters. This report identifies where the state is meeting or not meeting water quality standards, and consequently where the state is or not protecting beneficial uses. The Department has prepared this report every two years for over a decade. It has served to evaluate the effectiveness of the state's water pollution control program and help set future program direction.

The Department had been particularly deliberate in preparing the 1988 Water Quality Status Assessment report and had reviewed the steps being taken to identify water quality problems and water quality limited receiving streams with the Commission. This included a review of the criteria being used by the Department to determine water quality status. Considerable attention was given to this evaluation because of the ensuing implications for a waterbody designated as water quality limited and the potential effects that such a designation might have on the sources discharging to those receiving streams.

This approach highlighted the importance of the 1988 status assessment report. This would be the first report produced that would specifically identify water quality limited waterbodies throughout the state. This designation would have considerable effect on how the Department implemented the state's water pollution control program for these waterbodies.

The water quality management program in Oregon underwent considerable change from 1986 to 1988. The agency shifted from a technology based permit program to a water quality based permit program. The emphasis shifted from the treatment technology used to the actual quality of the receiving water. In other words, moving away from treatment engineering processes to the receiving water's chemical, physical, and biological health. This change also shifted emphasis away from the traditional pollutants, such as Biochemical Oxygen Demand (BOD), to an emphasis on a wider range of pollutants including nutrients, metals, and toxics. The key influence on this change had been the need to establish total maximum daily loads (TMDLs) for waterbodies identified as water quality limited.

Historically, the Department had implemented water quality control activities in accordance with a general management plan. This plan set forth an overall program to preserve and enhance water quality statewide and to provide for the beneficial uses of the water resource. The plan was intended to fulfill the policy of the State of Oregon regarding water pollution control as expressed in the Oregon statutes. This management plan was also designed to satisfy water quality planning and management activities identified in the Federal Clean Water Act (CWA) of 1972 which was amended in 1987 and is now referred to as the Water Quality Act (WQA).

Oregon's traditional water quality control program approach was challenged on December 12, 1986 when the Northwest Environmental Defense Center (NEDC) filed suit in the Federal District Court in Oregon against Lee Thomas, Administrator of EPA, to require him to ensure that TMDLs were established and implemented for waters within Oregon identified as being water quality limited. The suit was based on the information provided in the 1986 status assessment report wherein the Department had identified waterbodies that were not meeting standards and protecting beneficial uses.

As a result of the law suit and the ensuing court settlement the Department must develop total maximum daily loads (TMDLs), waste load allocations (WLAs), and load allocations (LAs) for waterbodies designated as being water quality limited. A detailed description of this suit is contained in Attachment F.

FEDERAL LAW AND REGULATION FOR RECEIVING STREAMS:

Section 303 of the WQA contains the basic federal requirements for water quality management planning. The federal regulations which implement this section of the WQA are found in 40 Code of Federal Regulations (CFR) 130.

Section 303 deals specifically with water quality standards and implementation plans. It also contains the basic introduction to the review of water quality information and introduces the concept of designating a receiving stream water quality limited. 40 CFR 130 contains additional detail and requirements for implementing section 303. It also describes the terms used in both the statue and regulations. The following part of this report highlights important sections in both the WQA and federal regulation.

Effluent Limited:

The concept behind designating a waterbody as effluent limiting is to identify receiving streams which will meet instream water quality standards by implementing the minimum acceptable level of technology based controls. These controls are directed at achieving a certain effluent quality. Standard technology is defined as secondary treatment for municipal sewage treatment and best practicable control technology (BPT) for industrial sources.

Water Quality Limited:

The concept behind designating a waterbody as water quality limited is to identify receiving streams where point and nonpoint source dischargers must provide a higher than standard level of treatment in order to meet instream water quality standards and protect instream beneficial uses.

Designating of a waterbody as water quality limited therefore identifies where receiving streams are in fact violating standards because sources are using only standard technology, when higher treatment is required. It also identified receiving streams which are not likely to meet standards with standard technology and receiving streams where higher than standard technology are presently being implemented.

Section 303(d) of the WQA describes the water quality limited (WQL) requirements. The statue language reads:

> "(d)(1)(A) Each state shall identify those waters within its boundaries for which the effluent limitations required by section 301(b)(1)(A) and section 301(b)(1)(B) are not stringent enough to implement any water quality standards applicable to such waters. The State shall establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such waters."

Therefore, under this section of the Act, the State is required to identify where water quality standards are not being met even after the application of effluent limitations required by section 301(b)(1)(A). Waterbodies so identified are termed <u>"water quality limited"</u>. Water quality limited receiving stream can therefore be stream reaches that do not meet instream

water quality standards, in either numerical or narrative form, even after technology based limitations have been applied.

According to section 303(d)(1)(D) of the WQA, total maximum daily loads (TMDLs) are to be developed on those waters identified under section 303(d)(1) as not meeting standards even after the application of effluent limitations.

> "303(d)(1)(C) Each State shall establish for the waters identified in paragraph (1)(A) of this subsection, and in accordance with the priority ranking, the total maximum daily load, for those pollutants which the Administrator identifies under section 304(a)(2) as suitable for such calculation. Such load shall be established at a level necessary to implement the applicable water quality standards with seasonal variations and margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality."

A TMDL has several components. These components are defined in federal regulations as follows:

Loading Capacity (LC): The greatest amount of loading that a water can receive without violating water quality standards.

Load Allocation (LA): The portion of a receiving water's loading capacity that is attributed either to one of its existing or future nonpoint sources of pollution or to natural background sources.

Wasteload Allocation (WLA): The portion of a receiving waters loading capacity that is allocated to one of its existing or future point sources of pollution. WLA constitute a water quality-based effluent limitation.

Total Maximum Daily Load (TMDL): The sum of the individual WLAs for point sources and LAs for nonpoint sources and background. If a receiving water has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure.

A TMDL is basically equivalent to the loading capacity of a waterbody. The loading capacity is the greatest amount of pollutant loading that a waterbody can receive without violating water quality standards.

The loading capacity (LC) is equal to the assimilative capacity of a stream for a particular parameter. Assimilation is the process of self purification. This process is dependent on the physical and biological

nature of the stream. As assimilation occurs, the ability of a stream to accept pollutant loadings is regenerated. For example, dissolved oxygen is added to a stream by reaeration. The decay of ammonia removes oxygen from a stream. When the ammonia demand for oxygen exceeds the oxygen supplied by reaeration, instream oxygen is depleted. When decay and reaeration rates are equal, the instream oxygen concentration remains stable. After the ammonia has decayed, reaeration replaces the lost oxygen. The capacity of the stream to receive ammonia loads has been regenerated and assimilation has occurred.

Some parameters will not be assimilated by a stream. These parameters, such as dissolved solids, are termed conservative. For conservative parameters, the mass loadings to a stream can simply be added to show the cumulative load. Other parameters, such as ammonia and phosphorus, may be assimilated by a stream and are termed non-conservative. For non-conservation parameters, the loading capacity of a stream may be regenerated due to instream assimilation. This dynamic process needs to be accounted for in establishing the TMDL, and in considering increased waste loads.

In summary a waterbody is termed WQL under section 303(d)(1) when it fails to meet water quality standards even after the application of minimum technology based controls. These waterbodies are required to have total maximum daily loads, waste load allocations and load allocations developed and implemented.

Section 303 in addition to requiring the identification of waterbodies needing TMDLs contains under section 303(d)(3) additional language for identifying water quality limited waterbodies. Section 303(d)(3) states:

> "For the specific purpose of developing information, each State shall identify all waters within its boundaries which it has not identified under paragraph (1)(A) and (2)(B) of this subsection and estimate for such waters the total maximum daily load with seasonal variations and margins of safety, for those pollutants which the Administrator identifies under section 304(a)(2) as suitable for such calculation and for thermal discharges, at the level that would assure protection and propagation of a balanced indigenous population of fish, shellfish and wildlife."

Therefore, the state must also identify waterbodies that <u>may not</u> be meeting water quality standards but for which the state lacks a complete data record. For these waterbodies the state shall estimate TMDLs and/or collect the needed information to determine if the waterbody should be designated a 303(d)(1) WQL waterbody.

By definition, waterbodies on which higher than minimum treatment technologies are being implemented to maintain and enhance assimilative capacity are also WQL. They are limited not because of existing problems

but because it has been recognized that higher than standard technologies is needed to protect beneficial uses.

There may also be waterbodies where the standard technologies have not been fully implemented. Therefore, on some waterbodies, there may exist inadequately or not fully implemented technologies, that if adequately or fully implemented, the waterbody may achieve standards. An example of this is the Tillamook River basin, where a management plan exists for nonpoint source problems, however the plan has not been fully implemented at this time. Water quality standards are still being violated but there has been a steady improvement in water quality while the plan is being implemented. The expectation is that with full plan implementation the river will be in compliance.

In summary a waterbody can be classified (Figure 1) into the following categories:

Effluent Limited:

A. Receiving Stream where standard technology, which is secondary treatment for municipal sewage sources and best practicable control technology for industrial source will achieve instream water quality standards.

B. Receiving streams where there is insufficient information on which to determine whether standard technologies will achieve instream water quality standards.

Water Quality Limited:

A. Receiving streams which do not meet instream water quality standards even after the implementation of standard technology.

B. Receiving streams which achieve and are expected to continue to achieve instream quality but utilize higher than standard technology to protect beneficial uses.

C. Receiving streams which are not expected to achieve instream water quality standards, streams where professional judgment would not expect them to meet water quality standards, and receiving streams where there is not enough information to determine if higher treatment technologies are achieving instream standards.

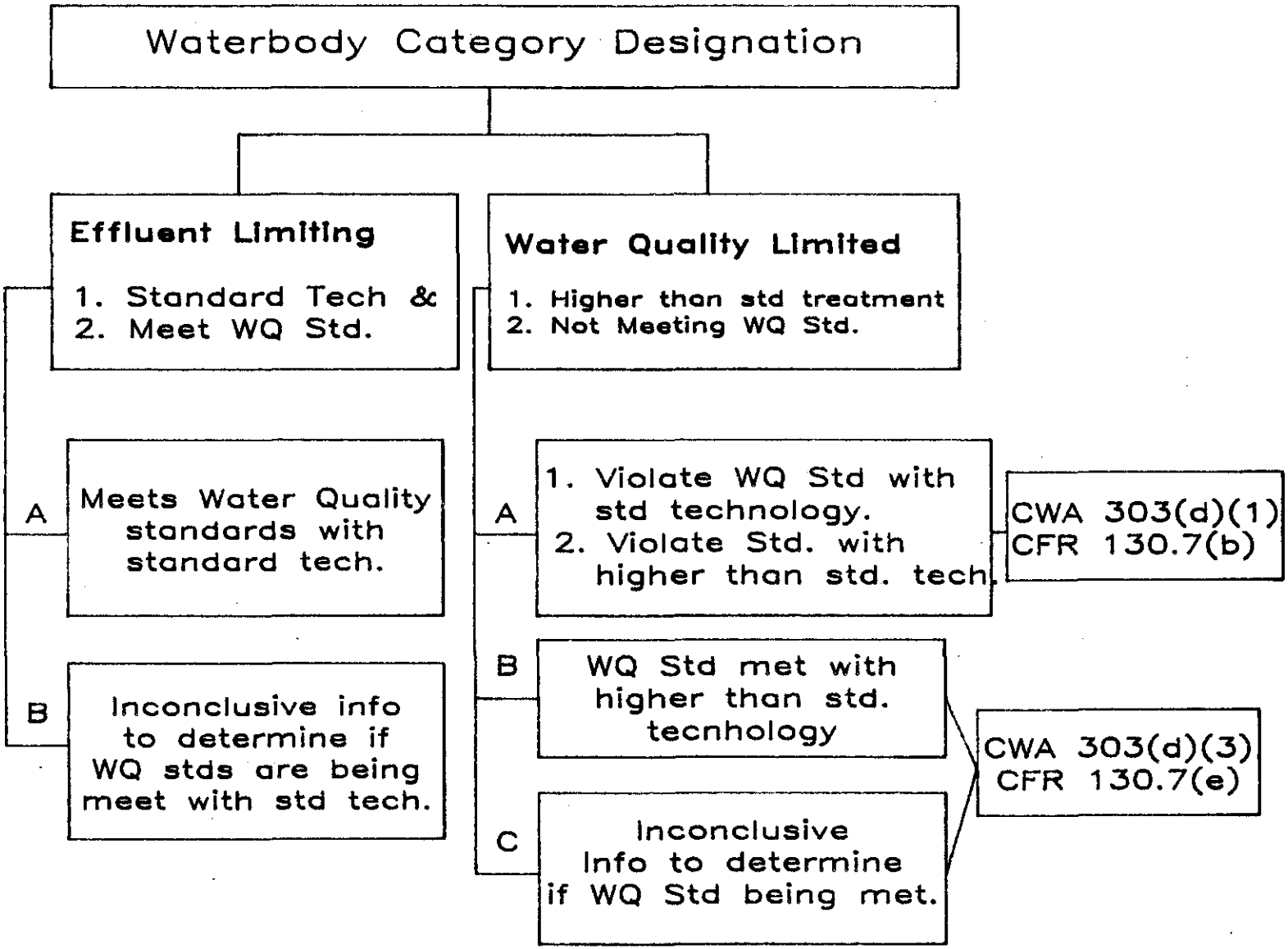

Waterbody Category Designation
Effluent Limiting
1. Standard Tech &
2. Meet WQ Std.
Water Quality Limited
1. Higher than std treatment
2. Not Meeting WQ Std.
A
Meets Water Quality standards with standard tech.
B
Inconclusive info to determine if WQ stds are being meet with std tech.
A
1. Violate WQ Std with std technology.
2. Violate Std. with higher than std. tech.
CWA 303(d)(1)
CFR 130.7(b)
B
WQ Std met with higher than std. tecnhology
C
Inconclusive Info to determine if WQ Std being met.
CWA 303(d)(3)
CFR 130.7(e)

Figure 1.

In relationship to the increase load rule (OAR 340-41-026(3)) it is very important that it be fully understood that the Department did not intend to include waterbodies identified under Section 303(d)(3) of the Act into the coverage of the increase load rule. Section 303(d)(3) waterbodies are waters where the Department does not have sufficient information to conclude one way or another whether the waterbody needs TMDLs or they are water quality limited because higher than standard technology is being implemented to meet standards or basin treatment criteria policies. At the very least, the language of OAR 340-41-026(3) needs to change to clarify what the WQL category is affected. Later in this report, different options will be proposed that describe how the Commission and Department could address waste load requests to these different WQL categories.

It is also important to note that even from the very beginning of the TMDL program there has been a division of waterbodies into categories based on sufficient information to make informed decisions. As the Department learned more about the WQL/TMDL program and federal regulations it became very apparent that these regulations also anticipated that there would be a wide range in available information on specific waterbodies. Consequently, different categories of water quality limited and two different program elements 303(d)(1) and 303(d)(3) were established to guide pollution control activities.

INTERSTATE WATERBODIES:

The federal regulations give the initial responsibility to the states to identify WQL status and develop TMDLs for the waters **within their boundaries**. This is true for interstate waterbodies as well. However, if the states can not agree to the TMDLs and the resulting WLAs and LAs the EPA has the responsibility to resolve the issues.

HOW HAVE WATERBODIES BEEN EVALUATED IN OREGON:

Conventional Pollutants:

The 1988 Water Quality Status Assessment report contains in Appendix B a detailed description of how the Department evaluated its ambient water quality data to determine water quality limited status. Briefly,the approach was to first identify specific beneficial uses, then identify the physical, chemical and biological parameters and criteria that would have the greatest effect in protecting these uses. Next the seasonality and data coverage were identified. This identifies the most sensitive time of year that particular beneficial uses needed to be protected. This was usually the critical flow period. It also identifies the level of data needed to make a use protection determination. Finally, the actual criteria for whether a use was supported or not supported were identified.

The results of this evaluation are contained in Appendix A of the report where the waterbodies are divided into 303(d)(1) and 303(d)(3) water quality limited status.

Toxic Pollutants:

In addition to examining its ambient water quality data, the Department, as a requirement of section 304(1) of the WQA, conducted and included in the 1988 status assessment report an evaluation of waterbodies affected by toxic discharges. The detailed description of this evaluation is contained in Appendix C of the report. The results of this evaluation are contained in column 8 of Appendix A. Waterbodies identified as having confirmed discharges of toxics that impacted beneficial uses were identified as water quality limited (303(d)(1)) and those with suspected discharges and problems were identified as water quality limited (303(d)(3)).

WHAT IS THE DESIGNATION PROCESS?

The current designation process begins with the evaluation of available data and ends with the submittal of the status assessment report (305 (b)) to EPA. The water quality limited waterbodies are identified in the table contained in Appendix A of the report. The report was taken to hearing for review by those who could potentially be affected by the various designations in the report.

RAMIFICATION OF BEING DESIGNATED WQL:

If a waterbody is designated as WQL under section 303(d)(1), the Department must prioritize this waterbody and schedule the development of TMDLs. The Department places facilities who may discharge to these waterbodies on notice that TMDLs will be developed and that the Department will open their permit and modify it to include the appropriate TMDL and WLA. The modified permit will be a water quality based permit.

If a waterbody is designated as WQL under section 303(d)(3) the Department will prioritize these waterbodies for: 1) collection of data needed to provide information to make a determination on whether TMDLs are needed, and/or 2) development of estimated TMDLs, and/or 3) development and implementation of management programs.

OAR 304-41-026(3)(c) Language Issues

The language in OAR 340-41-026(3)(a)(C) is unclear on the following issues:

1. Is the rule specifically directed at receiving streams which are violating instream water quality standards even after the application of standard treatment technologies?

2. Are waste load increases restricted for parameters directly or indirectly causing a waterbody to be designated WQL even during a season when there is sufficient reserve capacity?

3. When is a waterbody designated WQL and is this designation ever removed?

4. Can a waste load increase be granted to a WQL receiving stream?

Water Quality Limited:

The first issue is whether this rule was intended to apply to all WQLs waterbodies or only those determined not to be meeting standards even after the application of technology based controls (section 303(d)(1)). As previously discussed, federal law and regulation has several categories for water quality limited. OAR 340-41-026(3)(c) does not clearly distinguish between these categories or clearly indicate what categories were included in this rule. The current rule language speaks to restrictions on load increases for parameters causing WQL designations; thus it would appear to be directed towards streams violating standards. This would include those streams the Department has identified under the NEDC law suit and through the extensive evaluation conducted under the Water Quality Status Assessment process. Any waste load increases to these waterbodies should only be granted if the TMDL process has established the stream's assimilative capacity, waste load and load allocation have been set, and reserve capacity does or will exist, when the current sources come into compliance with their WLAs or LAs.

If reserve capacity has been set aside, the Commission and Department must determine under what conditions they will allow the reserve capacity to be allocated. There are three potential approaches: 1) approve no allocations until WLAs and LAs are being fully met; or 2) approve an allocation based on the waterbody being in compliance by the time the discharge will be made to the receiving stream; or 3) approve an allocation after extensive evaluation of the potential added risk to the waterbody's identified beneficial uses. Under approach three it would be imperative that the EQC carefully examined and make specific judgments as to whether it is appropriate to increase loads to that waterbody.

The water quality limited language in OAR 340-41-026(3) does not appear to include WQL waterbodies where there is a lack of knowledge. These situations would not warrant the strict discharge prohibition but a more deliberate evaluation approach. For these WQL waterbodies, it would be more appropriate to require detailed information be provide by the applicants to describe the potential affect of the discharge. This information would then be used to help answer the questions as to the health of the waterbody and allocate available reserve capacity. Any permit issued in this situation would also contain a reopener which would give the Department express

authority to open the permit to include TMDLs/WLAs if they prove to be necessary in the future to protect water quality.

Season of Standards Violation:

The second issue is that the current increasing load rule does not recognize the same seasonality the Department took into consideration when it evaluated the water quality data to determine WQL status. The fact that water quality standard violations associated with a specific waterbody may only occur during specific periods of the year and that maybe in compliance during other periods is not reflected in the current increase load rule language. The rule, as currently written, assumes that a waterbody designated WQL is violating standards the entire year. Consequently, it can not accept additional waste at any time and therefore the rule prohibits increase loads. This in fact may not be the case and it runs counter to the water quality based permitting concept inherent in the TMDL/WLA process.

Under the water quality based permitting concept, a waterbody's assimilative capacity would be determined and specific waste loads would be allocated to individual sources. The loads allocated would reflect the season of the year that load could be discharged. The Department would also reserve a portion of this capacity in a WQL waterbody for allocation to future loads increase request. This approach addresses the water quality problem at the specific time of the year when standards are being violated and also provides a reserve capacity to be allocated.

The current rule language does not in fact reflect what the Department and Commission have been doing in establishing and managing TMDLs. This can be seen in the program to achieve compliance with the TMDLs in the Tualatin basin. In this situation the Commission and Department have tied the TMDLs to specific periods of the year and stream flows. This describes the timing as to when the specific water quality problem is a concern in the waterbody and the ability of the waterbody to assimilate more waste with increased flow. A reserve capacity has also been established that may at some future date be allocated.

The Department is currently considering waste load increases for minor sources on WQL waterbodies but during a season when standards violations do not occur. These increases can be generally characterized as winter time increases where there is sufficient flow to assimilate the additional load. In making a decision on these requests the Department is considering: effect on beneficial uses, technologies available, cost, antidegradation policy, etc.

Water Quality Limited Status:

The designation of a waterbody as water quality limited is based on whether water quality standards are being violated even after the implementation of standard treatment technology, or on whether higher than standard treatment

technology is being implemented. The Department's biennial water quality status assessment effort under the Section 305(b) reporting requirements of the WQL is the basis of this determination. Once a waterbody is designated, water quality limited it will always be limited, but it can change status within the different water quality limited categories.

Approving Increasing Loads Discharged When WQL in Compliance:

The fourth issue is whether the Commission and Department may approve load increases for a water quality limited waterbody. In addressing this issue, it must be clearly understood that the different categories of water quality limit related to different instream conditions and different levels of stream data. Some WQL waterbodies currently have reserve capacity during a particular season or the entire year, while others do not. In order to approve load increases, the Commission and Department must know what water quality limited category a receiving stream is in and what effect the additional load will have on that receiving stream. They must decide when to allocate reserve capacity and when the reserve capacity can be used by a discharger. They must also determine whether to grant increase waste loads if a stream is still violating standards.

NEED FOR RULE CLARIFICATION:

The current increasing load rule needs to be clarified to address each of the issues described above. The best approach for accomplishing is to adopt rule amendments which specifically address the water quality limited program. These rules would define water quality limited, identify the different WQL categories, describe how a waterbody is designated WQL, and establish when and under what conditions may the Commission and Department approve increase waste loads for water quality limited receiving streams.

The following alternative options describe the basic approaches that could be reflected in rules to address the issues.

ALTERNATIVE OPTIONS:

Below are described three separate options for providing agency policy direction and clarification in this situation:

OPTION NO. 1:

Under Option 1, the Department would use the biennial water quality status assessment report (305(b) report) as the controlling document to identify waterbodies as water quality limited. The criteria for this designation would be those described in Appendix B and C of the status assessment report. Only those waterbodies qualifying for WQL status under section 303(d)(1) of the WQA and 40 CFR

130.7(b) would be affected by this proposed rule option. No increases would be allowed in these waterbodies during the time period that standards were not being met until: (1) waste load and load allocations had been made, (2) there was reserve capacity sufficient to handle the requested increase load, and (3) the sources were in full compliance with the waste load allocations.

Advantage -- This would establish a very strict regulatory program approach during the period of time when waterbodies were not achieving water quality standards. This would considerably reduce the work loads of Commission and Department because they would not have to consider load increase requests until a waterbody was in full compliance. It would tend to focus attention on the resources and timeframe for TMDL development and achievement of WLAs.

Disadvantage -- This option would not allow the Commission or Department to approve load increases that would be discharged after the WQL waterbody is in compliance until after the waterbody is in compliance. This could seriously curtail development and growth in an area until full compliance is reached. This approach would not effective the other WQL receiving streams. There is no ability for existing sources to increase load temporary to solve a critical environmental problem.

OPTION NO. 2

Under Option 2 the Department would use the status assessment report as the controlling document to identify water quality limited receiving streams. The criteria for this selection would be those described in Appendix B and C of the report.

Only those waterbodies qualifying for WQL status under section 303(d)(1) of the WQA (OAR 340-41-006(27)(a)) would be affected by the proposed rule. No load increase discharges would be allowed in these waterbodies during the time period the standards were not being met, unless extraordinary circumstances existed that warranted immediate action to solve a critical environment problem.

The Commission and Department could however consider load increases as long as: (1) reserve assimilative capacity sufficient to handle the requested increase would exist in the receiving stream when WLAs were achieved; (2) the existing sources were in full compliance with the schedule for meeting the WQL; and (3) the increase would not cause a threat to beneficial uses at the time it discharged.

Load increases could be granted when water quality standards violation still existed only if extraordinary circumstances existed that warranted immediate action to solve an immediate and critical environmental problem. This action could be taken if the existing sources had been allocated waste loads, the sources were in compliance with the schedule for meeting the waste load allocations, the Department had established a reserve assimilative capacity that could be allocated to new or existing sources, the proposed temporary increase load increment did not pose a significant temporary or permanent adverse effect to beneficial uses from the time it discharged until the waterbody was in full compliance with the TMDL.

Advantage -- The Department and Commission would have the ability to approve load increase requests on WQL receiving streams if sufficient reserve assimilative capacity was available to handle the request, either at the time of the request or when the existing sources were in full compliance with assigned WLAs. This option would give the Commission and Department the authority to increase load to solve an existing, immediate, and critical environmental problem.

Disadvantage - This would not address those water quality limited waterbodies needing more information. This approach requires adequate compliance monitoring to see that schedules are met so that approved discharges can occur.

OPTION NO. 3:

Under Option 3 the Department would use the status assessment report as the controlling document to identify waterbodies as water quality limited receiving streams. The criteria for this selection would be those described in Appendix B and C of the 305(b) report.

All waterbodies qualifying for WQL status under the proposed OAR 340-41-006(27) would be included in the rule.

No increases would be allowed to discharge to receiving streams under OAR 340-41-006(27)(a) during the time period the standards were not being met except under extraordinary circumstances. If WLAs had been made and the sources were in full compliance with the schedule for meeting the WQL the Commission and Department could consider load increases as long as there existed reserve assimilative capacity in the waterbody to accommodate the increase load and the increase would not

cause a significant threat to beneficial uses during the time it discharged.

Waterbodies qualifying for WQL status under OAR 340-41-006(27)(c) would be included in this proposed option rule.

A waterbody designated under OAR 340-41-066(25)(a) would remain on the table in Appendix A of the status assessment report until identified sources were in compliance with their assigned waste load allocations, and then it could be moved from OAR 340-41-006(27)(a) to (27)(b).

A waterbody designated under OAR 340-41-006(27)(c) would remain on the Appendix A table until data showed it should be OAR 340-41-006(27)(a) or (27)(b).

Advantage - In addition to all the advantages identified for Option No. 2, this option would allow the Department to identify and set priorities for OAR 340-41-006(27)(c) water quality limited receiving streams.

This would allow the Department to maintain emphasis on all WQL waterbody categories but at a level appropriate for each.

Disadvantage - Increase the Department's work load to develop water quality based permits.

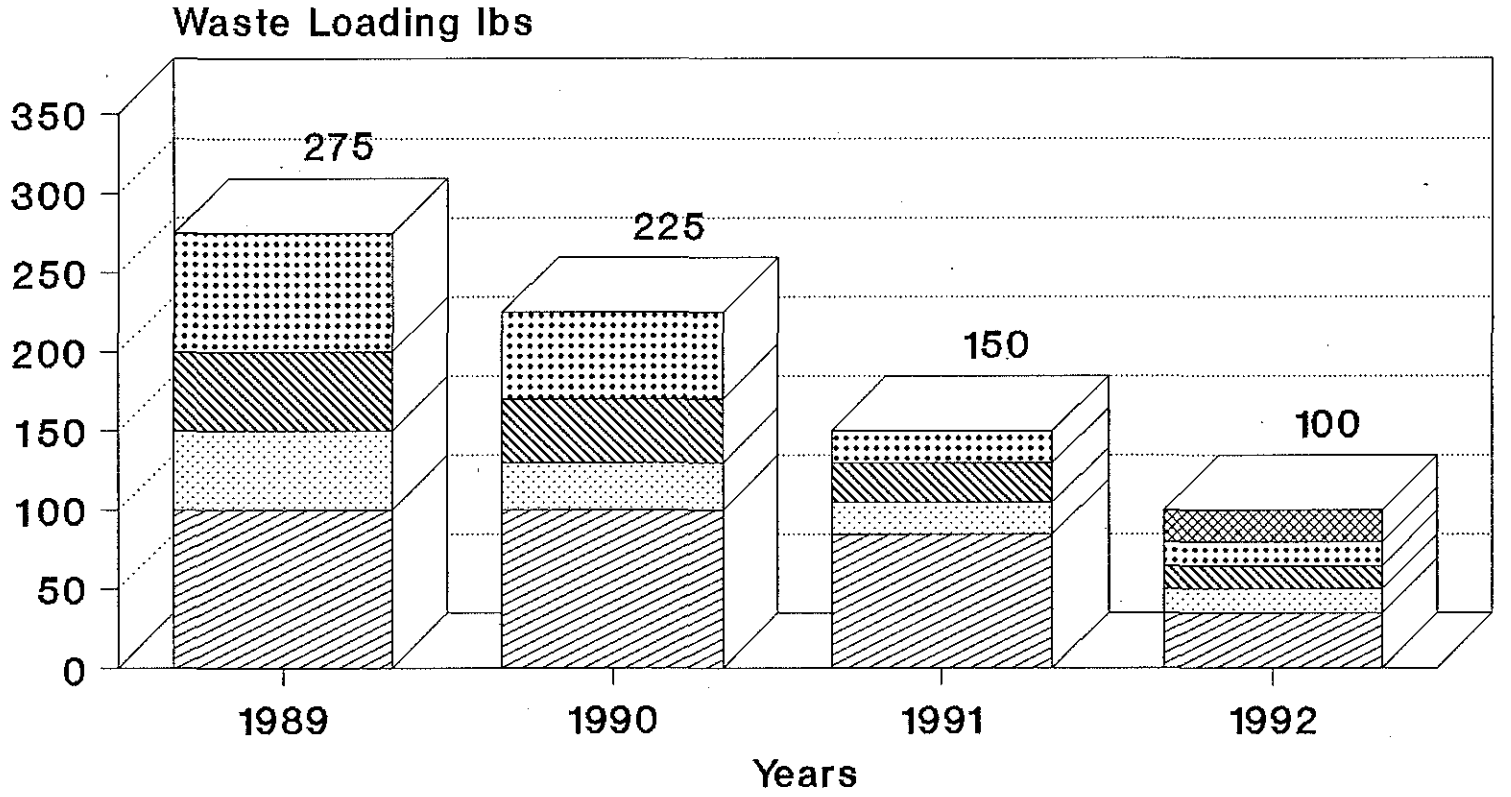
HOW THE CURRENT RULES AND PROPOSED OPTIONS WOULD WORK:

The following four examples describe various load increase request situations and then describe how the current rule and proposed rule options would address the request. Each situation described is paired with two graphs which illustrate the loading data for the receiving stream.

EXAMPLE 1

SITUATION: A new or existing facility has requested a load increase on a waterbody designated as water quality limited and violating standards during the period of time in which the facility wants to discharge. The waste load increase would contain a parameter that contributed to the waterbody being designated as water quality limited.

Graph 1 illustrates the conditions occurring in the receiving stream when the request is made in Example 1. The waterbody is water quality limited with a current 1989 load of 275 lbs. The


Water Quality Limited Stream
Waste Loading lbs
350
300
250
200
150
100
50
0
275
225
150
100
1989
1990
1991
1992
Years
Facility A
Facility B
Facility C
Nonpoint Sources
Reserve Capacity

GRAPH 1

Commission has established an assimilative capacity of 100 lbs, WLAs and LAs which add to 80 lbs, and a reserve capacity of 20 lbs.

The waterbody is to be in compliance in 1992. Graph 2 contains the annual loading data for this situation.

CAN THE COMMISSION OR DEPARTMENT CONSIDER THIS REQUEST?

1. **Current Rule:** No. The Commission or Department can not consider a waste load increase.

2. **Proposed Option 1:** No. The Commission or Department can not consider a waste load increase until the receiving stream is in full compliance with the established TMDLs/WLAs/LAs.

3. **Proposed Option 2:** Yes. The Commission or Department can consider this request and allocate future reserve capacity if:

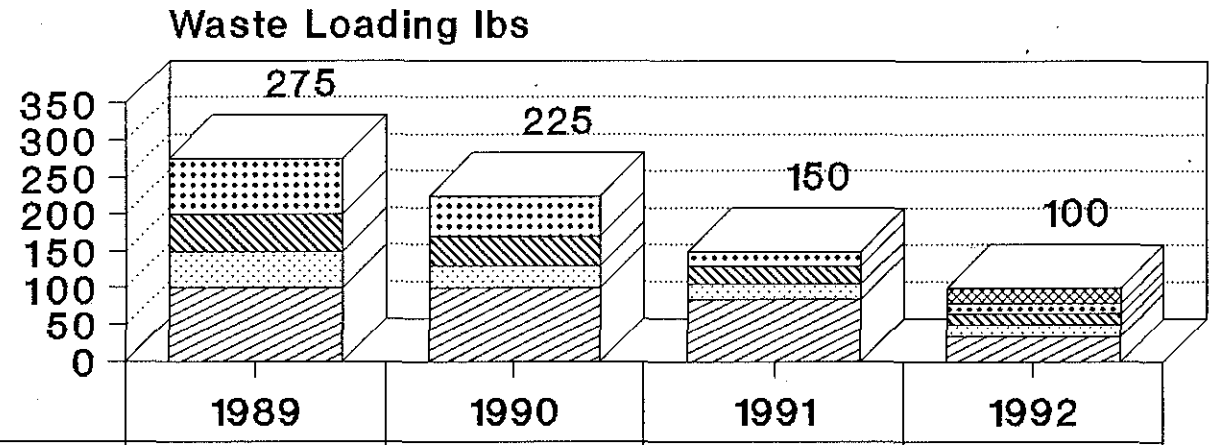
   - TMDLs/WLAs/LAs have been established,
   - A compliance plan under which enforcement actions can be taken has been established, and is being implemented on schedule,
   - Reserve capacity sufficient to handle the requested increase has been established, and
   - Discharge would not occur until there is available reserve capacity.

4. **Proposed Option 3:** Yes. Same as proposed Option 2.

EXAMPLE 2

SITUATION: A new or existing facility has requested a waste load increase to a waterbody designated as water quality limited. The waste load would contain a parameter that contributed to the waterbody being designated as water quality limited. There is currently available reserve capacity sufficient to handle the request. However, the waterbody has not reached full

Water Quality Limited Stream



	1989	1990	1991	1992
Reserve Capacity				20
Nonpoint Sources	75	55	20	15
Facility C	50	40	25	15
Facility B	50	30	20	15
Facility A	100	100	85	35

Years

Facility A Facility B Facility C
Nonpoint Sour Reserve Capacity

GRAPH 2

compliance with the TMDLs/WLAs/LAs established in the compliance plan.

Graph 3 illustrates the conditions occurring in the waterbody when the request is made in Example 2. The waterbody had a load of 275 lbs in 1989. The Commission established an assimilative capacity of 100 lbs, WLAs and LAs which added to 80 lbs, and a reserve capacity of 20 lbs. The waterbody is to be in compliance with these WLAs and LAs by 1992. The graph, however, shows that in 1991, there is actually 10 lbs of reserve capacity accumulated as a result of the different sources coming into compliance with their WLAs and LAs. Graph 4 provides the annual loading data for this example.

CAN THE COMMISSION OR DEPARTMENT CONSIDER THIS REQUEST?

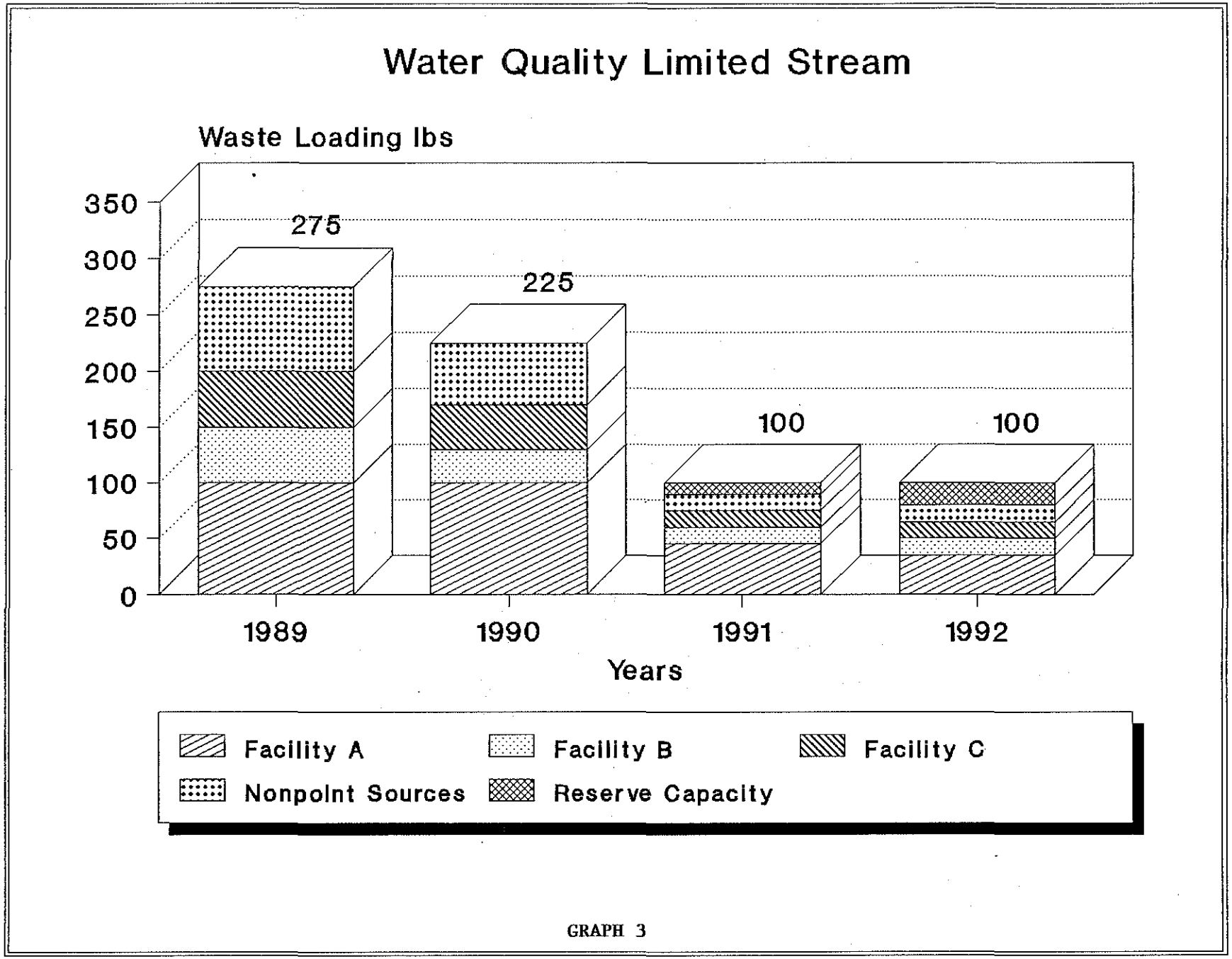
1. **Current Rule:** No. The Commission or Department can not consider waste load increases to water quality limited waterbodies.

2. **Proposed Option 1:** No. The Commission or Department can not consider waste load increases to a water quality limited waterbody until the waterbody is in full compliance with the established TMDLs/WLAs/LAs.

3. **Proposed Option 2:** Yes. The Commission or Department can consider this request and allocate a portion of the reserve capacity established if:

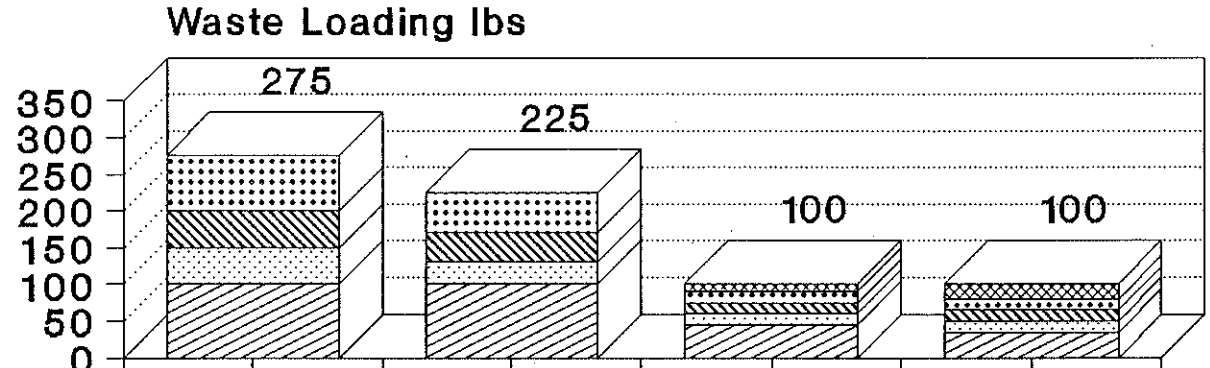
   - TMDLs/WLAs/LAs have been established,
   - A compliance plan under which enforcement actions can be taken has been established, and is being implemented on schedule.
   - Reserve capacity sufficient to handle the requested increase has been established and is available, and
   - A determination is made that shows at the time of discharge that sufficient reserve capacity exist and the increase load will meet water quality standards at the boundary of the established mixing zone.

4. **Proposed Option 3:** Same as proposed Option 2.


Water Quality Limited Stream
Waste Loading lbs
350
300
250
200
150
100
50
0
275
225
100
100
1989
1990
1991
1992
Years
Facility A
Facility B
Facility C
Nonpoint Sources
Reserve Capacity

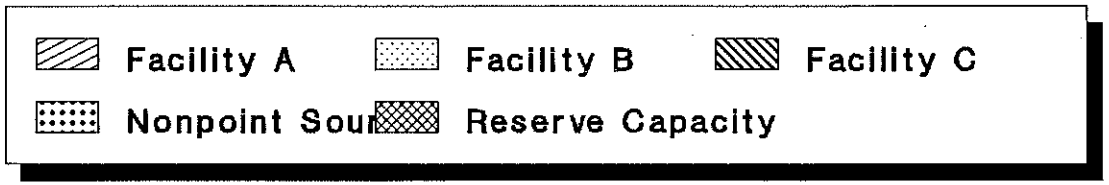
GRAPH 3

Water Quality Limited Stream



	1989	1990	1991	1992
Reserve Capacity			10	20
Nonpoint Sources	75	55	15	15
Facility C	50	40	15	15
Facility B	50	30	15	15
Facility A	100	100	45	35

Years



GRAPH 4

EXAMPLE 3

SITUATION: A new or existing facility has requested a waste load increase on a waterbody designated water quality limited but during a season when there is available assimilative capacity. In this situation there are summertime water quality standards violations but no violations during the winter. The requested increase would be for the wintertime when sufficient assimilative capacity existed.

Graph 5 illustrate the stream loading conditions for Example 3. As shown, the stream although water quality limited does have sufficient reserve capacity during the winter season. Graph 6 provides the loading data.

CAN THE COMMISSION OR DEPARTMENT CONSIDER THIS REQUEST?

1. **Current Rule:** No. The Commission or Department could not consider waste load increases because waterbody has been designated as water quality limited.

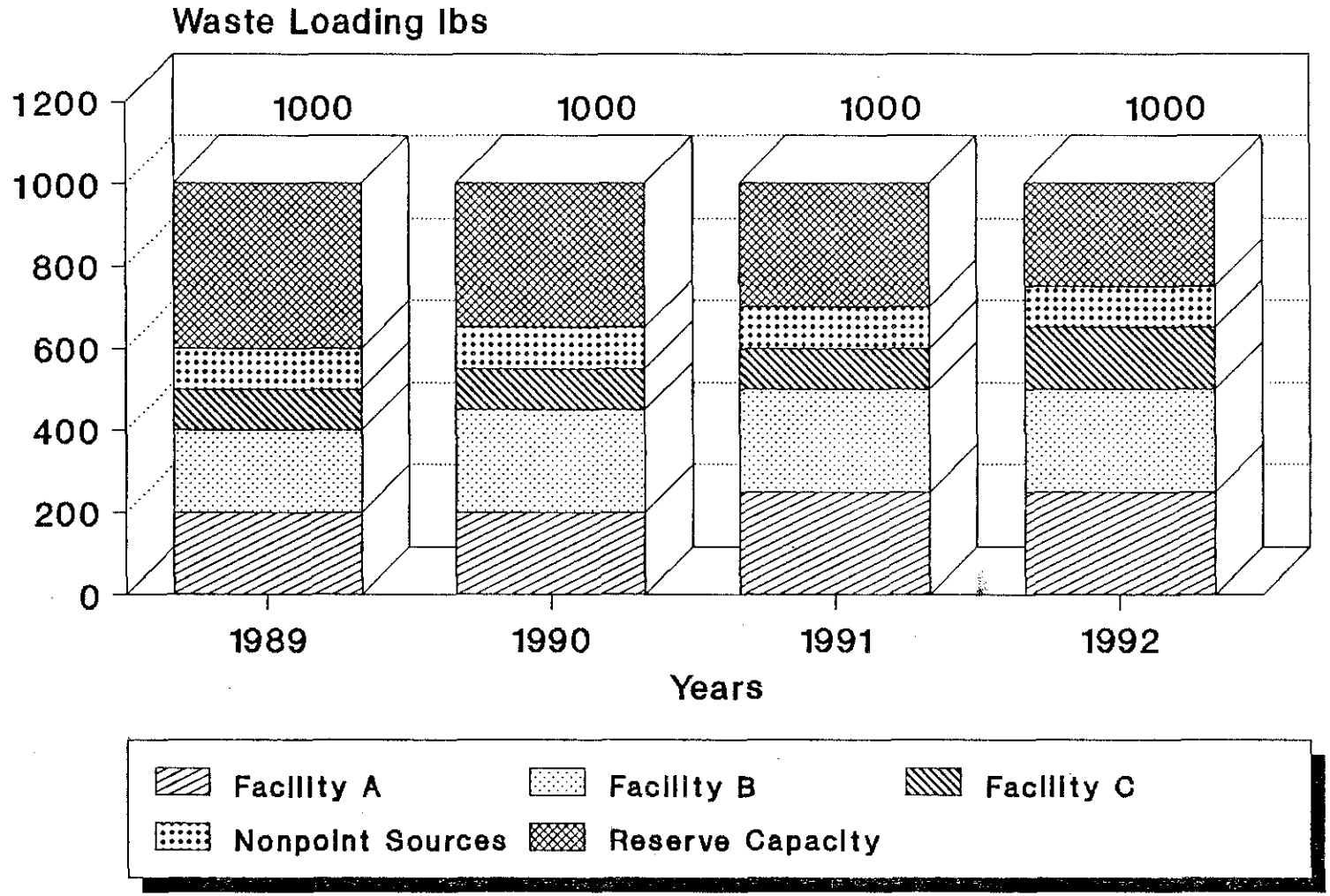
2. **Proposed Option 1:** Yes. The Commission or Department could consider waste load increases even though the waterbody is water quality limited because the proposed option would restrict waste load increases only during that time period when standards were violated.

3. **Proposed Option 2:** Same as proposed Option 1.

4. **Proposed Option 3:** Same as proposed Option 1.

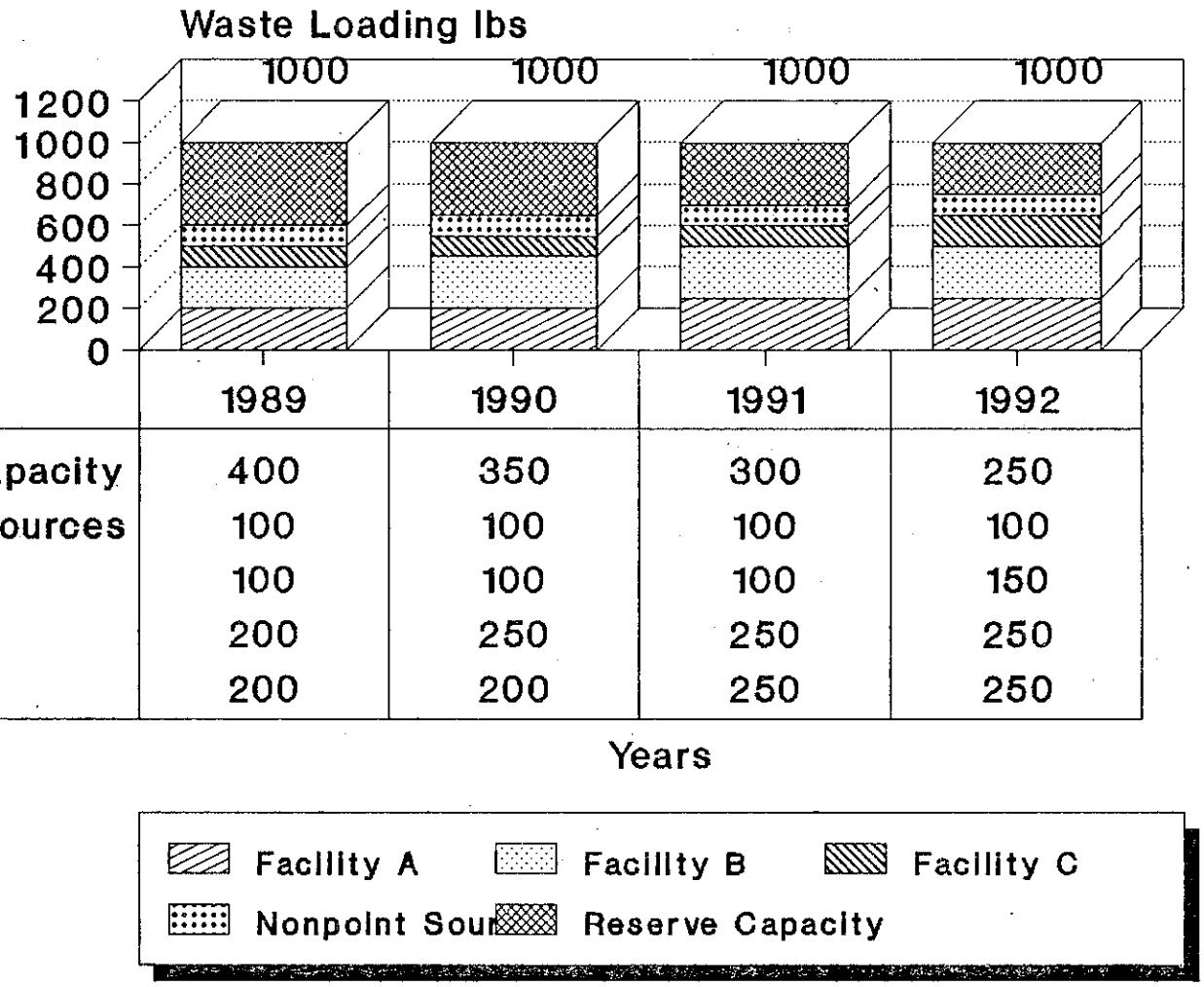
EXAMPLE 4

SITUATION: An existing facility that is attempting to solve an environmental problem in another waterbody has requested a temporary load increase on a water quality limited receiving stream. Temporary, because the facility would still have to meet its allocated waste load on schedule. In this case, the facility is extending service to a residential area where there are failing septic systems and sever groundwater contamination problems. The environment problem solution is to eliminate the septic systems but this will result in a temporary increase in


Winter Season Reserve Capacity Available
Waste Loading lbs
1200
1000
800
600
400
200
0
1000
1000
1000
1000
1989
1990
1991
1992
Years
Facility A
Facility B
Facility C
Nonpoint Sources
Reserve Capacity

GRAPH 5

Winter Season Reserve Capacity Available



	1989	1990	1991	1992
Reserve Capacity	400	350	300	250
Nonpoint Sources	100	100	100	100
Facility C	100	100	100	150
Facility B	200	250	250	250
Facility A	200	200	250	250

GRAPH 6

waste loading to the water quality limited waterbody. The waterbody is limited during the season of the proposed load increase, the waste contain parameters that lead to the water quality limited designation, there is insufficient assimilative capacity to handle the proposed increase.

Graph 7 illustrates the stream loading conditions for example 4. The stream has a 1989 loading of 225 lbs and an established assimilative capacity of 100 lbs. The sources are to be in compliance in 1992 with 80 lbs allocated to waste loads and a reserve capacity of 20 lbs. In 1990, however, due to an extraordinary circumstance, facility A requests to add 20 lbs to solve a critical environmental problem. This would temporarily increase the load but it is still projected to meet the 1992 WLA. Graph 8 provides the annual loading data for this example.

CAN THE COMMISSION OR DEPARTMENT CONSIDER THIS REQUEST?

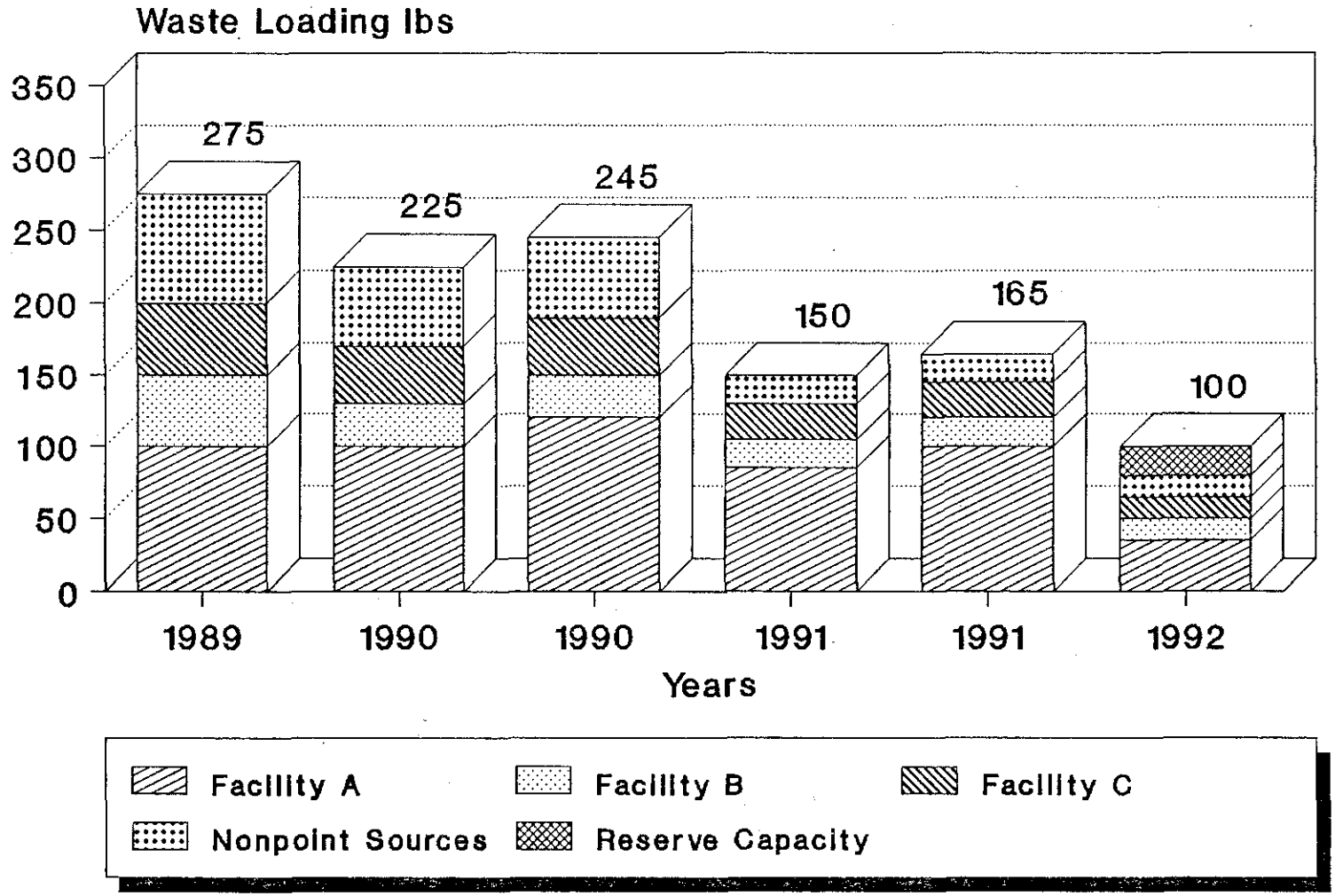
1. **Current Rule:** No.

2. **Proposed Option 1:** No.

3. **Proposed Option 2:** Yes. The Commission or Department can consider this request if:

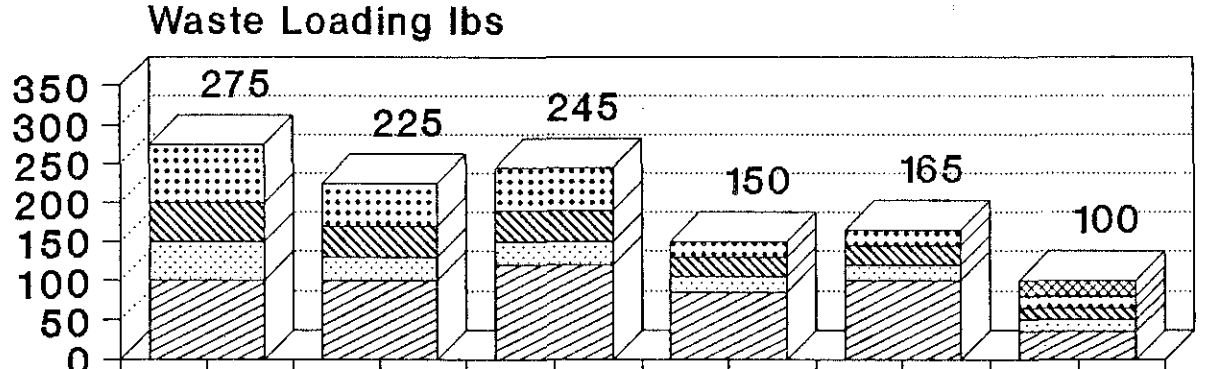
   - It is an extraordinary environmental problem affecting beneficial uses,
   - The increase load would only be temporary,
   - TMDLs/WLAs/LAs have been established,
   - A compliance plan under which enforcement actions can be taken has been established, and was being implemented on schedule, and
   - An evaluation of the requested temporary increased load shows that this increment of load will not have a significant adverse effect on beneficial uses.

4. **Proposed Option 3:** Same as proposed Option 2.


Water Quality Limited Stream
Waste Loading lbs
350
300
250
200
150
100
50
0
275
225
245
150
165
100
1989
1990
1990
1991
1991
1992
Years
Facility A
Facility B
Facility C
Nonpoint Sources
Reserve Capacity

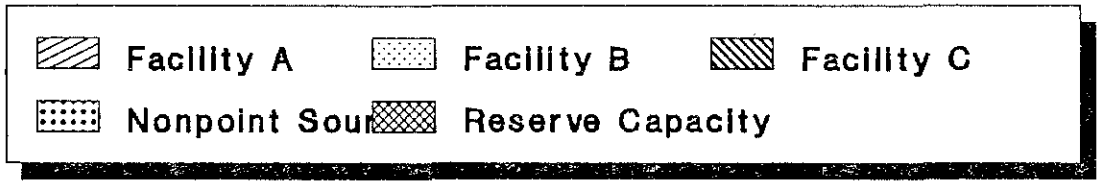
GRAPH 7

Water Quality Limited Stream



	1989	1990	1990	1991	1991	1992
Reserve Capacity						20
Nonpoint Sources	75	55	55	20	20	15
Facility C	50	40	40	25	25	15
Facility B	50	30	30	20	20	15
Facility A	100	100	120	85	100	35

Years



GRAPH 8

These examples provide an illustration of the issues surrounding the current rules and options for address them. In addition to the examples, Table 1 is a summary of some questions asked about the loading rules and how the various rules and rule options would address them.

TABLE 1

Draft

	Current Rule OAR 340-41-026(3)(c)	Option 1	Option 2	Option 3
Can the Commission or Department take an action on requested load increase for a new or existing facility before full compliance with WLA/LA?	No	No	Yes	Yes
Can increase loads be discharged before sufficient reserve capacity existed under normal conditions?	No	No	No	No
Can increased loads be discharged without sufficient reserve capacity in extra ordinary circumstances to solve environmental problem?	No	No	Yes	Yes
Can increased load be discharged before full compliance with WLA/LA?	No	No	Only if Sufficient Reserve Capacities Exists	Only if Sufficient Reserve Capacities Exists
What water quality limited streams are covered by the Rule or proposed option?	No Definition for WQL Provided, Assume All WQL Categories Included	Defines WQL and Would Cover Category A	Defines WQL and Would Cover Category A	Defines WQL and Would Cover Categories A, B, and C
Does the Rule consider the seasonality of some water quality problems?	No	Yes	Yes	Yes
Does the Rule require the establishment of TMDL, WLA, LA, and reserve capacity?	No	Yes	Yes	Yes
Does the Rule describe how waterbody is designated WQL?	No	Yes	Yes	Yes
Does the Rule address interstate waterbodies?	No	Yes	Yes	Yes
When would a load increase be allowed to discharge?	Not Until Water Quality Limited Segment Was in Full Compliance	Not Until Water Quality Limited Segment Was in Full Compliance	Not Until Sufficient Reserve Capacity Existed	Not Until Sufficient Reserve Capacity Existed
Does Rule provide a public process for review of WQL List?	No	Yes	Yes	Yes
Does Rule provide some delineation of the beneficial use protection.	No	Yes	Yes	Yes

PM\WH3809 (1/90)

NORTHWEST ENVIRONMENTAL DEFENCE CENTER VS THE U.S. EPA

Oregon's traditional water quality control program approach was challenged on December 12, 1986 when the Northwest Environmental Defense Center (NEDC) filed suit in the Federal District Court in Oregon against Lee Thomas, Administrator of EPA, to require him to ensure that TMDLs were established and implemented for waters within Oregon identified as being water quality limited. The suit was based on the information provided in the 1986 305(b) report wherein the Department had identified waterbodies that were not meeting standards and protecting beneficial uses.

The suit specifically identified the Tualatin River and generally other streams in Oregon that were water quality limited. Subsequently, NEDC filed a Notice of Intent to sue, naming 27 additional water quality limited waterbodies. The lawsuit contended that Section 303 of the WQA requires EPA to establish TMDLs on "water quality limited" stream segments and that this is a non-discretionary function. Therefore, EPA was obligated by statute to establish TMDLs.

The Department reviewed the suit with the State Attorney General's office to establish a legal position. In reviewing the suit the Department decided that the development of TMDLs and the supporting waste load allocations (WLAs) and load allocations (LAs) should be directed by the state. The Department believed that establishing TMDLs and, particularly, WLAs, would be quite controversial. There would be discussion over the loads given to different sources and there would be a number of different alternatives for achieving the WLAs including flow augmentation, modified treatment method, no discharge, land application, or a combination of these or other alternatives. Because of this, a process had to be developed that would involve as much public participation as practicable, so that all potential alternative WLAs/LAs and potential implementation strategies would be given appropriate evaluation.

If EPA were responsible for developing the TMDL their approach, as established by federal regulation, would not allow for more than minimal public participation.

The Department felt that it would be more consistent with the overall approach of the state's environmental control program that the Department take the lead in establishing TMDLs/WLAs/LAs. Therefore, it actively participated in the negotiations between EPA and NEDC to develop an acceptable approach to settle the suit.

On February 10, 1987, the Department met with the U.S. Justice Department and EPA to finalize a settlement proposal. The Justice Department and EPA presented the proposal developed to NEDC on February 11, 1987. The proposed approach consisted of the following key elements:

1. Identify the water quality limited stream segments on which TMDLs/WLAs/LAs would be developed and describe how other

waterbodies will be assessed and additional "water quality limited" segments would be identified, ranked, and addressed in the future.

2. Describe how TMDLs/WLAs/LAs would be developed.

3. Establish a generic process to be used by the Department to develop and adopt the TMDLs/WLAs/LAs for each "water quality limited" segment.

4. Describe how the Department would address applications for discharge permits during the period from the time a water quality limited segment is identified and the time TMDLs/WLAs/LAs are adopted.

5. Describe the basic procedure for developing strategies which would be used to implement the TMDLs/WLAs/LAs through the NPDES permit process.

As negotiation continued between EPA/NEDC/U.S. Justice Department, the Department proceeded to implement this approach. Department staff evaluated the 1986 305(b) report, the NEDC suit, and the NEDC "Notice of Intent" to file suit to determine the "water quality limited" segments due to point source discharges. The segments identified as the most appropriate waterbodies for the initial TMDL efforts are listed below:

Tualatin River
Yamhill River
Bear Creek
South Umpqua River
Coquille River
Pudding River
Garrison Lake
Klamath River
Umatilla River
Calapooia River
Grande Ronde River

In addition to these eleven waterbodies, the Department stated that there was insufficient information to make a definitive determination on 17 other waterbodies listed in the notice of intent to sue. These seventeen (17) waterbodies include:

Neacoxie Creek
Necanicum River
Nestucca River and Nestucca Bay
Schooner Creek and Siletz Bay
Yaquina River and Yaquina Bay
North Florence Groundwater Aquifer
Calapooya Creek
Coast Fork Willamette River
Mary's River
Columbia Slough

Deschutes River
Crooked River
John Day River
Powder River
Malheur River
Owyhee River
Willamette River

NEIL GOLDSCHMIDT
GOVERNOR

Environmental Quality Commission

811 SW SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

REQUEST FOR EQC ACTION

Meeting Date: January 19, 1990
Agenda Item: L
Division: H&SW
Section: Solid Waste

SUBJECT:

Infectious Waste: Authorization for hearing on proposed rules to implement 1989 Legislation limiting disposal and requiring incineration or other sterilization before disposal.

PURPOSE:

The proposed rule will establish criteria for the Department of Environmental Quality to use in determining when pathological wastes may be sterilized through means other than incineration.

ACTION REQUESTED:

__ Work Session Discussion
- __ General Program Background
- __ Potential Strategy, Policy, or Rules
- __ Agenda Item __ for Current Meeting
- __ Other: (specify)

_X_ Authorize Rulemaking Hearing
__ Adopt Rules

Proposed Rules	Attachment A
Rulemaking Statements	Attachment B
Fiscal and Economic Impact Statement	Attachment C
Public Notice	Attachment D

__ Issue a Contested Case Order
__ Approve a Stipulated Order
__ Enter an Order

Proposed Order	Attachment ___

__ Approve Department Recommendation

__ Variance Request	Attachment ___
__ Exception to Rule	Attachment ___
__ Informational Report	Attachment ___
__ Other: (specify)	Attachment ___

DESCRIPTION OF REQUESTED ACTION:

The 1989 Legislature passed House Bill 2865, regulating the storage, transport, and disposal of infectious waste. This new law (now Chapter 763, Oregon Laws) requires action by the State Health Division of the Department of Human Resources, the Public Utility Commission and the Environmental Quality Commission to adopt rules to implement various portions of the statute. The Environmental Quality Commission and the Department of Environmental Quality involvement is limited to regulation of disposal of infectious wastes.

Since disposal requirements for each type of infectious waste are clearly described in Chapter 763 of Oregon Laws 1989, the Department of Environmental Quality does not intend to repeat the statutory requirements in Oregon Administrative Rules, Chapter 340, Division 61, Solid Waste Management.

The statute states that "Pathological wastes (biopsy materials and all human tissues, anatomical parts that emanate from surgery, obstetrical procedures, autopsy and laboratory procedures and animal carcasses exposed to pathogens in research and the bedding and other waste from such animals) shall be treated by incineration in an incinerator that provides complete combustion of waste to carbonized or mineralized ash. The ash shall be disposed of as provided in rules adopted by the Environmental Quality Commission. However, if the Department of Environmental Quality determines that incineration is not reasonably available within a wasteshed, pathological wastes may be disposed of in the same manner provided for cultures and stocks."

The proposed rule establishes criteria by which the Department will determine if incineration is reasonably available within each wasteshed.

AUTHORITY/NEED FOR ACTION:

X	Required by Statute: Chapter 763, Oregon Laws 1989	Attachment E
	Enactment Date: 7/22/89 (HB 2685)	
___	Statutory Authority: _____	Attachment ___
___	Pursuant to Rule: _____	Attachment ___
___	Pursuant to Federal Law/Rule: _____	Attachment ___
___	Other:	Attachment ___

_X_ Time Constraints: (explain)

Chapter 763 of Oregon Laws 1989 becomes operative on July 1, 1990.

DEVELOPMENTAL BACKGROUND:

__	Advisory Committee Report/Recommendation	Attachment ___
__	Hearing Officer's Report/Recommendations	Attachment ___
__	Response to Testimony/Comments	Attachment ___
__	Prior EQC Agenda Items: (list)	Attachment ___
__	Other Related Reports/Rules/Statutes: OAR 340-25-850 to 905	Attachment ___
__	Supplemental Background Information	Attachment _F_

REGULATED/AFFECTED COMMUNITY CONSTRAINTS/CONSIDERATIONS:

The new infectious waste law passed by the 1989 Legislature will have significant impacts on the regulated community. Medical facilities which generate wastes defined in the statute as infectious will be required to segregate the infectious from noninfectious wastes at the medical facility. Commercial waste collection companies will then be required to transport infectious wastes in separate, non-compacting trucks. Infectious waste, which includes pathological wastes, cultures and stocks, sharps, and biological wastes, must be sterilized prior to disposal. Pathological wastes must be sterilized through incineration unless incineration is not "reasonably available". These new requirements may significantly increase disposal costs for infectious wastes for some facilities.

The purpose of this proposed rule is to allow an option to incineration of pathological waste where it is simply not reasonably available to medical facilities in a particular location, due to cost or other factors.

At the present time, there are approximately thirty-six (36) hospitals operating on-site infectious waste incinerators and thirty-seven (37) crematoriums. Two private corporations operate dedicated infectious waste incinerator facilities in Oregon. In addition, one municipal solid waste energy recovery facility and two municipal solid waste volume reduction incinerators dispose of infectious wastes.

On-site incineration disposal costs for infectious wastes average fifty cents per pound at most of these facilities. One large hospital burning infectious and noninfectious wastes in an incinerator equipped with a heat recovery system estimates that the value of the recovered energy is higher

than the cost of incineration. One small hospital in Eastern Oregon and a medium-sized hospital in the Willamette Valley estimate disposal costs of approximately eighty cents per pound, due to their burning only pathological wastes in their incinerators.

The cost of disposal in off-site incinerators is projected to be approximately the same as current disposal costs in on-site incinerators for most facilities. However, larger facilities which have energy recovery, such as St. Vincent's in Portland, and hospitals currently sending infectious wastes to landfills may pay more for incineration off-site.

Adoption of more stringent emission control rules currently proposed by the Air Quality Division may result in closure of many of the existing hospital incinerators. This will reduce overall availability of incineration. However, incinerator capacity is not expected to be a problem. The mass-burning, energy recovery facility in Marion County and the two commercial infectious waste incinerators (in Klamath and Washington counties) should be capable of disposing of the entire amount of infectious wastes generated in Oregon.

Discussions with the Public Utility Commission suggest that collection and transportation costs to these three incineration facilities will not vary significantly within the state. The expected capital and operating costs for incinerators operating in compliance with the proposed revised emission control rules are expected to be reasonably comparable between individual incinerators.

On November 21, 1989, the Solid Waste Advisory Committee discussed possible criteria to determine if incineration is reasonably available in a wasteshed. The Committee concluded that "reasonably available in a wasteshed" should not be limited to the presence of an incinerator in each wasteshed, and that the decision should be based largely upon cost, rather than upon geographic location. The Committee then evaluated a Department proposal that pathological wastes be incinerated if the cost of incineration did not exceed by more than twenty-five percent (25%) the cost of treatment by alternate methods, such as steam sterilization (autoclaving), chemical sterilization, irradiation, etc., approved by the State Health Division.

Based upon cost data provided by the owners of the two infectious waste incineration facilities, the Committee concluded that the proposed 25% cost differential would allow alternatives to incineration of pathological wastes in every part of the state of Oregon. This clearly violates the intent of the new legislation to promote incineration of pathological waste. The Department now recommends that

reasonable availability be determined by comparing the cost to incinerate pathological waste for a particular wasteshed to the cost of incineration throughout the state, rather than by comparing the cost to incinerate to the cost of treatment by alternative methods.

The proposed rule would require that the Department conduct periodic surveys of the cost of incineration and that pathological wastes generated in a wasteshed be incinerated unless the cost of incineration exceeds the average cost of incineration throughout the state by twenty-five percent. Even if incineration is not "reasonably available" using the 25 percent criteria, any alternate treatment system must still be approved by the State Health Division.

Adoption of rules establishing criteria by which the Department will determine whether incineration is reasonably available for a wasteshed presumes that alternative treatments for cultures and stocks will be approved by the State Health Division. The State Health Division is currently developing rules to implement that portion of the statute.

PROGRAM CONSIDERATIONS:

Chapter 763 of Oregon Laws 1989 requires that the Department determine if incineration is not reasonably available within a wasteshed. This proposed rule would establish criteria to make this determination on a statewide basis rather than for each individual wasteshed, thus reducing the fiscal impact upon the Department imposed by the statute, since HB 2865 did not establish a revenue source for this activity.

Based upon available information regarding proper management of infectious waste, incineration of these wastes in a properly designed incinerator equipped with air contaminant control systems and operated and maintained correctly is an environmentally acceptable method of disposal.

The proposed rule strikes a balance between encouraging incineration as the preferred treatment method for pathological wastes, and protects isolated rural communities from unreasonable rates.

Based upon discussions with hospital personnel involved with proper management of infectious waste, many hospitals have already contracted with private companies for collection of infectious wastes for incineration in regional facilities. The Department does expect some opposition to the proposed rule due to increased disposal costs for pathological wastes. The Department intends to survey incineration facilities

which comply with the applicable air quality rules in July 1990 to establish the initial base incineration cost, and to recalculate the base cost as new facilities are constructed. The base cost would also be recalculated when rule changes result in increased incineration disposal costs.

ALTERNATIVES CONSIDERED BY THE DEPARTMENT:

1. Develop new rules to establish criteria based upon geographic considerations such as distance from the nearest incinerator facility, or whether an incinerator facility is located within the same wasteshed.

2. Develop new rules to establish criteria based upon the statewide cost of disposal in incinerators which comply with the applicable emission control rules.

3. Develop new rules to establish criteria based upon a combination of geographic and disposal cost factors.

DEPARTMENT RECOMMENDATION FOR ACTION, WITH RATIONALE:

Alternatives 1 and 3 are not recommended because exempting areas or sources from the requirement to incinerate pathological waste solely on geographic proximity to incinerators would result in major portions of the state not having to incinerate pathological wastes. In addition, establishing incineration wastesheds could result in the creation of monopolies and unfairly restrict competition between incineration facilities.

The Department recommends alternative 2 because it is the most effective and most efficient way of accomplishing the legislative intent to promote incineration while still protecting small, remote communities from unreasonable costs.

The proposed criteria to determine whether incineration is reasonably available in a wasteshed are similar in concept to the criteria developed in the waste tire program to determine whether waste tires may be landfilled or whether they must be recycled. By providing an exception to the requirement for incineration, the proposed rule protects small, isolated communities from paying unreasonably high costs of transportation and incineration of pathological waste.

The recommended criteria are not based upon disposal fees at any specific incinerator facility, but rather upon a comparison with disposal costs for all incinerator facilities. The recommended criteria also delete the

requirement for incineration of pathological wastes if the generator is unable to contract for disposal with any incinerator facility.

CONSISTENCY WITH STRATEGIC PLAN, AGENCY POLICY, LEGISLATIVE POLICY:

The proposed rule is consistent with Section 6 of Chapter 763 of Oregon Laws 1989 (also known as HB 2685). One alternative option considered, comparing the cost to alternate treatment methods, would not have been consistent with the clear legislative intent to encourage incineration.

ISSUES FOR COMMISSION TO RESOLVE:

1. Does the proposed rule provide sufficient preference to incineration of pathological waste?

2. Will the proposed rule prevent "unreasonable" costs from being imposed upon remote areas of the state?

3. Is the rule consistent with the policy of decreasing the number of hospital incinerators per the proposed air quality rules?

INTENDED FOLLOWUP ACTIONS:

1. File public hearing notice with the Secretary of State.

2. Hold a public hearing.

3. Review oral and written testimony and revised proposed rule as appropriate.

4. Return to Commission for final rule adoption.

Approved:

Section: Steve Greenwood

Division: Stephanie Hallock

Director: Fred Hansen for Tom

Report Prepared By: Tim Davison

Phone: 229-5965

Date Prepared: January 3, 1990

ETD:k
SW\SK2441
January 3, 1990

Proposed Revisions

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY
ADMINISTRATIVE RULES
DIVISION 61 - SOLID WASTE MANAGEMENT

INFECTIOUS WASTE MANAGEMENT

Proposed additions to rule are underlined.
Proposed deletions are in brackets [].

DEFINITIONS

340-61-010

As used in these rules unless otherwise specified:

(1) "Access road" means any road owned or controlled by the disposal site owner which terminates at the disposal site and which provides access for users between the disposal site entrance and a public road.
(2) "Airport" means any area recognized by the Oregon Department of Transportation, Aeronautics Division, for the landing and taking-off of aircraft which is normally open to the public for such use without prior permission.
(3) "Aquifer" means a geologic formation, group of formations or portion of a formation capable of yielding usable quantities of ground water to wells or springs.
(4) "Assets" means all existing and probable future economic benefits obtained or controlled by a particular entity.
(5) "Baling" means a volume reduction technique whereby solid waste is compressed into bales for final disposal.
(6) "Base flood" means a flood that has a one percent or greater chance of recurring in any year or a flood of a magnitude equaled or exceeded once in 100 years on the average of a significantly long period.
(7) "Closure permit" means a document issued by the Department bearing the signature of the Director or his authorized representative which by its conditions authorizes the permittee to complete active operations and requires the permittee to properly close a land disposal site and maintain the site after closure for a period of time specified by the Department.
(8) "Commission" means the Environmental Quality Commission.
(9) "Cover material" means soil or other suitable material approved by the Department that is placed over the top and side slopes of solid wastes in a landfill.
(10) "Composting" means the process of controlled biological decomposition of organic solid waste.

(11) "Cultures and stocks," means etiologic agents and associated biologicals, including specimen cultures and dishes and devices used to transfer, inoculate and mix cultures, wastes from production of biologicals, and serums and discarded live and attenuated vaccines. "Cultures" does not include throat and urine cultures.

[~~(11)~~] (12) "Current assets" means cash or other assets or resources commonly identified as those which are reasonably expected to be realized in cash or sold or consumed during the normal operating cycle of the business.

[~~(12)~~] (13) "Current liabilities" means obligations whose liquidation is reasonably expected to require the use of existing resources properly classifiable as current assets or the creation of other current liabilities.

[~~(13)~~] (14) "Department" means the Department of Environmental Quality.

[~~(14)~~] (15) "Digested sewage sludge" means the concentrated sewage sludge that has decomposed under controlled conditions of pH, temperature and mixing in a digester tank.

[~~(15)~~] (16) "Director" means the Director of the Department of Environmental Quality.

[~~(16)~~] (17) "Disposal site" means land and facilities used for the disposal, handling or transfer of or resource recovery from solid wastes, including but not limited to dumps, landfills, sludge lagoons, sludge treatment facilities, disposal sites for septic tank pumping or cesspool cleaning service, transfer stations, resource recovery facilities, incinerators for solid waste delivered by the public or by a solid waste collection service, composting plants and land and facilities previously used for solid waste disposal at a land disposal site; but the term does not include a facility subject to the permit requirements of ORS 468.740; a landfill site which is used by the owner or person in control of the premises to dispose of soil, rock, concrete or other similar nondecomposable material, unless the site is used by the public either directly or through a solid waste collection service; or a site licensed pursuant to ORS 481.345.

[~~(17)~~] (18) "Endangered or threatened species" means any species listed as such pursuant to Section 4 of the Federal Endangered Species Act and any other species so listed by the Oregon Department of Fish and Wildlife.

[~~(18)~~] (19) "Financial assurance" means a plan for setting aside financial resources or otherwise assuring that adequate funds are available to properly close and to maintain and monitor a land disposal site after the site is closed according to the requirements of a permit issued by the Department.

[~~(19)~~] (20) "Floodplain" means the lowland and relatively flat areas adjoining inland and coastal waters which are inundated by the base flood.

[~~(20)~~](21) "Groundwater" means water that occurs beneath the land surface in the zone(s) of saturation.

[~~(21)~~](22) "Hazardous waste" means discarded, useless or unwanted materials or residues in solid, liquid or gaseous state and their empty containers which are classified as hazardous pursuant to ORS 459.410.

[~~(22)~~](23) "Heat-treated" means a process of drying or treating sewage sludge where there is an exposure of all portions of the sludge to high temperatures for a sufficient time to kill all pathogenic organisms.

[~~(23)~~](24) "Incinerator" means any device used for the reduction of combustible solid wastes by burning under conditions of controlled air flow and temperature.

(25) "Infectious waste" means biological waste, cultures and stocks, pathological waste, and sharps; as defined in Oregon Revised Statutes, Chapter 763, Oregon Laws 1989.

[~~(24)~~](26) "Land disposal site" means a disposal site in which the method of disposing of solid waste is by landfill, dump, pit, pond or lagoon.

[~~(25)~~](27) "Landfill" means a facility for the disposal of solid waste involving the placement of solid waste on or beneath the land surface.

[~~(26)~~](28) "Leachate" means liquid that has come into direct contact with solid waste and contains dissolved and/or suspended contaminants as a result of such contact.

[~~(27)~~](29) "Liabilities" means probable future sacrifices of economic benefits arising from present obligations to transfer assets or provide services to other entities in the future as a result of past transactions or events.

[~~(28)~~](30) "Local government unit" means a city, county, metropolitan service district formed under ORS Chapter 268, sanitary district or sanitary authority formed under ORS Chapter 450, county service district formed under ORS Chapter 451, regional air quality control authority formed under ORS 468.500 to 468.530 and 468.540 to 468.575 or any other local government unit responsible for solid waste management.

[~~(29)~~](31) "Net working capital" means current assets minus current liabilities.

[~~(30)~~](32) "Net worth" means total assets minus total liabilities and is equivalent to owner's equity.

[~~(31)~~](33) "Open dump" means a facility for the disposal of solid waste which does not comply with these rules.

(34) "Pathological waste," means biopsy materials and all human tissues, anatomical parts that emanate from surgery, obstetrical procedures, autopsy and laboratory procedures and animal carcasses exposed to pathogens in research and the bedding and other waste from such animals. "Pathological waste" does not include teeth or formaldehyde or other preservative agents.

[~~(32)~~](35) "Permit" means a document issued by the Department, bearing the signature of the Director or his authorized representative which by its conditions may authorize the permittee to construct, install, modify or operate a disposal site in accordance with specified limitations.

[~~(33)~~](36) "Person" means the state or a public or private corporation, local government unit, public agency, individual, partnership, association, firm, trust, estate or any other legal entity.

[~~(34)~~](37) "Public waters" or "Waters of the State" include lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters which do not combine or effect a junction with natural surface or underground waters), which are wholly or partially within or bordering the state or within its jurisdiction.

[~~(35)~~](38) "Processing of wastes" means any technology designed to change the physical form or chemical content of solid waste including, but not limited to, baling, composting, classifying, hydropulping, incinerating and shredding.

[~~(36)~~](39) "Putrescible waste" means solid waste containing organic material that can be rapidly decomposed by microorganisms, which may give rise to foul smelling, offensive products during such decomposition or which is capable of attracting or providing food for birds and potential disease vectors such as rodents and flies.

[~~(37)~~](40) "Regional disposal site" means:

(a) A disposal site selected pursuant to chapter 679, Oregon Laws 1985; or

(b) A disposal site that receives, or a proposed disposal site that is designed to receive more than 75,000 tons of solid waste a year from commercial haulers from outside the immediate service area in which the disposal site is located. As used in this paragraph, "immediate service area" means the county boundary of all counties except a county that is within the boundary of the metropolitan service district. For a county within the metropolitan service district, "immediate service area" means the metropolitan service district boundary.

[~~(38)~~](41) "Resource recovery" means the process of obtaining useful material or energy from solid waste and includes:

(a) "Energy recovery," which means 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.

(b) "Material recovery," which means any process of obtaining from solid waste, by presegregation or otherwise, materials which still have useful physical or chemical properties after serving a specific purpose and can, therefore, be reused or recycled for the same or other purpose.

(c) "Recycling," which means any process by which solid waste materials are transformed into new products in such a manner that the original products may lose their identity.

(d) "Reuse," which means the return of a commodity into the economic stream for use in the same kind of application as before without change in its identity.

[~~(39)~~] **(42)** "Salvage" means the controlled removal of reusable, recyclable or otherwise recoverable materials from solid wastes at a solid waste disposal site.

[~~(40)~~] **(43)** "Sanitary landfill" means a facility for the disposal of solid waste which complies with these rules.

[~~(41)~~] **(44)** "Sludge" means any solid or semisolid waste and associated supernatant generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant or air pollution control facility or any other such waste having similar characteristics and effects.

[~~(42)~~] **(45)** "Solid waste" means all putrescible and non-putrescible wastes, including but not limited to garbage, rubbish, refuse, ashes, waste paper and cardboard; sewage sludge, septic tank and cesspool pumpings or other sludge; commercial, industrial, demolition and construction wastes; discarded or abandoned vehicles or parts thereof; discarded home and industrial appliances; manure; vegetable or animal solid and semi-solid wastes, dead animals and other wastes; but the term does not include:

(a) Hazardous wastes as defined in ORS 459.410.

(b) Materials used for fertilizer or for other productive purposes or which are salvageable as such materials are used on land in agricultural operations and the growing or harvesting of crops and the raising of fowls or animals.

[~~(43)~~] **(46)** "Solid waste boundary" means the outermost perimeter (on the horizontal plane) of the solid waste at a landfill as it would exist at completion of the disposal activity.

[~~(44)~~] **(47)** "Tangible net worth" means the tangible assets that remain after deducting liabilities; such assets would not include intangibles such as goodwill and rights to patents or royalties.

[~~(45)~~] **(48)** "Transfer station" means a fixed or mobile facility, normally used as an adjunct of a solid waste collection and disposal system or resource recovery system, between a collection route and a disposal site, including but not limited to a large hopper, railroad gondola or barge.

[~~(46)~~](49) "Underground drinking water source" means an aquifer supplying or likely to supply drinking water for human consumption.

[~~(47)~~](50) "Vector" means any insect, rodent or other animal capable of transmitting, directly or indirectly, infectious diseases from one person or animal to another.

[~~(48)~~](51) "Waste" means useless or discarded materials.

[~~(49)~~](52) "Zone of saturation" means a three (3) dimensional section of the soil or rock in which all open spaces are filled with groundwater. The thickness and extent of a saturated zone may vary seasonally or periodically in response to changes in the rate or amount of groundwater recharge, discharge or withdrawal.

Stat. Auth.: ORS Ch. 459
Hist.: DEQ 41, f. 4-5-72, ef. 4-15-72; DEQ 26-1981, f. & ef. 9-8-81; DEQ 2-1984, f. & ef. 1-16-84
OAR Ch. 763, ef. 7-1-90

GENERAL RULES PERTAINING TO SPECIFIED WASTES

340-61-060

(1) Agricultural Wastes. Residues from agricultural practices shall be recycled, utilized for productive purposes or disposed of in a manner not to cause vector creation or sustenance, air or water pollution, public health hazards, odors, or nuisance conditions.

(2) Hazardous Solid Wastes. No hazardous solid wastes shall be deposited at any disposal site without prior written approval of the Department or state or local health department having jurisdiction.

(3) Waste Vehicle Tires:
   (a) Open Dumping. Disposal of loose waste tires by open dumping into ravines, canyons, gullies, and trenches, is prohibited;
   (b) Tire Landfill. Bulk quantities of tires which are disposed by landfilling and which are not incorporated with other wastes in a general landfill, must be baled, chipped, split, stacked by hand ricking or otherwise handled in a manner provided for by an operational plan submitted to and approved by the Department;
   (c) General Landfill. Bulk quantities of tires if incorporated in a general landfill with other wastes, shall be placed on the ground surface on the bottom of the fill and covered with earth before other wastes are placed over them.

(4) Waste Oils. Large quantities of waste oils, greases, oil sludges, or oil soaked wastes shall not be placed in any disposal site unless special provisions for handling and other special precautions are included in the approved plans and specifications and operational plan to prevent fires and pollution of surface or groundwaters.

(5) Demolition Materials. Due to the unusually combustible nature of demolition materials, demolition landfills or landfills incorporating large quantities of combustible materials shall be cross-sectioned into cells by earth dikes sufficient to prevent the spread of fire between cells, in accordance with engineering plans required by these rules. Equipment shall be provided of sufficient size and design to densely compact the material to be included in the landfill.

(6) Hazardous Wastes from Other States. Wastes which are hazardous under the law of the state of origin shall not be managed at a solid waste disposal site when transported to Oregon. Such wastes may be managed at a hazardous waste facility in Oregon if the facility is authorized to accept the wastes pursuant to ORS 466.005 et seq. and applicable regulations.

(7) Infectious Wastes. All infectious wastes must be managed in accordance with Chapter 763, Oregon Laws 1989. Pathological wastes shall be treated by incineration in an incinerator which complies with the requirements of Oregon Administrative Rules 340-25-850 to -905 unless the Department determines:

(a) The disposal cost for incineration of pathological wastes generated within the individual wasteshed exceeds the average cost by twenty-five percent (25%) for all incinerators within the state of Oregon which comply with the requirements of Oregon Administrative Rules 340-25-850 to -905; or the generator is unable to contract with any incinerator facility within the state of Oregon due to lack of incinerator processing capacity; and

(b) The State Health Division of the Oregon Department of Human Resources has prescribed by rule requirements for sterilizing "cultures and stocks," and this alternative means of treatment of the pathological waste is available.

Stat. Auth.: ORS Ch. 459
Hist.: DEQ 41, f. 4-5-72, ef. 4-15-72
ORS Ch. 763, ef. 7-1-90

RULEMAKING STATEMENTS
for
Proposed New Rule and Revisions to Existing Rules
Pertaining to Disposal of Infectious Waste

OAR Chapter 340, Division 61

Pursuant to ORS 183.335, these statements provide information on the intended action to adopt a rule.

STATEMENT OF NEED:

Legal Authority

The 1989 Oregon Legislature passed HB 2865 regulating the collection, transportation, storage, treatment and disposal of infectious waste that establish priority in methods of treating and disposing of infectious waste. Sections 2 to 9 of this Act (ORS Chapter 763) are added to and made part of ORS 459.005 to 459.385. The Commission is adopting a new rule and revisions to an existing rule which are necessary to implement the provisions of the HB 2865.

Need for the Rule

Improper storage, transportation, treatment and disposal of infectious waste represents a potential health and safety problem to the staff of medical facilities and to employees of solid waste collection services and disposal facilities, and to a lesser extent to the public and the environment. The Act establishes a comprehensive program involving the State Health Division of the Oregon Department of Human Resources, the Public Utility Commission, the Environmental Quality Commission and the Department of Environmental Quality to regulate collection, treatment and disposal of infectious waste. The new rule and the rule revision are needed to adopt criteria needed to determine the treatment method to be used for certain types of infectious wastes.

Principal Documents Relied Upon

a. Oregon Revised Statutes, Chapter 459.

b. Chapter 763, Oregon Laws 1989.

c. Oregon Administrative Rules, Chapter 340, Division 61.

LAND USE CONSISTENCY STATEMENT:

The proposed rules appear to affect land use to a minimum extent, and appear to be consistent with Statewide Planning Goals and Guidelines.

With regard to Goal 6 (Air, Water and Land Resources Quality), the rules pertain to establishing criteria by which the Department will determine whether certain infectious wastes are to be incinerated in each portion of the state. The proposed rule does not directly involve issuance of an Air Contaminant Discharge Permit or a Solid Waste Disposal Permit for a specific incineration facility. New or modified incineration facility permits are issued under existing rules.

The rules do not appear to conflict with other Goals.

Public comment on any land use issue involved is welcome and may be submitted in the manner described in the accompanying NOTICE OF PUBLIC HEARING.

It is requested that local, state and federal agencies review the proposed action and comment on possible conflicts with their programs affecting land use and with Statewide planning goals within their expertise and jurisdiction.

The Department of Environmental Quality intends to ask the Department of Land Conservation and Development to mediate any apparent conflicts brought to our attention by local, state or federal authorities.

EST:k
SW\SK2447 (12/89)

FISCAL AND ECONOMIC IMPACT STATEMENT

I. Introduction

The statute (Chapter 763, Oregon Laws 1989) requires that pathological waste shall be treated by incineration in an incinerator that provides complete combustion of waste to carbonized or mineralized ash. The ash shall be disposed of as provided in rules adopted by the Environmental Quality Commission. However, if the Department of Environmental Quality determines that incineration is not reasonably available within a wasteshed, pathological wastes may be disposed of in the same manner provided for cultures and stocks. Cultures and stocks shall either be incinerated or sterilized by other means (steam sterilization or autoclaving, chemical sterilization, irradiation, etc.) as prescribed by Health Division rule. Sterilized waste may be then disposed of in a permitted land disposal site, if it is not otherwise classified as hazardous waste.

The new rule and the rule revisions establish criteria for the Department to determine if incineration is not reasonably available in a wasteshed.

II. General Public

Since pathological wastes are defined in the statute as human tissues and anatomical parts from surgical and obstetrics procedures, and autopsies and laboratory procedures, individual members of the public do not generate this type of waste. There would be no direct financial impact imposed upon the public. The public would, however, be indirectly affected by this proposed rule if disposal costs for pathological wastes (from medical facilities) result in increased costs for medical procedures.

III. Small Business

Small hospitals and other medical facilities (which employ less than 50 persons) classified as small businesses would be affected directly by the proposed rule. Based on discussions with commercial infectious waste incineration companies and on estimates of transportation charges within the state of Oregon, total costs for transportation and incineration are estimated to range between 33 cents per pound to 38 cents per pound. In addition, the cost of containers for infectious wastes for transportation (as required by Chapter 763) are estimated at 14 cents per pound (based upon 25 pounds of waste in each container). The total container, shipping and incineration costs would range from 47 cents per pound to 52 cents per pound in off-site incinerators which comply with the proposed air quality regulations.

Chapter 763 requires infectious wastes to be segregated from other wastes by separate containment at the point of generation. The 14 cents per pound estimate for the containers may be identical for medical facilities for on-site and off-site incineration. The current disposal costs for on-site incineration of infectious wastes in a number of hospitals averages 50 cents per pound, with two hospitals burning only pathological wastes reporting costs of over 80 cents per pound. These costs are expected to increase to comply with the proposed new air quality rules. Disposal costs will also increase for medical facilities now disposing of pathological wastes in landfills.

The net financial impact upon medical facilities generating pathological wastes will be site specific. Some medical facilities will face increased disposal costs, while other medical facilities utilizing off-site incineration may pay the same as or less than they now pay to operate their own incinerators.

IV. Large Businesses

Larger medical facilities, such as hospitals and medical laboratories, must also dispose of pathological wastes. This rule would have the same impact on them as on small businesses.

V. Local Governments

Local governments operating hospitals also generate pathological wastes. The proposed rule would have the same impact on them as on the general public or on small and large businesses.

VI. State Agencies

Hospitals operated by the Department of Human Resources which conduct surgical procedures will also be required to incinerate pathological wastes. This rule would have the same impact on them as on the general public, large and small businesses and local governments.

The proposed rule will have no appreciable fiscal impact upon the Department of Environmental Quality.

ETD:b

Oregon Department of Environmental Quality

A CHANCE TO COMMENT ON...

Proposed Rules Relating to Management of Infectious Wastes

Hearing Dates: March 20, 1990
March 21, 1990
March 22, 1990

Comments Due: April 6, 1990

WHO IS AFFECTED: Medical facilities generating infectious wastes.

WHAT IS PROPOSED: The Department of Environmental Quality proposes to add a new administrative rule, OAR 340-61-060(7), to establish criteria by which the Department will determine if incineration is not reasonably available within wasteshed for the disposal of pathological wastes.

WHAT ARE THE HIGHLIGHTS: The proposed rule would:

- Add the definitions of "pathological waste" and "cultures and stocks" to the list of definitions in OAR 340-61-010.
- Require that all infectious wastes be managed in accordance with the requirements contained in Chapter 763 of Oregon Laws 1989.
- Require that pathological wastes be incinerated unless the Department determines if incineration is not reasonably available within the wasteshed. The criteria would compare the cost to incinerate the pathological waste for each wasteshed to the average cost of incineration within the entire state. The Department would determine that incineration is not reasonably available if the cost in the wasteshed exceeds the average cost within the entire state by 25% or if there is a lack of incineration capacity, and if an alternate treatment method, approved by the State Health Division for treatment of cultures and stocks, is available.

(over)

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

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

11/1/86

HOW TO COMMENT:

Public hearings will be held before a hearings officer at:

9:00 a.m.
March 20, 1990
DEQ Headquarters
Conference Room 4A
811 S.W. Sixth Avenue
Portland, OR

1:00 p.m.
March 21, 1990
Cascade Natural Gas
334 N.E. Hawthorne
Bend, OR

1:00 p.m.
March 22, 1990
Eastern Oregon State College
Room 309-310
Hoke College Center
La Grande, OR

1:30 p.m.
March 22, 1990
City Council Chambers
900 S.E. Douglas
Roseburg, OR

Written or oral comments may be presented at the hearing. Written comments may also be sent to the Department of Environmental Quality, Solid Waste Section, Hazardous and Solid Waste Division, 811 SW Sixth Avenue, Portland, OR 97204, and must be received no later than 5:00 p.m. on April 6, 1990.

Copies of the complete proposed rule package may be obtained from the DEQ Solid Waste Section. For further information, contact Tim Davison at 229-5965, or toll free at 1-800-452-4011.

WHAT IS THE NEXT STEP:

The Environmental Quality Commission may adopt a new rule identical to the one proposed, adopt a modified rule as a result of testimony received, or may decline to adopt a rule. The Commission will consider the proposed new rule and rule revisions at its meeting on May __, 1990.

SW\SK2450

CHAPTER 763

AN ACT HB 2865

Relating to solid waste disposal; creating new provisions; and amending ORS 459.005, 459.225, 459.284, 459.290 and 459.995 and section 9, chapter 679, Oregon Laws 1985.

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

SECTION 1. Sections 2 to 9 of this Act are added to and made a part of ORS 459.005 to 459.385.

SECTION 2. The Legislative Assembly finds and declares that:

(1) The collection, transportation, storage, treatment and disposal of infectious waste in a manner that protects the health, safety and welfare of the workers who handle the waste and of the public is a matter of state-wide concern.

(2) The public health, safety and welfare is best protected by an infectious waste collection system that serves as many persons as possible in this state, including medical care and laboratory facilities, ...ing care facilities and private residences.

(3) In the interest of public health, safety and welfare, it is the policy of this state to establish requirements for collection, transportation, storage, treatment and disposal of infectious waste that will

establish priority in methods of treating and disposing of infectious waste.

SECTION 3. As used in sections 2 to 8 of this 1989 Act:

(1) "Disposal" means the final placement of treated infectious waste in a disposal site operating under a permit issued by a state or federal agency.

(2) "Infectious waste" includes:

(a) "Biological waste," which includes blood and blood products, excretions, exudates, secretions, suctionings and other body fluids that cannot be directly discarded into a municipal sewer system, and waste materials saturated with blood or body fluids, but does not include diapers soiled with urine or feces.

(b) "Cultures and stocks," which includes etiologic agents and associated biologicals, including specimen cultures and dishes and devices used to transfer, inoculate and mix cultures, wastes from production of biologicals, and serums and discarded live and attenuated vaccines. "Cultures" does not include throat and urine cultures.

(c) "Pathological waste," which includes biopsy materials and all human tissues, anatomical parts that emanate from surgery, obstetrical procedures, autopsy and laboratory procedures and animal carcasses exposed to pathogens in research and the bedding and other waste from such animals. "Pathological waste" does not include teeth or formaldehyde or other preservative agents.

(d) "Sharps," which includes needles, IV tubing with needles attached, scalpel blades, lancets, glass tubes that could be broken during handling and syringes that have been removed from their original sterile containers.

(3) "Storage" means the temporary containment of infectious waste in a manner that does not constitute treatment or disposal of such waste.

(4) "Transportation" means the movement of infectious waste from the point of generation over a public highway to any intermediate point or to the point of final treatment.

(5) "Treatment" means incineration, sterilization or other method, technique or process approved by the Health Division of the Department of Human Resources that changes the character or composition of any infectious waste so as to render the waste noninfectious.

SECTION 4. (1) No person who generates infectious waste shall discard or store such waste except as provided in section 5 of this 1989 Act.

(2) No person shall transport infectious waste other than infectious waste that is an incidental part of other solid waste except as provided in subsection (6) of section 5 and section 10 of this 1989 Act.

SECTION 5. (1) Infectious waste shall be segregated from other wastes by separate containment at the point of generation. Inclosures used for storage of infectious waste shall be secured to prevent access by unauthorized persons and shall be marked with prominent warning signs.

(2) Infectious waste, except for sharps, shall be contained in disposable red plastic bags or containers made of other materials impervious to moisture and strong enough to prevent ripping, tearing or bursting under normal conditions of use. The bags or containers shall be closed to prevent leakage or expulsion of solid or liquid wastes during storage, collection or transportation.

(3) Sharps shall be contained for storage, collection, transportation and disposal in leakproof, rigid, puncture-resistant red containers that are taped closed or tightly lidded to prevent loss of the contents. Sharps may be stored in such containers for more than seven days.

(4) All bags, boxes or other containers for infectious waste and rigid containers of discarded sharps shall be clearly identified as containing infectious waste.

(5) Infectious waste shall be stored at temperatures and only for times established by rules of the Health Division of the Department of Human Resources.

(6) Infectious waste shall not be compacted before treatment and shall not be placed for collection, storage or transportation in a portable or mobile trash compactor.

(7) Infectious waste contained in disposable bags as specified in this section shall be placed for collection, storage, handling or transportation in a disposable or reusable pail, carton, box, drum, dumpster, portable bin or similar container. The container shall have a tight-fitting cover and be kept clean and in good repair. The container may be of any color and shall be conspicuously labeled with the international biohazard symbol and the words "Biomedical Waste" on the sides so as to be readily visible from any lateral direction when the container is upright.

(8) Each time a reusable container for infectious waste is emptied, the container shall be thoroughly washed and decontaminated unless the surfaces of the container have been protected from contamination by a disposable red liner, bag or other device removed with the waste.

(9) Trash chutes shall not be used to transfer infectious waste between locations where it is contained or stored.

(10) Generators that produce 50 pounds or less of infectious waste in any calendar month shall be exempt from the specific requirements of subsections (5), (7) and (8) of this section.

SECTION 6. (1) Pathological wastes shall be treated by incineration in an incinerator that provides complete combustion of waste to carbonized or mineralized ash. The ash shall be disposed of as provided in rules adopted by the Environmental Quality Commission. However, if the Department of Environmental Quality determines that incineration is not reasonably available within a wasteshed,

pathological wastes may be disposed of in the same manner provided for cultures and stocks.

(2) Cultures and stocks shall be incinerated as described in subsection (1) of this section or sterilized by other means prescribed by Health Division rule. Sterilized waste may be disposed of in a permitted land disposal site if it is not otherwise classified as hazardous waste.

(3) Liquid or soluble semisolid biological wastes may be discharged into a sewage treatment system that provides secondary treatment of waste.

(4) Sharps and biological wastes may be incinerated as described in subsection (1) of this section or sterilized by other means prescribed by Health Division rule. Sharps may be disposed of in a permitted land disposal site only if the sharps are in containers as required in subsection (3) of section 5 of this 1989 Act and are placed in a segregated area of the landfill.

(5) Other methods of treatment and disposal may be approved by rule of the Environmental Quality Commission.

SECTION 7. The Environmental Quality Commission may adopt rules for storage and handling of infectious waste at a solid waste disposal site.

SECTION 8. The requirements of sections 2 to 8 of this 1989 Act shall not apply to waste, other than sharps as defined in section 3 of this 1989 Act, that is:

(1) Generated in the practice of veterinary medicine; and

(2) Not capable of being communicated by invasion and multiplication in body tissues and capable of causing disease or adverse health impacts in humans.

SECTION 9. Each person who transports infectious waste for consideration, other than waste that is an incidental part of other solid waste, shall:

(1) Provide written certification to a person who discards more than 50 pounds per month of infectious waste that such waste will be disposed of in compliance with the provisions of sections 2 to 9 of this 1989 Act; and

(2) Maintain records showing the point of origin and date and place of final disposal of infectious waste collected from generators. A copy of these records shall be given to the generator or the Department of Environmental Quality upon request.

SECTION 10. The Public Utility Commission may establish rules governing the conditions for transportation of infectious waste that is not an incidental part of other solid waste. The rules may require persons transporting infectious waste for consideration to register separately with the Public Utility Commission as an infectious waste transporter and may specify the terms of that registration, including a fee for such registration. The commission may require that persons transporting infectious waste for consideration document the county and state of origin of the waste. As used in this section, "infectious waste" has the meaning given in section 3 of this 1989 Act.

SECTION 11. Section 10 of this Act is added to and made a part of ORS chapter 767.

SECTION 12. ORS 459.005 is amended to read:

459.005. As used in ORS 459.005 to 459.385, unless the context requires otherwise:

(1) "Affected person" means a person or entity involved in the solid waste collection service process including but not limited to a recycling collection service, disposal site permittee or owner, city, county and metropolitan service district.

(2) "Area of the state" means any city or county or combination or portion thereof or other geographical area of the state as may be designated by the commission.

(3) "Board of county commissioners" or "board" includes county court.

(4) "Collection franchise" means a franchise, certificate, contract or license issued by a city or county authorizing a person to provide collection service.

(5) "Collection service" means a service that provides for collection of solid waste or recyclable material or both.

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

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

(8) "Disposal site" means land and facilities used for the disposal, handling or transfer of or resource recovery from solid wastes, including but not limited to dumps, landfills, sludge lagoons, sludge treatment facilities, disposal sites for septic tank pumping or cesspool cleaning service, transfer stations, resource recovery facilities, incinerators for solid waste delivered by the public or by a solid waste collection service, composting plants and land and facilities previously used for solid waste disposal at a land disposal site; but the term does not include a facility subject to the permit requirements of ORS 468.740; a landfill site which is used by the owner or person in control of the premises to dispose of soil, rock, concrete or other similar nondecomposable material, unless the site is used by the public either directly or through a solid waste collection service; or a site operated by a wrecker issued a certificate under ORS 822.110.

(9) "Land disposal site" means a disposal site in which the method of disposing of solid waste is by landfill, dump, pit, pond or lagoon.

(10) "Land reclamation" means the restoration of land to a better or more useful state.

(11) "Local government unit" means a city, county, metropolitan service district formed under ORS chapter 268, sanitary district or sanitary authority formed under ORS chapter 450, county service district formed under ORS chapter 451, regional air quality control authority formed under ORS 468.500 to 468.530 and 468.540 to 468.575 or any

other local government unit responsible for solid waste management.

(12) "Metropolitan service district" means a district organized under ORS chapter 268 and exercising solid waste authority granted to such district under this chapter and ORS chapter 268.

(13) "Permit" includes, but is not limited to, a conditional permit.

(14) "Person" means the state or a public or private corporation, local government unit, public agency, individual, partnership, association, firm, trust, estate or any other legal entity.

(15) "Recyclable material" means any material or group of materials that can be collected and sold for recycling at a net cost equal to or less than the cost of collection and disposal of the same material.

(16) "Regional disposal site" means:

(a) A disposal site selected pursuant to chapter 679, Oregon Laws 1985; or

(b) A disposal site that receives, or a proposed disposal site that is designed to receive more than 75,000 tons of solid waste a year from commercial haulers from outside the immediate service area in which the disposal site is located. As used in this paragraph, "immediate service area" means the county boundary of all counties except a county that is within the boundary of the metropolitan service district. For a county within the metropolitan service district, "immediate service area" means the metropolitan service district boundary.

(17) "Resource recovery" means the process of obtaining useful material or energy resources from solid waste and includes:

(a) "Energy recovery," which means 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.

(b) "Material recovery," which means any process of obtaining from solid waste, by presegregation or otherwise, materials which still have useful physical or chemical properties after serving a specific purpose and can, therefore, be reused or recycled for the same or other purpose.

(c) "Recycling," which means any process by which solid waste materials are transformed into new products in such a manner that the original products may lose their identity.

(d) "Reuse," which means the return of a commodity into the economic stream for use in the same kind of application as before without change in its identity.

(18) "Solid waste collection service" or "service" means the collection, transportation or disposal of or resource recovery from solid wastes but does not include that part of a business operated under a certificate issued under ORS 822.110.

(19) "Solid waste" means all putrescible and nonputrescible wastes, including but not limited to garbage, rubbish, refuse, ashes, waste paper and cardboard; sewage sludge, septic tank and cesspool pumpings or other sludge; commercial, industrial, demolition and construction wastes; discarded or abandoned vehicles or parts thereof; discarded home and industrial appliances; manure, vegetable or animal solid and semisolid wastes, dead animals, **infectious waste as defined in section 3 of this 1989 Act** and other wastes; but the term does not include:

(a) Hazardous wastes as defined in ORS 466.005.

(b) Materials used for fertilizer or for other productive purposes or which are salvageable as such materials are used on land in agricultural operations and the growing or harvesting of crops and the raising of fowls or animals.

(20) "Solid waste management" means prevention or reduction of solid waste; management of the storage, collection, transportation, treatment, utilization, processing and final disposal of solid waste; or resource recovery from solid waste; and facilities necessary or convenient to such activities.

(21) "Source separate" means that the person who last uses recyclable material separates the recyclable material from solid waste.

(22) "Transfer station" means a fixed or mobile facility normally used, as an adjunct of a solid waste collection and disposal system or resource recovery system, between a collection route and a disposal site, including but not limited to a large hopper, railroad gondola or barge.

(23) "Waste" means useless or discarded materials.

(24) "Wasteshed" means an area of the state having a common solid waste disposal system or designated by the commission as an appropriate area of the state within which to develop a common recycling program.

SECTION 13. ORS 459.225 is amended to read:

459.225. (1) If the commission finds that a disposal site cannot meet one or more of the requirements of ORS 459.005 to 459.105, 459.205 to 459.245 and 459.255 to 459.285 or any rule or regulation adopted pursuant thereto, it may issue a variance from such requirement either for a limited or unlimited time or it may issue a conditional permit containing a schedule of compliance specifying the time or times permitted to bring the disposal site into compliance with such requirements, or it may do both.

(2) In carrying out the provisions of subsection (1) of this section, the commission may grant specific variances from particular requirements or may grant a conditional permit to an applicant or to a class of applicants or to a specific disposal site, and specify conditions it considers necessary to protect the public health.

(3) The commission shall grant a variance or conditional permit only if:

(a) Conditions exist that are beyond the control of the applicant.

(b) Special conditions exist that render strict compliance unreasonable, burdensome or impractical.

(c) Strict compliance would result in substantial curtailment or closing of a disposal site and no alternative facility or alternative method of solid waste management is available.

(4) A variance or conditional permit may be revoked or modified by the commission after a public hearing held upon not less than 10 days' notice. Such notice shall be served upon all persons who the commission knows will be subjected to greater restrictions if such variance or conditional permit is revoked or modified, or who are likely to be affected or who have filed with the commission a written request for such notification.

(5) In addition to the authority to issue a variance or conditional permit under subsections (1) to (4) of this section, the commission may modify an existing disposal site permit to specify the conditions under which the disposal site may accept and dispose of infectious waste as defined in section 3 of this 1989 Act. The commission also may require that a resource recovery facility or solid waste incinerator accept infectious waste generated in Oregon if the infectious waste has been contained and transported in accordance with sections 5 and 10 of this 1989 Act, but only so long as the volume of infectious waste generated outside the county in which the facility or incinerator is located does not affect the ability of the facility or incinerator to process or dispose of all waste generated within the county in which the facility or incinerator is located.

[*(5)*] **(6)** The establishment, operation, maintenance, expansion, alteration, improvement or other change of a disposal site in accordance with a variance or a conditional permit is not a violation of ORS 459.005 to 459.105, 459.205 to 459.245 and 459.255 to 459.285 or any rule or regulation adopted pursuant thereto.

SECTION 14. ORS 459.995 is amended to read:

459.995. (1) In addition to any other penalty provided by law, any person who violates ORS 459.205, 459.270 or the provisions of ORS 459.180, 459.188, 459.190, 459.195, 459.710 or 459.715 **or the provisions of sections 2 to 8 of this 1989 Act** or any rule or order of the Environmental Quality Commission pertaining to the disposal, collection, storage or reuse or recycling of solid wastes, as defined by ORS 459.005, shall incur a civil penalty not to exceed $500 a day for each day of the violation.

(2) The civil penalty authorized by subsection (1) of this section shall be established, imposed, collected and appealed in the same manner as civil penalties are established, imposed and collected under ORS 448.305, 454.010 to 454.040, 454.205 to 454.255, 454.405, 454.425, 454.505 to 454.535, 454.605 to 454.745 and ORS chapter 468.

SECTION 15. ORS 459.284 is amended to read:

459.284. Each [*city or county*] **local government unit** that has a disposal site operating under the provisions of ORS 459.005 to 459.385 and for which the [*city or county*] **local government unit** collects a fee may apportion an amount of the service or user charges collected for solid waste disposal at each publicly owned, [*or*] franchised **or privately owned** solid waste disposal site within or for the [*city or county*] **local government unit** and dedicate and use the moneys obtained for rehabilitation and enhancement of the area around the disposal site from which the fees have been collected. That portion of the service and user charges set aside by the [*city or county*] **local government unit** for the purposes of this section shall be not more than $1 for each ton of solid waste. If [*a city*] **any local government unit** apportions moneys under this section, [*the county in which the city is located*] **another local government unit** may not also apportion moneys under this section **for the same disposal site.**

SECTION 16. ORS 459.290 is amended to read:

459.290. Each [*city or county*] **local government unit** that apportions money under ORS 459.284 shall establish a citizens advisory committee to select plans, programs and projects for the rehabilitation and enhancement of the area around disposal sites for which the [*city or county*] **local government unit** has apportioned moneys under ORS 459.284. If [*a city*] **any local government unit** establishes a citizens advisory committee under this section, [*a board of county commissioners*] **another local government unit** may not also establish a local citizens advisory committee under this section **for the same disposal site.**

SECTION 17. Section 9, chapter 679, Oregon Laws 1985, is amended to read:

Sec. 9. (1) The metropolitan service district shall apportion an amount of the service or user charges collected for solid waste disposal at each general purpose landfill within or for the district and dedicate and use the moneys obtained for rehabilitation and enhancement of the area in and around the landfill from which the fees have been collected. That portion of the service and user charges set aside by the district for the purposes of this subsection shall be 50 cents for each ton of solid waste. **The metropolitan service district may not apportion moneys under ORS 459.284 for a general purpose landfill for which the district sets aside service and user charges under this subsection.**

(2) The metropolitan service district, commencing on [*the effective date of this 1985 Act*] **July 13, 1985,** shall apportion an amount of the service or user charges collected for solid waste disposal and shall transfer the moneys obtained to the Department of Environmental Quality. That portion of the service and user charges set aside by the district for the purposes of this subsection shall be $1 for each ton of solid waste. Moneys transferred to the department under this section shall be paid into the Land Disposal Mitigation Account in the General Fund of the State Treasury, which is hereby established. All moneys in the account are continuously appropriated to the department and shall be used for carrying out the department's functions and duties under [*this 1985 Act*] **chapter 679, Oregon Laws 1985.** The department shall keep a record of all moneys deposited in the account. The record shall

indicate by cumulative accounts the source from which the moneys are derived and the individual activity or program against which each withdrawal is charged. Apportionment of moneys under this subsection shall cease when the department is reimbursed for all costs incurred by it under [*this 1985 Act*] **chapter 679, Oregon Laws 1985.**

(3) The metropolitan service district shall adjust the amount of the service and user charges collected by the district for solid waste disposal to reflect the loss of those duties and functions relating to solid waste disposal that are transferred to the commission and department under [*this 1985 Act*] **chapter 679, Oregon Laws 1985.** Moneys no longer necessary for such duties and functions shall be expended to implement the solid waste reduction program submitted under section 8, [*of this 1985 Act*] **chapter 679, Oregon Laws 1985.** The metropolitan service district shall submit a statement of proposed adjustments and changes in expenditures under this subsection to the department for review.

SECTION 18. Except as provided in section 19 of this Act, sections 2 to 11 of this Act and the amendments to ORS 459.005, 459.225 and 459.995 by sections 12, 13 and 14 of this Act do not become operative until July 1, 1990.

SECTION 19. The Environmental Quality Commission, the Health Division and the Public Utility Commission may take any action before the operative date of this Act that is necessary to enable the Public Utility Commission, the Environmental Quality Commission, the Health Division or the Department of Environmental Quality to exercise on and after the operative date of this Act, all the duties, functions and powers conferred by this Act.

Approved by the Governor July 22, 1989
Filed in the office of Secretary of State July 24, 1989

ATTACHMENT F

STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY INTEROFFICE MEMO

TO: Solid Waste Advisory Committee DATE: November 15, 1989

FROM: Tim Davison

SUBJECT: Infectious Waste Management
Determination that Incineration is Available in a Wasteshed

In response to your discussion during the October 20 meeting concerning the criteria to be used in determining if incineration is "not reasonably available" within a wasteshed, we have developed draft criteria on which to make this determination.

We would like discussion and input by the Solid Waste Advisory Committee at its November 21 meeting.

Background

Chapter 763 of Oregon Laws 1989, formerly known as HB 2865, contains a requirement that pathological wastes (human tissue from surgical and obstetrical procedures, biopsy materials and similar wastes) shall be incinerated. If the Department, however, determines that incineration is not reasonably available to a wasteshed, pathological wastes can be disposed of in the same manner as cultures and stocks. The law requires incineration, or sterilization by other means prescribed by Health Division rule, of culture and stocks and of sharps.

At the present time, there are approximately thirty-six (36) hospitals operating on-site infectious waste incinerators and thirty-seven (37) crematoriums. Two private corporations operate dedicated infectious waste incinerator facilities in Oregon. In addition, one municipal solid waste energy recovery facility and two municipal solid waste volume reduction incinerators dispose of infectious wastes.

At the October 20, 1989 meeting, the Environmental Quality Commission authorized the Air Quality Division to hold public hearings to receive testimony on proposed rules to impose new emission limits on incineration facilities. The proposed rules would lower the allowable emission limits on particulates; establish new emission limits on hydrogen chloride, sulfur dioxide and carbon monoxide; require continuous monitoring equipment; require performance testing and require particulate and gaseous pollution control equipment on all incinerators. These new rules would not apply to

the energy recovery facility owned and operated by Ogden-Martin at Brooks in Marion County, as that facility is regulated under equally restrictive rules which apply to large incineration facilities.

Omitting the on-site hospital incinerators and the two volume reduction incinerators which burn incidental quantities of infectious waste that is mixed with municipal solid wastes, three facilities now accept infectious wastes delivered to the incinerators in separate containers. Bio-Waste Management Corporation, located in southern Klamath County, began operating an incinerator in July 1989. This unit is rated at 1,000 pounds per hour of infectious waste for operation for 22 hours per day, for a daily capacity of 11 tons. The unit is equipped with acid gas and particulate removal emission control system. Therm-Tec, Inc., located in Tualatin, currently operates a small incinerator unit limited to 500 pounds of infectious waste per day. Therm-Tec, Inc., recently purchased Medical Waste Systems of Oregon from BFI, and is continuing to transport medical facility wastes collected in Oregon to a privately owned municipal solid waste incinerator facility near Ferndale, Washington. Therm-Tec, Inc., is also constructing a larger incinerator unit to dispose of infectious waste at their Tualatin location.

Ogden-Martin Systems of Marion, Inc., the owner and operator of a mass-burn, waste-to-energy facility in Marion County located at Brooks, disposes of infectious wastes generated within the county. Infectious wastes from Marion County are separately collected by a subsidiary of the franchised collection firms. The County is currently considering whether or not to accept infectious wastes from other Oregon counties.

The new Therm-Tec, Inc. incinerator will have the capability of disposing of more infectious wastes than the present customers (of both Therm-Tec, Inc., and Medical Waste Systems of Oregon) generate. Bio-Waste Management Corporation also has capacity to accept additional infectious wastes. Ogden-Martin Systems of Marion, Inc., also has the capability of disposing of more infectious wastes than are generated in Marion County. The remaining capacity of these three existing incineration facilities, even without considering possible new facilities, appear to provide sufficient capacity to incinerate most, if not all, of the pathological wastes and cultures and stocks generated in Oregon. In addition, one corporation located in the Portland area has indicated some interest in using an existing large steam autoclave to render infectious wastes non-infectious.

The proposed revisions to the incinerator emission limitations may persuade many hospitals to shut down their incinerators rather than to retrofit emission control systems. This will eliminate the opportunity for other medical facilities in the community to dispose of infectious wastes in

hospital incinerators. It is possible that the incinerator disposal options will be limited to Therm-Tec, Inc., Ogden-Martin and Bio-Waste Management Corporation and to new facilities.

Since sufficient incineration capacity is available to dispose of pathological wastes and stocks and cultures (as well as sharps and biological wastes), this suggests that a determination whether incineration is reasonably available could be a function of disposal costs, geographic location or a combination of cost and location.

Using Cost to Define "Reasonably Available"

Although the owner/operators of the two infectious waste incinerator units use different cost allocation methodology to develop disposal costs, it is possible to make some general assumptions pertaining to disposal costs of incineration. These assumptions include:

- Capital costs for dedicated infectious waste incineration facilities, including emission control systems, are similar for the two existing facilities and any new facilities that might be constructed in the next two or three years.

- Operational costs (labor, maintenance, combustion residue disposal, etc.) should be comparable for incinerator facilities that comply with the proposed emission standards.

- Tipping fees at incinerators have been up to $300 per ton. These costs are expected to rise to cover the cost of meeting the proposed new air emission rules and the costs of disposal of ash in monofils.

- The cost of containers for collection of infectious waste should be comparable for generators if the collection firms serve similar populations and provide the containers.

- Infectious waste collection costs are a function of the quantity of waste generated in a wasteshed, the number of collection points in each wasteshed, the distance between the wasteshed and the incineration facility and the road conditions. Because of the statutory prohibition against use of compaction equipment to store or to collect infectious wastes, collection costs for small communities are not necessarily proportional to the number of generators (measured on a unit weight basis).

We were unable to develop cost estimates for central steam autoclave treatment facilities since no facility of this type currently operates in Oregon. Each medical facility using a steam autoclave must be evaluated on an individual basis, and the availability of this option will be dependent

upon the physical locations of autoclaves. (The cost of collection and transportation of infectious wastes to a centrally located steam autoclave (or other approved treatment) facility should be the same as if the wastes were to be disposed of in a centrally located incinerator.)

If cost is to be the main factor in determining what is "reasonably available," the preferred method is to compare the cost of incineration to other available alternatives. This method has been utilized by the Department in the past (e.g., in the waste tire program). The primary alternative for sterilizing pathological cultures and stocks, and sharps is autoclaving (steam sterilization).

Many hospitals (and other medical facilities generating pathological wastes and cultures and stocks) have installed steam autoclaves in close proximity to surgical and obstetrical suites for use in sterilizing instruments. Use of such an autoclave unit to treat infectious wastes may not be acceptable because of a risk of releasing pathogenic organisms during waste handling or by interfering with the use of the autoclave to sterilize instruments during surgical procedures. The decision whether existing steam autoclaves can be used is the responsibility of the Oregon State Health Division.

Using Geographical Location to Define "Reasonably Available"

During our discussions with owners of existing facilities and with local government entities, we have found that:

- One private corporation limits the service area to a radius of one hundred miles of the incinerator.

- One private corporation will serve generators within a three-hundred-mile radius at a set price per volume, with larger loads being charged less per pound. Generators located outside that radius will be charged more per pound.

- One private corporation currently receives infectious wastes only within the county in which the facility is located.

- One out-of-state incinerator operator may be restricted to accepting only infectious wastes generated within that state if an initiative passes.

Geographic limitations at this time do not completely stop shipment of infectious wastes to an incinerator from anywhere in Oregon. A determination by the Department whether incineration is reasonably available basically depends upon the incineration costs and existence of an alternate disposal option approved by the Oregon State Health Division, rather than location of the generator of the wastes.

Recommendation

The Department shall reach a determination that incineration is "not reasonably available" if:

1) The generator is unable to contract with the owner/operator of any incinerator authorized by the Department to accept infectious waste in the state of Oregon.

2) The disposal cost of incineration is greater than one hundred and twenty-five percent (125%) of the cost to dispose of infectious wastes in an alternate treatment facility, provided that the alternative disposal facility has been approved by the Oregon State Health Division.

ETD:k
SW\SK2384

NEIL GOLDSCHMIDT
GOVERNOR

Environmental Quality Commission

811 SW SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

REQUEST FOR EQC ACTION

Meeting Date: January 19, 1990
Agenda Item: M
Division: Hazardous & Solid Waste
Section: Underground Storage Tanks

SUBJECT:

UST Rules: Authorization for hearing on Proposed Adoption of Federal UST Technical Standards and Financial Responsibility Rules, and Local Program Delegation

PURPOSE:

Adopt underground storage tank (UST) rules for local program delegation. Adopt UST rules allowing local government to petition for more stringent UST standards where groundwater is threatened. Adopt technical standards and financial responsibility rules that are no less stringent than the federal UST regulations, thereby qualifying for federal approval of the state program to regulate USTs in lieu of federal regulation.

ACTION REQUESTED:

___ Work Session Discussion
- ___ General Program Background
- ___ Potential Strategy, Policy, or Rules
- ___ Agenda Item ___ for Current Meeting
- ___ Other: (specify)

_X_ Authorize Rulemaking Hearing
___ Adopt Rules

Proposed Rules	Attachment A
40 CFR 280	Attachment B
Rulemaking Statements	Attachment C
Fiscal and Economic Impact Statement	Attachment C
Public Notice	Attachment D
Land Use Consistency Statement	Attachment E

___ Issue a Contested Case Order

___ Approve a Stipulated Order
___ Enter an Order
Proposed Order Attachment ___

___ Approve Department Recommendation
___ Variance Request Attachment ___
___ Exception to Rule Attachment ___
___ Informational Report Attachment ___
___ Other: (specify) Attachment ___

DESCRIPTION OF REQUESTED ACTION:

Subtitle I of the 1984 Hazardous and Solid Waste Amendments to the Resource Conservation and Recovery Act (RCRA) introduced regulations requiring underground storage tanks containing petroleum and hazardous substances to meet certain technical and financial responsibility requirements. Additionally, the regulations encouraged the states to run the UST program. The Department of Environmental Quality worked with representatives of the public (32 member advisory committee) to develop a legislative proposal that would establish a state underground storage tank program. All parties, including industry representatives, preferred a state-run UST program to a federal program. The 1987 Oregon Legislature adopted state UST statutes that encourage the Commission to establish a state UST program that will receive authorization to regulate USTs in lieu of federal regulation.

In 1988 the Commission adopted interim UST rules to establish a $25 annual UST permit fee to fund the program, limited technical and decommissioning standards, and the authority to prohibit delivery of product where an UST is out of compliance. Since that time the Commission has adopted additional UST regulations, including licensing requirements for persons who work on USTs, reporting and corrective action requirements for releases and spills from USTs containing petroleum, plus several housekeeping modifications to the interim UST rules. Final federal UST technical and financial regulations were adopted in late 1988.

To obtain state program approval to regulate USTs in lieu of federal regulation it is necessary to first adopt technical and financial responsibility requirements that are no less stringent than the federal UST regulations, 40 CFR 280, included as Attachment B. Secondly, the Department must apply to the U.S. Environmental Protection Agency for state program approval. The Department intends to make application sometime after July 1, 1990.

As a first step, the Department is requesting authorization to hold public hearings on the proposed rules shown in Attachment A.

AUTHORITY/NEED FOR ACTION:

___ Required by Statute: _____ Attachment ___
Enactment Date: _____
_X_ Statutory Authority: ORS 466.705 - .995 Attachment ___
___ Pursuant to Rule: _____ Attachment ___
_X_ Pursuant to Federal Law/Rule: 40 CFR 280 Attachment ___

___ Other: Attachment ___

_X_ Time Constraints:

The Department has made a grant commitment to the EPA to make application for federal authorization prior to July 1, 1990. The rule adoption process takes four to six months.

DEVELOPMENTAL BACKGROUND:

___ Advisory Committee Report/Recommendation Attachment ___
___ Hearing Officer's Report/Recommendations Attachment ___
___ Response to Testimony/Comment Attachment ___
___ Prior EQC Agenda Items: (list)
Attachment ___
___ Other Related Reports/Rules/Statutes:
Attachment ___
___ Supplemental Background Information Attachment ___

REGULATED/AFFECTED COMMUNITY CONSTRAINTS/CONSIDERATIONS:

USTs in Oregon are presently regulated by both the Department and the Environmental Protection Agency (EPA). A single regulating agency would be more effective and less confusing for the public, the Department and the EPA. The proposed rules combine state and federal UST regulations. Federal authorization of the Oregon program will establish the Department as the sole agency regulating USTs.

The existing federal technical and financial responsibility requirements are burdensome upon owners and operators of underground storage tanks. Financially marginal persons will not be able to continue to operate their USTs. (The EPA estimates that 46 percent of the independent motor fuel

retailers will not survive beyond the next five years.) This unavailability of motor fuel will severely affect the general public and tourism in the rural sections of the state. Although the federal regulations are now creating these problems, adoption of the proposed rules will focus attention on the Department and create expectations that the Department and the state will develop satisfactory solutions.

PROGRAM CONSIDERATIONS:

Before the state UST program can be authorized to regulate USTs in lieu of federal regulation it will be necessary for the state to assure the EPA that our rules are no less stringent and are as enforceable as the federal UST regulations. A Governor's submittal letter and an Attorney General's certification are required as part of the authorization application.

To assure that these proposed rules are no less stringent than the federal regulations, the Department has chosen to adopt the federal UST regulations (40 CFR 280) in whole, then modify the federal regulations where necessary for clarity, coordination with existing state rules and statutes, or to be more stringent. Specific areas where the federal rules are changed include:

A. Coordination with State Rules:

1. The existing rule on decommissioning has been deleted. The federal rules have been modified to include all of the Oregon decommissioning requirements.

2. The definitions included in both the existing state rules and the federal regulations have been modified to insure consistency of terms.

3. Subpart E "Release Reporting, Investigation, and Confirmation" and Subpart F "Release Response and Corrective Action for UST Systems Containing Petroleum or Hazardous Substances" have been modified to coordinate with the Department's existing cleanup rules for leaking petroleum systems OAR 340-122-305 through OAR 340-122-360.

4. Subpart F "Release Response and Corrective Action for UST Systems Containing Petroleum or Hazardous Substances" has been modified so that the Department's environmental cleanup rules OAR 340-122-010 through 340-

122-110 are used rather than the federal cleanup regulations.

B. More Stringent Requirements: These more stringent than federal requirements have been given consensus approval from the UST citizen advisory committee.

1. Require owners and operators of field constructed tanks to provide federal notification forms. The EPA excluded these large tanks (greater than 30,000 gallons) from reporting requirements and the technical and financial responsibility requirements. The Department believes that field constructed USTs could cause a risk to the environment. The Department would like to know the presence of large underground tanks containing petroleum or hazardous substances.

2. Require Department approval where a corrosion expert has determined that an UST system may be installed without corrosion protection. Since corrosion of USTs is the major cause of releases from USTs, the Department wishes to review and approve any UST installation where corrosion protection is not installed.

3. Require that a test station and a reference cell be installed with each UST cathodic protection system. A test station allows accurate testing of a cathodic protection system.

4. Limit compliance certification of an UST installation to certification by a state licensed installer, certification by a registered professional engineer or another manner approved by the Department. In addition to these certification methods, the federal rules allowed certification by completing a UST manufacturers check list, using an installer who is certified by the tank and piping manufacturers and certification of the installation by the Department. Since the Department now licenses UST installers we prefer that USTs be installed and certified by licensed installers. The other options are available to persons installing their own UST.

5. Require existing bare steel tanks to be upgraded by adding cathodic protection by December 22, 1998. This change affects only tanks that are upgraded by internal lining. Cathodic protection is needed in addition to the internal lining to inhibit external failure of the steel tank, thereby preventing releases from the UST.

6. Require installation of spill containment basins on all USTs by December 22, 1994 rather than December 22, 1998. Spills during filling of USTs are a major source of contamination. Spill containment basins are critical to protect human health and the environment.

7. Require Department approval of groundwater monitoring systems. Require that they be designed by a person especially qualified by education and experience in groundwater monitoring systems. The Department is concerned that improperly installed monitoring wells could create an open pathway for UST leaks to rapidly enter groundwater.

8. Require daily or continuous monitoring on groundwater and vapor monitoring leak detection systems or daily inventory control. Federal regulations allow monitoring once per month. Once per month monitoring is not protective of human health and the environment.

9. Require a site assessment during any UST closure. The federal regulations allow closure (decommissioning) without a site assessment where either soil vapor, groundwater or interstitial monitoring is used. The Department believes that soil or ground water sampling is needed to make certain that contamination does not exist.

10. Require notice three working days prior to starting physical work on UST closure. Advanced notice is needed to allow the Department's regional staff to arrange an inspection during decommissioning.

C. The Department has added provisions to the existing state underground storage tank rules, as follows.

1. Section 340-150-125: Allow a local unit of government responsible for a public water supply to petition the Commission for more stringent UST requirements. The Commission must determine that more stringent rules are required to protect the water supply. To date no local government has proposed a geographical rule. This rule was added to accommodate the future unknown ground water protection needs of local and state agencies.

2. Section 340-150-015: Allow delegation of program administration, in whole or part, to other state agencies or local government. The organization will apply for program delegation by providing a written

application that describes the breadth of the proposed administration, administration procedures, procedures to coordinate with the Department and the needed resources.

The proposed rules contain no provisions for passing on any part of the UST fee to local government. Only one governmental body (Clackamas county) has shown any interest in the program. The Commission may wish to pass on a portion of the Department's UST fee to encourage local programs. The 1989 Oregon legislature considered and rejected any authority for the Department to collect any additional fee to fund local programs.

3. Modify Section 340-150-150 to require sellers and distributors to maintain and make available to the Department a written record of the maximum capacity of each UST into which they have deposited a regulated substance. The Department is requiring the sellers to use product depth, before and after delivery, to calculate tank size. Some owners and operators of farm and residential UST's are attempting to avoid regulation by claiming the UST is smaller than 1101 gallons, and thereby, exempt from regulation.

These proposed changes to the interim UST rules will provide an UST program as envisioned by the Oregon legislature. Future rule adoption that will not affect program approval include the grant and loan programs and licensing of persons who perform remedial action at underground storage tank sites.

ALTERNATIVES CONSIDERED BY THE DEPARTMENT:

1. Do not adopt the federal regulations as state regulations.

The Department currently receives federal funding for both UST compliance activities and UST remedial action activities. This funding could be reduced or eliminated if a state program is not developed. Additionally, it is more efficient to operate a single program rather than both a state and federal UST program.

2. Delay adoption of the federal regulations as state regulations.

Federal funding for UST programs could be reduced or eliminated. The current grant from the EPA anticipated state rule adoption prior to July 1, 1990. It is more efficient to

operate a single program rather than both a state and federal UST program.

DEPARTMENT RECOMMENDATION FOR ACTION, WITH RATIONALE:

The Department recommends that the Commission:

1. Authorize the Department to proceed to hearing to take testimony on the proposed modified underground storage tank rules shown in Attachment A.

Rationale for this action is presented in the discussion of alternatives above.

CONSISTENCY WITH STRATEGIC PLAN, AGENCY POLICY, LEGISLATIVE POLICY:

The recommended action is consistent with legislative policy and with the agency's policy of seeking delegation of federal programs to the state.

ISSUES FOR COMMISSION TO RESOLVE:

1. The Commission may wish to pass on a portion of the permit fee to those governmental bodies that wish delegation of the UST program. The Department is not recommending this, however, since the existing fee revenue is just adequate over the next two to three years to support legislatively authorized positions. Even with some selected local programs the Department will retain primary responsibility for most tasks in the state.

2. As required by ORS 466.815 (6), prior to asking the Commission to adopt the financial responsibility portion of these rules, the Department will ask the appropriate legislative committee to review the financial responsibility rules.

INTENDED FOLLOWUP ACTIONS:

Proceed to give notice of hearing for permanent rule adoption.

Conduct rule hearings during April 1990.

Present the financial responsibility rules to an appropriate legislative committee prior to May 1, 1990.

Request adoption of the final rules at the May Environmental Quality Commission meeting.

Apply for federal authorization of Oregon's underground storage tank progam by July 1, 1990.

Approved:

Section: Richard P. Reiter

Division: Stephanie Hallock

Director: Tom Bispham for Fred Hansen

Report Prepared By: Larry Frost

Phone: 229-5769

Date Prepared: January 2, 1990

LDF:lf
STAFF011.US2
January 2, 1990

Attachment A
Agenda Item M
1-19-90 EQC Meeting

OREGON ADMINISTRATIVE RULES
CHAPTER 340, DIVISION 150 - DEPARTMENT OF ENVIRONMENTAL QUALITY

UNDERGROUND STORAGE TANK RULES
ORS 466.705 through 466.835 and ORS 466.895 through 466.995

OAR 340-150-001 is added in its entirety.

Purpose and Scope

340-150-001 (1) These rules are promulgated in accordance with and under the authority of ORS 466.705 through ORS 466.835 and ORS 466.895 through 466.995.

(2) The purpose of these rules is;

(a) to provide for the regulation of underground storage tanks to protect the public health, safety, welfare and the environment from the potential harmful effects of spills and releases from underground tanks used to store regulated substances, and

(b) to establish requirements for the prevention and reporting of releases and for taking corrective action to protect the public and the environment from releases from underground storage tanks.

(3) A secondary purpose is to obtain state program approval to manage underground storage tanks in Oregon in lieu of the federal program.

(4) Scope.

(a) OAR 340-150-002 incorporates, by reference, underground storage tank technical and financial responsibility regulations of the federal program, included in 40 CFR 280, Subparts A, B, C, D, E, F, G, and H. Persons must consult these Subparts of 40 CFR 280 to determine applicable underground storage tank requirements. Additionally, persons must consult OAR Chapter 340, Division 122 for the applicable release reporting and corrective action requirements for underground storage tanks containing petroleum.

(b) OAR 340-150-003 incorporates amendments to the underground storage tank technical and financial responsibility regulations of the federal program, included in 40 CFR 280, Subparts A, B, C, E, F, G, and H.

(c) OAR 340-150-010 through -150 establishes requirements for underground storage tank permits, notification requirements for persons who sell underground storage tanks, and persons who deposit or cause to have deposited a regulated substance into an underground storage tank.

OAR 340-150-002 is added in its entirety.

Adoption of United States Environmental Protection Agency Underground Storage Tank Regulations.

340-150-002 (1) Except as otherwise modified or specified by these rules, the rules and regulations governing the technical standards, corrective action, and financial responsibility requirements for owners and operators

of underground storage tanks, prescribed by the United States Environmental Protection Agency in Title 40 Code of Federal Regulations, Part 280, amendments thereto promulgated prior to May 1, 1990, and Oregon amendments listed in OAR 340-150-003 are adopted and prescribed by the Commission to be observed by all persons subject to ORS 466.705 through 466.835 and ORS 466.895 through 466.995.

OAR 340-150-003 is added in its entirety.

Oregon Rules Amending the United States Environmental Protection Agency Underground Storage Tank Regulations.

340-150-003 (1) In addition to the regulations and amendments promulgated prior to May 1, 1989, as described in 340-150-002 of these rules, the following rules amending Title 40 Code of Federal Regulations, Part 280 are adopted and prescribed by the Commission to be observed by all persons subject to ORS 466.705 through 466.835 and ORS 466.985 through 466.995.

(2) Unless otherwise indicated, the material enclosed in brackets [ ] is proposed to be deleted and material that is underlined is proposed to be added.

(3) 40 CFR 280.10(a) is amended as follows:

(a) The requirements of this Part apply to all owners and operators of an UST system as defined in 280.12 except as otherwise provided in paragraphs (b), (c), and (d) of this section. Any UST system listed in paragraph (c) of this section must meet the requirements of 280.11. Any UST system listed in paragraph (c)(5) of this section must meet the requirements of 280.22.

(4) 40 CFR 280.11(b) is amended as follows:

(b) Notwithstanding paragraph (a) of this section, an UST system without corrosion protection may be installed at a site that is determined by a corrosion expert and the implementing agency not to be corrosive enough to cause it to have a release due to corrosion during its operating life. Owners and operators must maintain records that demonstrate compliance with the requirements of this paragraph for the remaining life of the tank.

(5) 40 CFR 280.12 "Cathodic protection tester" is amended, as follows:

"Cathodic protection tester" means a person licensed as an Underground Storage Tank Supervisor of Cathodic Protection System Testing through meeting the requirements of OAR Chapter 340, Division 160 [who can demonstrate an understanding of the principles and measurements of all common types of cathodic protection systems as applied to buried or submerged metal piping and tank systems. At a minimum, such persons must have education and experience in soil resistivity, stray current, structure-to-soil potential, and component electrical isolation measurements of buried metal piping and tank systems].

(6) 40 CFR 280.12 "Implementing Agency" is amended, as follows:

"Implementing agency" means the Oregon Department of Environmental Quality [EPA, or, in the case of a state with a program approved under section 9004 (or pursuant to a memorandum of agreement with EPA), the designated state or local agency responsible for carrying out an approved UST program].

(7) 40 CFR 280.12 "Operator" is amended, as follows:

"Operator" means any person in control of, or having responsibility for, the daily operation of the UST system, including the permittee under a permit issued pursuant to OAR Chapter 340, Division 150.

(8) Amend 40 CFR 280.12 by deleting the definition "Owner" in it's entirety.

["Owner" means:
(a) in the case of an UST system in use on November 8, 1984, or brought into use after that date, any person who owns an UST system used for storage, use, or dispensing of regulated substances; and
(b) in the case of any UST system in use before November 8, 1984, but no longer in use on that date, any person who owned such UST immediately before the discontinuation of its use.]

(9) Amend 40 CFR 280.12 by deleting the definition "Release" in it's entirety.

["Release" means any spilling, leaking, emitting, discharging, escaping, leaching or disposing from an UST into ground water, surface water or subsurface soils.]

(10) 40 CFR 280.12 "Residential tank" is amended, as follows.

"Residential tank" is a tank located on property used primarily for single family dwelling purposes.

(11) 40 CFR 280.20(a)(2) is amended, as follows:

(2) The tank is constructed of steel and cathodically protected in the following manner:
Note: Each cathodic protection system shall include a permanently installed reference cell and a cathodic protection test station with clearly identified wiring terminals for the reference cell, the anode and the cathode (e.g. the protected tank or piping). The test station shall be arranged to allow separate electrical testing of the reference cell, the anode and the cathode.

(12) 40 CFR 280.20(a)(4)(i) is amended, as follows:

(i) The tank is installed at a site that is determined by a corrosion expert and the implementing agency not to be corrosive enough to cause it to have a release due to corrosion during its operating life; and

Note: For the purpose of complying with Paragraph 280.20(a)(4)(i), approval by the Department shall be given after reviewing the data and information submitted by the corrosion expert and a finding that the corrosion experts determination is justified.

(13) 40 CFR 280.20(a)(5) is amended, as follows:

(5) The tank construction and corrosion protection are determined by the implementing agency to be designed to prevent the release or threatened release of any stored regulated substance in a manner that is no less protective of human health and the environment than paragraphs (a)(1) through (4) of this section.

Note: For the purpose of complying with Paragraph 280.20(a)(5), approval by the Department shall be given after reviewing the data and information submitted by a corrosion expert and a finding that the corrosion experts determination is justified.

(14) 40 CFR 280.20(b)(3)(i) is amended, as follows:

(i) The piping is installed at a site that is determined by a corrosion expert and the implementing agency to not be corrosive enough to cause it to have a release due to corrosion during its operating life; and

Note: For the purpose of complying with Paragraph 280.20(b)(3)(i), approval by the Department shall be given after reviewing the data and information submitted by the corrosion expert and a finding that the corrosion experts determination is justified.

(15) 40 CFR 280.20(b)(4) is amended, as follows:

(4) The piping construction and corrosion protection are determined by the implementing agency to be designed to prevent the release or threatened release of any stored regulated substance in a manner that is no less protective of human health and the environment than the requirements in paragraphs (b)(1) through (3) of this section.

Note: For the purpose of complying with Paragraph 280.20(b)(4), approval by the Department shall be given after reviewing the data and information submitted by a corrosion expert and a finding that the corrosion experts determination is justified.

(16) 40 CFR 280.20(c)(2)(i) is amended, as follows:

(i) Alternative equipment is used that is determined by the implementing agency to be no less protective of human health and the environment than the equipment specified in paragraph (c)(1)(i) or (ii) of this section; or

Note: For the purpose of complying with Paragraph 280.20(c)(2)(i), approval by the Department shall be given after reviewing the data and

information submitted by a corrosion expert and a finding that the corrosion experts determination is justified.

(17) 40 CFR 280.20(e) is amended, as follows:

(e) Certification of installation. All owners and operators must ensure that one or more of the following methods of certification, testing, or inspection is used to demonstrate compliance with paragraph (d) of this section by providing a certification of compliance on the UST notification form in accordance with § 280.22.

[(1) The installer has been certified by the tank and piping manufacturers; or]

([2]1) The installer has been [certified or] licensed by the implementing agency; or

([3]2) The installation has been inspected and certified by a registered professional engineer with education and experience in UST system installation; or

[(4) The installation has been inspected and approved by the implementing agency; or

(5) All work listed in the manufacturer's installation checklists has been completed; or]

([6]3) The owner and operator have complied with another method for ensuring compliance with paragraph (d) of this section that is determined by the implementing agency to be no less protective of human health and the environment.

(18) 40 CFR 280.21(b)(1) is amended, as follows:

(1) Interior lining. A tank may be upgraded by internal lining if:

(i) The lining is installed in accordance with the requirements of § 280.33, and

(ii) [Within 10 years after lining, and every 5 years thereafter, the lined tank is internally inspected and found to be structurally sound with the lining still performing in accordance with original design specifications] Not later than December 22, 1998, the tank is upgraded by cathodic protection where the cathodic protection system meets the requirements of § 280.20(a)(2)(ii),(iii), and (iv).

(19) 40 CFR 280.21(d) is amended, as follows:

(d) [Spill and o]Overfill prevention equipment. To prevent [spilling and] overfilling associated with product transfer to the UST system, all existing UST systems must comply with new UST system [spill and] overfill prevention equipment requirements specified in § 280.20(c).

(20) Amend 40 CFR 280.21 by adding new subpart (e), as follows:

(e) Spill prevention equipment. To prevent spilling associated with product transfer to the UST system, all existing UST systems must comply with new UST system spill prevention equipment requirements specified in § 280.20(c) before December 22, 1994.

(21) 40 CFR 280.22(a) is amended, as follows:

(a) Any owner who brings an underground storage tank system into use after May 8, 1986, must [within] 30 days [of] prior to installing, closing, using, or bringing such tank into use, submit, in the form prescribed in Sections I through VI of Appendix I of this Part (or appropriate state form), a notice of existence of such tank system to the state or local agency or department designated in Appendix II of this Part to receive such notice.

(22) 40 CFR 280.22(d) is amended, as follows:

(d) Notices required to be submitted under paragraph (a) of this section must provide all of the information in Sections I through VI of the prescribed form (or appropriate state form) for each tank for which notice must be given. Notices for tanks installed after December 22, 1988 must, within 30 days after bringing such tank into use, also provide all of the information in Section VII of the prescribed form (or appropriate state form) for each tank for which notice must be given.

(23) 40 CFR 280.41(a) is amended, as follows:

(a) Tanks. Tanks must be monitored at least every 30 days for releases using one of the methods listed in § 280.43 (d) or must be monitored daily for releases using one of the methods listed in § 280.43 (e) through (h) except that:

(24) 40 CFR 280.41(b)(ii) is amended, as follows:

(ii) Have an annual line tightness test conducted in accordance with § 280.44(b) or have daily[monthly] monitoring conducted in accordance with § 280.44(c).

(25) Amend 40 CFR 280.43 by adding a new paragraph (f)(9), as follows:

(9) The ground water monitoring system is determined by the implementing agency to be designed so that the risk to human health and the environment is not increased.

Note: For the purpose of complying with the requirements of this section, approval by the implementing agency shall be given after reviewing the data and design information submitted by a person especially qualified by education and experience to design release detection systems and a finding that the leak detection system is designed so that the risk to human health and the environment is not increased.

(26) 40 CFR 280 Subpart F is amended, as follows:

Subpart F--Release Response and Corrective Action for UST Systems Containing [Petroleum or] Hazardous Substances

(27) 40 CFR 280.60 is amended, as follows:

§ 280.60 General.

Owners and operators or responsible persons of hazardous substance UST systems must, in response to a confirmed release from the UST system, comply with the requirements of this subpart except for USTs excluded under § 280.10(b), where UST systems contain petroleum, and UST systems subject to RCRA Subtitle C corrective action requirements under section 3004(u) of the Resource Conservation and Recovery Act, as amended.

Note: Release Response and Corrective Action for UST Systems Containing Petroleum must meet the requirements of OAR Chapter 340 Division 122.

(28) 40 CFR 280.61(a) is amended, as follows:

(a) Report the release to the implementing agency (e.g., by telephone or electronic mail);

(1) All below-ground releases from the UST system in any quantity;

(2) All above-ground releases to land from the UST system in excess of reportable quantities as defined in OAR Chapter 340, Division 108, if the owner and operator or responsible person is unable to contain or clean up the release within 24 hours; and

(3) All above-ground releases to water.

(29) 40 CFR 280.62(a) is amended, as follows:

(a) Unless directed to do otherwise by the implementing agency, owners and operators or responsible persons must perform the following abatement measures:

(30) 40 CFR 280.62(a)(4) is amended, as follows:

(4) Remedy hazards posed by contaminated soils that are excavated or exposed as a result of release confirmation, site investigation, abatement, or corrective action activities. If these remedies include treatment or disposal of soils, the owner and operator or responsible person must comply with applicable state and local requirements;

(31) 40 CFR 280.62(b) is amended, as follows:

(b) Within 20 days after release confirmation, or within another reasonable period of time determined by the implementing agency, owners and operators or responsible persons must submit a report to the implementing agency summarizing the initial abatement steps taken under paragraph (a) of this section and any resulting information or data.

(32) Amend 40 CFR 280.62 by adding a new paragraph (c), as follows:

(c) The owner and operator, or responsible person shall provide any additional information beyond that required under paragraph (b) of this section, as requested by the implementing agency.

(33) 40 CFR 280.63(a)(4) is amended, as follows:

(4) Results of the free product investigations required under § 280.62(a)(6), to be used by owners and operators or responsible persons to determine whether free product must be recovered under § 280.64.

(34) 40 CFR 280.64 Free Product Removal is amended, as follows:

§ 280.64 Free product removal.

At sites where investigations under § 280.62(a)(6) indicate the presence of free product, owners and operators or responsible persons must remove free product to the maximum extent practicable as determined by the implementing agency while continuing, as necessary, any actions initiated under §§ 280.61 through 280.63, or preparing for actions required under §§ 280.65 through 280.66. In meeting the requirements of this section, owners and operators or responsible persons must:

(35) 40 CFR 280.64(d) is amended, as follows:

(d) Unless directed to do otherwise by the implementing agency, prepare and submit to the implementing agency, within 45 days after confirming a release, a free product removal report that provides at least the following information:

(1) The name of the person(s) responsible for implementing the free product removal measures;

(2) The estimated quantity, type, and thickness of free product observed or measured in wells, boreholes, and excavations;

(3) The type of free product recovery system used;

(4) Whether any discharge will take place on-site or off-site during the recovery operation and where this discharge will be located;

(5) The type of treatment applied to, and the effluent quality expected from, any discharge;

(6) The steps that have been or are being taken to obtain necessary permits for any discharge;[and]

(7) The disposition of the recovered free product[.]; and

(8) Other matters deemed appropriate by the implementing agency.

(36) 40 CFR 280.65 is amended as follows:

§ 280.65 Corrective Action. [Investigations for soil and ground-water cleanup.]

(a) Corrective action for cleanup of releases from underground storage tanks containing regulated substances other than petroleum shall meet the requirements of OAR 340-122-010 through 340-122-110. [In order

to determine the full extent and location of soils contaminated by the release and the presence and concentrations of dissolved product contamination in the ground water, owners and operators must conduct investigations of the release, the release site, and the surrounding area possibly affected by the release if any of the following conditions exist:

(1) There is evidence that ground-water wells have been affected by the release (e.g., as found during release confirmation or previous corrective action measures);

(2) Free product is found to need recovery in compliance with § 280.64;

(3) There is evidence that contaminated soils may be in contact with ground water (e.g., as found during conduct of the initial response measures or investigations required under §§ 280.60 through 280.64); and

(4) The implementing agency requests an investigation, based on the potential effects of contaminated soil or ground water on nearby surface water and ground-water resources.

(b) Owners and operators must submit the information collected under paragraph (a) of this section as soon as practicable or in accordance with a schedule established by the implementing agency.]

(37) 40 CFR 280.66 is amended by deleting it in it's entirety.

Note: OAR 340-122-010 through 340-122-110 contains equivalent requirements.

(38) 40 CFR 280.67 is amended by deleting it in it's entirety.

Note: OAR 340-122-010 through 340-122-110 contains equivalent requirements.

(39) 40 CFR 280.71(a) is amended, as follows:

(a) At least 30 days before beginning either permanent closure or a change-in-service under paragraphs (b) and (c) of this section, or within another reasonable time period determined by the implementing agency, owners and operators must notify the implementing agency on a form provided by the implementing agency of their intent to permanently close or make the change-in-service, UNLESS such action is in response to corrective action. Unless the implementing agency agrees to waive the requirement , at least 3 working days before beginning this permanent closure, owners and operators or the licensed service provider performing the work must notify the implementing agency of the confirmed date and time the closure will begin to allow observation of the closure by the implementing agency. The required assessment of the excavation zone under § 280.72 must be performed after notifying the implementing agency but before completion of the permanent closure or a change-in-service.

(40) 40 CFR 280.71(b) is amended, as follows:

(b) To permanently close a tank, owners and operators must empty and clean it by removing all liquids and accumulated sludges. Dispose of

all liquids and accumulated sludges by recycling or dispose in a manner approved by the implementing agency prior to disposal. All tanks taken out of service permanently must also be either removed from the ground or filled it with an inert solid material. Tanks removed from the ground must be disposed of in a manner approved by the implementing agency. The owner and operator shall document the disposal method and disposal location for all liquids, sludges and UST system components including tanks, piping and equipment.

(41) 40 CFR 280.71(c) is amended, as follows:

(c) Continued use of an UST system to store a non-regulated substance is considered a change-in-service. Before a change-in-service, owners and operators must empty and clean the tank by removing all liquid and accumulated sludge and conduct a site assessment in accordance with § 280.72.

Note: The following cleaning and closure procedures shall [may] be used to comply with this section unless the implementing agency has approved alternate procedures and determined these alternate procedures are designed to be no less protective of human health, human safety and the environment:

(A) American Petroleum Institute Recommended Practice 1604, "Removal and Disposal of Used Underground Petroleum Storage Tanks";
(B) American Petroleum Institute Publication 2015, "Cleaning Petroleum Storage Tanks";
(C) American Petroleum Institute Recommended Practice 1631, "Interior Lining of Underground Storage Tanks," may be used as guidance for compliance with this section; and
(D) The National Institute for Occupational Safety and Health "Criteria for a Recommended Standard...Working in Confined Space" may be used as guidance for conducting safe closure procedures at some hazardous substance tanks.

(41) Amend 40 CFR 280.72 by adding a new subpart (d), as follows.

(d) If contaminated soil, contaminated ground water, or free product as a liquid or vapor is discovered during the measurement for the presence of a release the owner or operator must notify the implementing agency and meet the requirement of Subparts E and F.

(42) 40 CFR 280.72(a) is amended, as follows:

(a) Before permanent closure or a change-in-service is completed, owners and operators must measure for the presence of a release where contamination is most likely to be present at the UST site. In selecting sample types, sample locations, and measurement methods, owners and operators must consider the method of closure, the nature of the stored substance, the type of backfill, the depth to ground water, and other factors appropriate for identifying the presence of a release. For USTs containing petroleum, the owner and operator shall measure for the presence of a release by following the sampling and analytical procedures

specified in OAR Chapter 340 Division 122. A petroleum release shall be considered to have occurred if the contaminant levels are found to exceed the levels specified in OAR Chapter 340 Division 122. For USTs containing regulated substances other than petroleum, the owner and operator shall submit a sampling plan to the implementing agency for its approval. [The requirements of this section are satisfied if one of the external release detection methods allowed in § 280.43(e) and (f) is operating in accordance with the requirements in § 280.43 at the time of closure, and indicates no release has occurred.]

(43) 40 CFR 280 Appendix II is amended, as follows:

APPENDIX II - LIST OF AGENCIES DESIGNATED TO RECEIVE NOTIFICATIONS

[Alabama (EPA Form)
Alabama Department of Environmental Management
Ground Water Section/Water Division
1751 Congressman W.L. Dickinson Drive
Montgomery, Alabama 36130
205/271-7823

Alaska (EPA Form)
Department of Environmental Conservation
Box O
Juneau, Alaska 99811-1800
970/465-2653

American Samoa (EPA Form)
Executive Secretary
Environmental Quality Commission
Office of the Governor
American Samoan Government
Pago Pago, American Samoa 96799
Attention: UST Notification

Arizona (EPA Form)
Attention: UST Coordinator
Arizona Department of Environmental Quality
Environmental Health Services
2005 N. Central
Phoenix, Arizona 85004

Arkansas (EPA Form)
Arkansas Department of Pollution Control and Ecology
P.O. Box 9583
Little Rock, Arkansas 72219
501/562-7444

California (State Form)
Executive Director
State Water Resources Control Board
P.O. Box 100
Sacramento, California 95801

916/445-1533

Colorado (EPA Form)
Section Chief
Colorado Department of Health
Waste Management Division
Underground Tank Program
4210 East 11th Avenue
Denver, Colorado 80220
303/320-8333

Connecticut (State Form)
Hazardous Materials Management Unit
Department of Environmental Protection
State Office Building
165 Capitol Avenue
Hartford, Connecticut 06106

Delaware (State Form)
Division of Air and Waste Management
Department of Natural Resources and Environmental Control
P.O. Box 1401
89 Kings Highway
Dover, Delaware 19903
302/726-5409

District of Columbia (EPA Form)
Attention: UST Notification Form
Department of Consumer and Regulatory Affairs
Pesticides and Hazardous Waste Management Branch
Room 114
5010 Overlook Avenue, SW
Washington, D.C. 20032

Florida (State Form)
Florida Department of Environmental Regulation
Solid Waste Section
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399
904/487-4398

Georgia (EPA Form)
Georgia Department of Natural Resources
Environmental Protection Division
Underground Storage Tank Program
3420 Norman Berry Drive, 7th Floor
Hapeville, Georgia 30354
404/656-7404

Guam (State Form)
Administrator
Guam Environmental Protection Agency

P.O. Box 2999
Agana, Guam 96910
Overseas Operator (Commercial call 646-8863)

Hawaii (EPA Form)
Administrator, Hazardous Waste Program
645 Halekauwila Street
Honolulu, Hawaii 96813
808/548-2270

Idaho (EPA Form)
Underground Storage Tank Coordinator
Water Quality Bureau
Division of Environmental Quality
Idaho Department of Health and Welfare
450 W. State Street
Boise, Idaho 83720
208/334-4251

Illinois (EPA Form)
Underground Storage Tank Coordinator
Division of Fire Prevention
Office of State Fire Marshal
3150 Executive Park Drive
Springfield, Illinois 62703-4599

Indiana (EPA Form)
Underground Storage Tank Program
Office of Environmental Response
Indiana Department of Environmental Management
105 South Meridian Street
Indianapolis, Indiana 46225

Iowa (State Form)
UST Coordinator
Iowa Department of Natural Resources
Henry A. Wallace Building
900 East Grand
Des Moines, Iowa 50219
512/281-8135

Kansas (EPA Form)
Kansas Department of Health and Environment
Forbes Field, Building 740
Topeka, Kansas 66620
913/296-1594

Kentucky (State Form)
Department for Environmental Protection, Hazardous Waste Branch
Fort Boone Plaza, Building #2
18 Reilly Road
Frankfort, Kentucky 40601
501/564-6716

Louisiana (State Form)
Secretary, Louisiana Department of Environmental Quality
P.O. Box 44066
Baton Rouge, Louisiana 70804
501/342-1265

Maine (State Form)
Attention: Underground Tanks Program
Bureau of Oil and Hazardous Material Control
Department of Environmental Protection
State House - Station 17
Augusta, Maine 04333

Maryland (EPA Form)
Science and Health Advisory Group
Office of Environmental Programs
201 West Preston Street
Baltimore, Maryland 21201

Massachusetts (EPA Form)
UST Registry, Department of Public Safety
1010 Commonwealth Avenue
Boston, Massachusetts 02215
617/566-4500

Michigan (EPA Form)
Michigan Department of State Police, Fire Marshal Division
General Office Building
7150 Harris Drive
Lansing, Michigan 48913

Minnesota (State Form)
Underground Storage Tank Program
Division of Solid and Hazardous Wastes
Minnesota Pollution Control Agency
520 West Lafayette Road
St. Paul, Minnesota 55155

Mississippi (State Form)
Department of Natural Resources, Bureau of Pollution Control
Underground Storage Tank Section
P.O. Box 10385
Jackson, Mississippi 39209
601/961-5171

Missouri (EPA Form)
UST Coordinator
Missouri Department of Natural Resources
P.O. Box 176
Jefferson City, Missouri 65102
314/751-7428

Montana (EPA Form)
Solid and Hazardous Waste Bureau
Department of Health and Environmental Science
Cogswell Bldg. - Room B-201
Helena, Montana 59620

Nebraska (EPA Form)
Nebraska State Fire Marshal
P.O. Box 94677
Lincoln, Nebraska 68509-4677
402/471-9465

Nevada (EPA Form)
Attention: UST Coordinator
Division of Environmental Protection
Department of Conservation and Natural Resources
Capitol Complex 201 S. Fall Street
Carson City, Nevada 89710
800/992-0900, Ext. 4670
702/885-4670

New Hampshire (EPA Form)
NH Dept. of Environmental Services
Water Supply and Pollution Control Division
Hazen Drive
P.O. Box 95
Concord, New Hampshire 03301
Attention: UST Registration

New Jersey (State Form)
Underground Storage Tank Coordinator
Department of Environmental Protection
Division of Water Resources (CN-029)
Trenton, New Jersey 08625
609/292-0424

New Mexico (EPA Form)
New Mexico Environmental Improvement Division
Groundwater/Hazardous Waste Bureau
P.O. Box 968
Santa Fe, New Mexico 87504
505/827-2933

New York (EPA Form)
Bulk Storage Section, Division of Water
Department of Environmental Conservation
50 Wolf Road, Room 326
Albany, New York 12233-0001
518/457-4351

North Carolina (EPA Form)
Division of Environmental Management

Ground-Water Operations Branch
Department of Natural Resources and Community Development
P.O. Box 27687
Raleigh, North Carolina 27611
919/733-3221

North Dakota (State Form)
Division of Hazardous Management and Special Studies
North Dakota Department of Health
Box 5520
Bismarck, North Dakota 58502-5520

Northern Mariana Islands (EPA Form)
Chief, Division of Environmental Quality
P.O. Box 1304
Commonwealth of Northern Mariana Islands
Saipan, CM 96950
Cable Address: Gov. NMI Saipan
Overseas Operator: 6984

Ohio (State Form)
State Fire Marshal's Office
Department of Commerce
8895 E. Main Street
Reynoldsburg, Ohio 43068
State Hotline: 800/282-1927

Oklahoma (EPA Form)
Underground Storage Tank Program, Oklahoma Corporation Comm.
Jim Thorpe Building
Oklahoma City, Oklahoma 73105]

Oregon (State Form)
Underground Storage Tank Program
Hazardous and Solid Waste Division
Department of Environmental Quality
811 S.W. Sixth Avenue
Portland, Oregon 98204
503/229-5788

Report Releases to:
1-800-452-0311 or
1-800-452-4011

[Pennsylvania (EPA Form)
PA Department of Environmental Resources
Bureau of Water Quality Management
Ground Water Unit
9th Floor Fulton Building
P.O. Box 2063
Harrisburg, Pennsylvania 17120

Puerto Rico (EPA Form)

Director, Water Quality Control Area
Environmental Quality Board
Commonwealth of Puerto Rico
Santurce, Puerto Rico
809/725-0717

Rhode Island (EPA Form)
UST Registration, Department of Environmental Management
83 Park Street
Providence, Rhode Island 02903
401/277-2234

South Carolina (State Form)
Ground-Water Protection Division
South Carolina Department of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201
803/758-5213

South Dakota (EPA Form)
Office of Water Quality
Department of Water and Natural Resources
Joe Foss Building
Pierre, South Dakota 57501

Tennessee (EPA Form)
Tennessee Department of Health and Environment
Division of Superfund Underground Storage Tank Section
150 Ninth Avenue, North
Nashville, Tennessee 37219-5404
615/741-0690

Texas (EPA Form)
Underground Storage Tank Program
Texas Water Commission
P.O. Box 13087
Austin, Texas 78711

Utah (EPA Form)
Division of Environmental Health
P.O. Box 45500
Salt Lake City, Utah 84145-0500

Vermont (State Form)
Underground Storage Tank Program
Vermont AEC/Waste Management Division
State Office Building
Montpelier, Vermont 05602
802/828-3395

Virginia (EPA Form)
Virginia Water Control Board
P.O. Box 11143

Richmond, Virginia 23230-1143
804/257-6685

Virgin Islands (EPA Form)
205(J) Coordinator
Division of Natural Resources Management
14 F Building 111, Watergut Homes
Christianstead, St. Croix, Virgin Islands 00820

Washington (State Form)
Underground Storage Tank Notification
Solid and Hazardous Waste Program
Department of Ecology, M/S PV-11
Olympia, Washington 98504-8711
206/459-6316

West Virginia (EPA Form)
Attention: UST Notification
Solid and Hazadous Waste, Ground Water Branch
West Virginia Department of Natural Resources
1201 Greenbriar Street
Charleston, West Virginia 25311

Wisconsin (State Form)
Bureau of Petroleum Inspection
P.O. Box 7969
Madison, Wisconsin 53707
608/266-7605

Wyoming (EPA Form)
Water Quality Division
Department of Environmental Quality
Herschler Building, 4th Floor West
122 West 25th Street
Cheyenne, Wyoming 82002
307/777-7781]

Definitions

340-150-010 (1) The definitions of terms contained in this rule modify, or are in addition to, the definitions contained in 40 CFR 280.12 and 40 CFR 280.92.

(2) "Cleanup" or "cleanup activity" has the same meaning as "corrective action" as defined in ORS 466.705 or "remedial action" as defined in ORS 465.200.

([1]3) "Corrective Action" means remedial action taken to protect the present or future public health, safety, welfare or the environment from a release of a regulated substance. "Corrective Action" includes but is not limited to:

(a) The prevention, elimination, removal, abatement, control, investigation, assessment, evaluation or monitoring of a hazard or potential hazard or threat, including migration of a regulated substance; or

(b) Transportation, storage, treatment or disposal of a regulated substance or contaminated material from a site.

([2]4) "Decommission" means temporary or permanent closure, to remove from operation an underground storage tank, including temporary or permanent removal from operation, abandonment in place or removal from the ground.

(5) "Department" means the Oregon Department of Environmental Quality.

(6) "Director" means the Director of the Oregon Department of Environmental Quality or the Director's authorized representative.

([3]7) "Fee" means a fixed charge or service charge.

([4]8) "Investigation" means monitoring, surveying, testing or other information gathering.

(9) "OAR" means Oregon Administrative Rule.

(10) "ORS" means Oregon Revised Statute.

[(5) "Oil" means gasoline, crude oil, fuel oil, diesel oil, lubrication oil, sludge, oil refuse and any other petroleum related product or fraction thereof that is liquid at a temperature of 60 degrees Fahrenheit and a pressure of 14.7 pounds per square inch absolute.]

(11) "Owner" means the owner of an underground storage tank.

([7]12) "Permittee" means the owner or a person designated by the owner who is in control of or has responsibility for the daily operation or daily maintenance of an underground storage tank under a permit issued pursuant to these rules.

[(8) "Person" means an individual, trust, firm, joint stock company, corporation, partnership, joint venture, consortium, association, state, municipality, commission, political subdivision of a state or any interstate body, any commercial entity and the Federal Government or any agency of the Federal Government.]

[(9) "Regulated substance" means:

(a) Any substance listed by the United States Environmental Protection Agency in 40 CFR Table 302.4 as amended as of the date October 1, 1987, but not including any substance regulated as a hazardous waste under 40 CFR Part 261 and OAR 340 Division 101, or

(b) Oil.]

([10]13) "Release" means the discharge, deposit, injection, dumping, spilling, emitting, leaking or placing of a regulated substance from an underground storage tank into the air or into or on land or the waters of the state, other than as authorized by a permit issued under state or federal law.

(14) "Responsible person" means any person ordered or authorized to undertake remedial actions or related activities under ORS 465.200 through ORS 465.380.

([11]15) "Underground storage tank" or "UST" means "Underground storage tank", as defined in 40 CFR 280.12 [any one or combination of tanks (including underground pipes connected thereto) that is used to contain an accumulation of a regulated substance, and the volume of which (including the volume of the underground pipes connected thereto is 10 percent or more beneath the surface of the ground. Such term does not include any:

(a) Farm or residential tank of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes;

(b) Tank used for storing heating oil for consumptive use on the premises where stored;

(c) Septic tank;

(d) Pipeline facility (including gathering lines) regulated under:
(A) Under the Natural Gas Pipeline Safety Act of 1968 (49 U.S.C. 1671, et seq.);
(B) Under the Hazardous Liquid Pipeline Safety Act of 1979 (49 U.S.C. 2001, et seq.); or
(C) As an intrastate pipeline facility regulated under state laws comparable to the provisions of law referred to in paragraph (A) or (B) of this subsection;
(e) Surface impoundment, pit, pond or lagoon;
(f) Storm water or waste water collection system;
(g) Flow-through process tank;
(h) Liquid trap or associated gathering lines directly related to oil or gas production and gathering operations; or
(i) Storage tank situated in an underground area if the storage tank is situated upon or above the surface of a floor. As used in this subsection. "underground area" includes but is not limited to a basement, cellar, mine, drift, shaft or tunnel.
(j) Pipe connected to any tank described in subsections (a) to (i) of this section.]
([12]16) "Seller" or "Distributor" means person who is engaged in the business of selling regulated substances to the owner or permittee of an underground storage tank.

Exempted Tanks

340-150-015 (1) The following regulated underground storage tanks are exempt from the requirements of these rules:
(a) [Any UST system holding hazardous wastes listed or identified under Subtitle C of the Solid Waste Disposal Act, or a mixture of such hazardous waste and other regulated substances;
(b) Any wastewater treatment tank system that is part of a wastewater treatment facility regulated under section 402 or 307(b) of the Clean Water Act;
(c) Equipment or machinery that contains regulated substances for operational purposes such as hydraulic lift tanks and electrical equipment tanks;
(d) Any UST system whose capacity is 110 gallons or less;
(e) Any UST system that contains a de minimus concentration of regulated substances;
(f) Any emergency spill or overflow containment UST system that is expeditiously emptied after use;
(g) Pipes connected to any tank described in subsections (a) to (f) of this section.

Note:] The exempt underground storage tanks [defined by this section]are the [same]underground storage tanks defined by 40 CFR 280.10, Paragraph (b).

Underground Storage Tank Permit Required

340-150-020 (1) After February 1, 1989, no person shall install, bring into operation, operate or decommission an underground storage tank without first obtaining an underground storage tank permit from the department.

(2) Permits issued by the department will specify those activities and operations which are permitted as well as requirements, limitations and conditions which must be met.

(3) A new application must be filed with the department to obtain modification of a permit.

(4) After February 1, 1989, permits are issued to the person designated as the permittee for the activities and operations of record and shall be automatically terminated:

(a) Within 120 days after any change of ownership of property in which the tank is located, ownership of tank or permittee unless a new underground storage tank permit application is submitted in accordance with these rules;

(b) Within 120 days after a change in the nature of activities and operations from those of record in the last application unless a new underground storage tank permit application is submitted in accordance with these rules;

(c) Upon issuance of a new or modified permit for the same operation;

(5) The department may issue a temporary permit pending adoption of additional Federal underground storage tank technical standards.

(6) The permit conditions may be modified when the Commission adopts new rules.

Underground Storage Tank Permit Application Required

340-150-030 (1) On or before May 1, 1988 the following persons shall apply for an underground storage tank permit from the department.

(a) An owner of an underground storage tank currently in operation;

(b) An owner of an underground storage tank taken out of operation between January 1, 1974, and May 1, 1988 and not permanently decommissioned in accordance with Section 340-150-130; and

(c) An owner of an underground storage tank that was taken out of operation before January 1, 1974, but that still contains a regulated substance.

(2) After May 1, 1988 the owner of an underground storage tank shall apply for an underground storage tank permit from the department prior to installation of the tank, placing an existing underground storage tank in operation, or modifying an existing permit.

Underground Storage Tank Permit Application

340-150-040 (1) Any person wishing to obtain a new, modified, or renewal permit from the department shall submit a written application on a form provided by the department. Applications must be submitted at least 30 days before a permit is needed. All application forms must be completed in full, and accompanied by the specified number of copies of all required exhibits.

(2) Applications which are obviously incomplete, unsigned, or which do not contain the required exhibits (clearly identified) will not be accepted by the department for filing and will be returned to the applicant for completion.

(3) Applications which appear complete will be accepted by the department for filing.

(4) Within 30 days after filing, the department will review the application to determine the completeness of the application:

(a) If the application is complete for processing, an underground storage tank permit will be issued.

(b) If the department determines that the application is not complete, it will promptly request the needed information from the applicant. The application will not be considered complete for processing until the requested information is received. The application will be considered to be withdrawn if the applicant fails to submit the requested information within 90 days of the request.

(5) In the event the department is unable to complete action on an application within 30 days after the application is accepted by the department for filing, the applicant shall be deemed to have received a temporary or conditional permit, such permit to expire upon final action by the department to grant an underground storage tank permit. Such temporary or conditional permit does not authorize any construction, activity, operation, or discharge which will violate any of the laws, rules, or regulations of the State of Oregon or the Department of Environmental Quality.

(6) If, upon review of an application, the department determines that a permit is not required, the department shall notify the applicant in writing of this determination. Such notification shall constitute final action by the department on the application.

(7) Following determination that it is complete for processing, each application will be reviewed on its own merits. Recommendations will be developed in accordance with the provisions of applicable statutes, rules and regulations of the State of Oregon and the Department of Environmental Quality.

(8) If the applicant is dissatisfied with the conditions or limitations of any permit issued by the department, the applicant may request a hearing before the Commission or its authorized representative. Such a request for hearing shall be made in writing to the Director within 20 days of the date of mailing of the notification of issuance of the permit. Any hearing held shall be conducted pursuant to the regulations of the department.

Information Required on the Permit Application

340-150-050 (1) The underground storage tank permit application shall include:

(a) The name and mailing address of the owner of the underground storage tank.

(b) The name and mailing address of the owner of the real property in which the underground storage tank is located.

(c) The name and mailing address of the proposed permittee of the underground storage tank.

(d) The signatures of the owner of the underground storage tank, the owner of the real property and the proposed permittee.

(e) The facility name and location.

(f) The substance currently stored, to be stored or last stored.

(g) The operating status of the tank.

(h) The estimated age of the tank.

(i) Description of the tank, including tank design and construction materials.

(j) Description of piping, including piping design and construction materials.

(k) History of tank system repairs.
(l) Type of leak detection and overfill protection.
(m) Any other information that may be necessary to protect public health, safety, or the environment.
(n) The federal notification form, Sections I through VI of Appendix I of 40 CFR 280 (or appropriate state form).

Authorized Signatures, Permit Application

340-150-060 (1) The following persons must sign an application for a permit submitted to the department.
(a) The owner of an underground storage tank storing a regulated substance;
(b) The owner of the real property in which an underground storage tank is located; and
(c) The proposed permittee, if a person other than the owner of the underground storage tank or the owner of the real property.

Underground Storage Tank Permit Application Fee

340-150-070 (1) A permit application fee of $25 shall accompany each underground storage tank application. For applications received after February 1, 1989, the permit application fee will also be considered the first compliance fee required by OAR 340-150-110.
(2) No permit application fee is required if application is solely for the purpose of recording a change in ownership of the underground storage tank, ownership of the real property, of the permittee, or a change in operation of the underground storage tank.

Denial of Underground Storage Tank Permit

340-150-080 (1) An underground storage tank permit application may be denied if the underground storage tank installation or operation is not in conformance with these underground storage tank rules or ORS 466.705 through 466.835 and ORS 466.895 through ORS 466.995.
(2) An underground storage tank permit may be denied if the underground storage tank permit application is not complete or is determined to be inaccurate.

Revocation of Underground Storage Tank Permit

340-150-090 An underground storage tank permit may be revoked if the underground storage tank installation or operation is not in conformance with the underground storage tank permit, these underground tank rules or ORS 466.705 through ORS 466.835 and ORS 466.895 ORS 466.995.

Permit Procedures for Denial and Revocation.

340-150-100 The permit procedures for denial and suspension or revocation (OAR 340-14-035 and OAR 340-14-045) shall apply to permits issued under this section.

Underground Storage Tank Permit Compliance Fee

340-150-110 (1) Beginning March 1, 1989, and annually thereafter, the permittee shall pay an underground storage tank permit compliance fee of $25 per tank per year.

(2) The underground storage tank permit compliance fee shall be paid for each calendar year (January 1 though December 30) or part of a calendar year that an underground storage tank is in operation.

(3) The compliance fee shall be made payable to the Department of Environmental Quality.

Add OAR 340-150-015

Delegation of Program Administration

340-150-015 (1) Any agency of this state or a local unit of government wishing to administer all or part of the underground storage tank program covered by these rules shall submit a written application describing the program they wish to administer in lieu of the Department's underground storage tank program. The application shall contain the following:

(a) A description in narrative form of the scope, structure, coverage and procedures of the proposed program.

(b) A description, including organization charts, of the organization and structure of applicant, including:

(A) The number of employees, occupation and general duties of each employee who will carry out the activities of the program;

(B) An itemized estimate of the cost of establishing and administering the program, including the cost of personnel listed in subparagraph (A) of this section and administrative and technical support;

(C) An itemization of the source and amount of funding available to meet the costs listed in subparagraph (B) of this section, including any restrictions or limitations upon this funding;

(D) A description of applicable procedures, including permit procedures;

(E) Copies of the permit form, application form and reporting form that will be used in the program;

(F) A complete description of the methods to be used to assure compliance and for enforcement of the program;

(G) A description of the procedures to be used to coordinate information with the Department, including the frequency of reporting and report content; and

(H) A description of the procedures the applicant will use to comply with trade secret laws under ORS 192.500 and ORS 468.910.

(2) Within 30 days after receiving the application, the Department will review the application for completeness and request any additional information needed in order for the application to be complete. The Department will notify the applicant in writing when the application is complete.

(3) Within 120 days after the application is complete, the Department will prepare and mail a written and signed agreement or contract, outlining the terms and conditions under which the Department will delegate a portion or all of the underground storage tank program described by these rules, to the applicant.

(4) The agreement or contract may be terminated by either party by providing 30 days prior notice in writing.

Delete OAR 340-150-120 in it's entirety.

[Underground Storage Tank Interim Installation Standards

340-150-120 (1) Upon the effective date of these rules no person shall install an underground storage tank for the purpose of storing regulated substances unless;

(a) such tank installation will prevent releases due to corrosion or structural failure for the operational life of the tank;

(b) such tank installation is cathodically protected against corrosion, constructed of noncorrosive material, steel clad with a noncorrosive material, or designed in a manner to prevent the release or threatened release of any stored substance; and

(c) the material used in the construction or lining of the tank is compatible with the substance to be stored.

(2) For the purpose of determining compliance with these Interim Installation Standards, the department will use the guidelines published by the United State Environmental Protection Agency (EPA) entitled "Hazardous Waste; Interpretive Rule on the Interim Prohibition Against Installation of Unprotected Underground Storage Tanks", 40 CFR Part 280. (Copies are available from the EPA or the department)]

Add OAR 340-150-125.

Approval of More Stringent Performance Standards.

340-150-125 (1) Any local unit of government supplying water for municipal purposes from an underground source that could be jeopardized by releases from UST systems may petition the Department for more stringent UST performance standards for UST systems in the vicinity of the underground water source. Administrative rules on more stringent performance standards may be adopted where the Commission determines through facts and findings that it is necessary to protect the underground water supply through more stringent UST performance standards.

(2) The petition shall be made to the Department in writing and shall include the following information:

(a) A description of the underground water resource including, but not limited to:

(A) The geographical limits of the area where more stringent UST performance standards are required;

(B) The geographical limits of the groundwater recharge zone;

(C) The geographical limits of the underground water resource;

(D) The geology within both the recharge zone and the underground water resource;

(E) Location, size and present use of wells within the limits of the underground water resource;

(F) Estimated capacity of the underground water resource;

(b) A description of the existing threats to the groundwater resource including, but not limited to:

(A) Location, type and number of underground storage tanks;

(B) Agricultural effluent and rainwater runoff;

(C) Industrial effluent and rainwater runoff; and

(D) Rainwater runoff from roads and parking lots.

(c) A description of the underground storage tank performance standards required, including UST technical standards, operating standards, and administrative procedures.

(d) A description of the emergency conditions, where the petitioner requests adoption of emergency rules.

(3) Within 30 days after receiving the petition, the Department will review the petition for completeness and request any additional information needed in order for the petition to be complete. The Department will notify the petitioner in writing when the petition is complete.

(4) The Department shall initiate rulemaking within 120 days after the petition is complete.

Permanent Decommissioning of an Underground Storage Tank

340-150-130 (1) The permanent decommissioning requirements for underground storage tanks are described in 40 CFR 280 Subpart G - Out of Service UST Systems and Closure. [Upon the effective date of these rules any underground storage tank that is permanently decommissioned must comply with the requirements of this section.

(2) After the effective date of these rules, an underground storage tank that is taken out of operation for longer than 24 months must be permanently decommissioned.

(3) Prior to permanent decommissioning the tank owner or permittee must notify the department in writing.

(4) All tanks that are permanently decommissioned must be emptied and either removed from the ground or be filled with an inert solid material.

(a) The permanent decommissioning procedures described in API 1604 "Recommended Practice for Abandonment or Removal of Used Underground Service Station Tanks" may be used as guidelines for compliance with this section.

(5) Dispose of all liquids, solids and sludge removed from the tank by recycling or dispose in a manner approved by the department.

(6) All tanks removed from the ground must be disposed of in a manner approved by the department.

(7) Measure for the presence of a release from the UST system. A release shall be considered to have occurred if, by following the sampling and analytical procedures specified in OAR 340-122-301 to 340-122-360, contaminant levels are found which exceed the levels specified in those rules.

(8) If contaminated soil, contaminated ground water, or free product as a liquid or vapor is discovered during measurement for the presence of a release the tank owner or permittee must;

(a) Notify the department within 24 hours. (Phone: 1-800-452-0311 or 1-800-452-4011)

(b) Assess the source and the extent of the release.

(c) Meet with the department to set up a cleanup standard and a schedule for cleanup.

(d) Cleanup the release.

(9) All underground storage tank owners must maintain records which are capable of demonstrating compliance with the permanent decommissioning requirement under this section. These records must be maintained for at least three years after permanent decommissioning and made available, upon request, to the department during business hours.]

Requirement to Notify the Underground Storage Tank Owner and Operator

340-150-140 (1) Between February 1, 1989 and February 1, 1990 any person who deposits a regulated substance into an underground storage tank shall notify the owner or operator of the tank in writing of the requirements for obtaining an underground storage tank permit.

(2) After February 1, 1989 any person who sells an underground storage tank shall notify the owner or operator of the tank in writing of the requirements for obtaining an underground storage tank permit.

Depositing Regulated Substances in Underground Storage Tanks

340-150-150 (1) After February 1, 1989 no person owning an underground storage tank shall deposit or cause to be deposited a regulated substance into that tank without first having applied for and received an operating permit issued by the department.

(2)(a) After June 1, 1989, the tank owner or permittee shall, prior to accepting delivery of a regulated substance, provide the underground storage tank permit number to any person depositing a regulated substance into the tank.

(b) If, for any reason, a permit becomes invalid, the tank owner or permittee shall provide written notice of the change in permit status to any person previously notified under Subsection (2)(a) of this Section.

(3) After August 1, 1989 no person shall deposit or cause to have deposited a regulated substance into an underground storage tank unless the tank is operating under a permit issued by the department.

(4)(a) After August 1, 1989, sellers and distributors shall maintain a written record of the permit number for each underground storage tank into which they deposit a regulated substance.

(b) After September 1, 1990, sellers and distributors shall maintain a written record of the maximum capacity, in gallons, for each UST into which they deposited a regulated substance. The volume capacity of each UST shall be determined from the amount of product delivered, the product depth in the UST before delivery and the product depth after delivery.

([b]c) If requested by the Department, a seller or distributor shall provide a written record, by permit number, tank capacity and data used to calculate tank capacity, for tanks into which they have deposited a regulated substances during the last three years of record.

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EPA TECHNICAL STANDARDS AND CORRECTIVE ACTION REQUIREMENTS FOR OWNERS AND OPERATORS OF UNDERGROUND STORAGE TANKS

(40 CFR 280; 50 FR 28742, July 15, 1985; Amended by 50 FR 46612, November 8, 1985; Corrected by 51 FR 13497, April 21, 1986; Revised by 53 FR 37194, September 23, 1988, Effective December 22, 1988; Amended by 53 FR 43370, October 26, 1988; Corrected by 53 FR 51274, December 21, 1988; Amended by 54 FR 5452, February 3, 1989)

[*Editor's note*: The revised version of these rules is effective December 22, 1988, with the exception of 280.22(g) which is effective October 24, 1988.]

PART 280—TECHNICAL STANDARDS AND CORRECTIVE ACTION REQUIREMENTS FOR OWNERS AND OPERATORS OF UNDERGROUND STORAGE TANKS (UST)

Authority: 42 U.S.C. 6912, 6991, 6991(a), 6991(b), 6991(c), 6991(d), 6991(e), 6991(f), and 6991(h).
[Amended by 53 FR 43370, October 26, 1988; 54 FR 5452, February 3, 1989]

Subpart A—Program Scope and Interim Prohibition

§280.10 Applicability.

(a) The requirements of this part apply to all owners and operators of an UST system as defined in §280.12 except as otherwise provided in paragraphs (b), (c), and (d) of this section. Any UST system listed in paragraph (c) of this section must meet the requirements of §280.11.

(b) The following UST systems are excluded from the requirements of this part:

(1) Any UST system holding hazardous wastes listed or identified under Subtitle C of the Solid Waste Disposal Act, or a mixture of such hazardous waste and other regulated substances.

(2) Any wastewater treatment tank system that is part of a wastewater treatment facility regulated under section 402 or 307(b) of the Clean Water Act.

(3) Equipment or machinery that contains regulated substances for operational purposes such as hydraulic lift tanks and electrical equipment tanks.

(4) Any UST system whose capacity is 110 gallons or less.

[Sec. 280.10(b)(4)]

Published by THE BUREAU OF NATIONAL AFFAIRS, INC., Washington, D.C. 20037

(5) Any UST system that contains a *deminimis* concentration of regulated substances.

(6) Any emergency spill or overflow containment UST system that is expeditiously emptied after use.

(c) *Deferrals.* Subparts B, C, D, E, and G do not apply to any of the following types of UST systems:

(1) Wastewater treatment tank systems;

(2) Any UST systems containing radioactive material that are regulated under the Atomic Energy Act of 1954 (42 U.S.C. 2011 and following);

(3) Any UST system that is part of an emergency generator system at nuclear power generation facilities regulated by the Nuclear Regulatory Commission under 10 CFR Part 50, Appendix A;

(4) Airport hydrant fuel distribution systems; and

(5) UST systems with field-constructed tanks.

(d) *Deferrals.* Subpart D does not apply to any UST system that stores fuel solely for use by emergency power generators.

§280.11 Interim prohibition for deferred UST systems.

(a) No person may install an UST system listed in §280.10(c) for the purpose of storing regulated substances unless the UST system (whether of single- or double-wall construction):

(1) Will prevent release due to corrosion or structural failure for the operational life of the UST system;

(2) Is cathodically protected against corrosion, constructed of noncorrodible material, steel clad with a noncorrodible material, or designed in a manner to prevent the release or threatened release of any stored substance; and

(3) Is constructed or lined with material that is compatible with the stored substance.

(b) Notwithstanding paragraph (a) of this section, an UST system without corrosion protection may be installed at a site that is determined by a corrosion expert not to be corrosive enough to cause it to have a release due to corrosion during its operating life. Owners and operators must maintain records that demonstrate compliance with the requirements of this paragraph for the remaining life of the tank.

Note: The National Association of Corrosion Engineers Standard RP-02-85, "Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems," may be used as guidance for complying with paragraph (b) of this section.

§280.12 Definitions.

"Aboveground release" means any release to the surface of the land or to surface water. This includes, but is not limited to, releases from the aboveground portion of an UST system and aboveground releases associated with overfills and transfer operations as the regulated substance moves to or from an UST system.

"Ancillary equipment" means any devices including, but not limited to, such devices as piping, fittings, flanges, valves, and pumps used to distribute, meter, or control the flow of regulated substances to and from an UST.

"Belowground release" means any release to the subsurface of the land and to ground water. This includes, but is not limited to, releases from the belowground portions of an underground storage tank system and belowground releases associated with overfills and transfer operations as the regulated substance moves to or from an underground storage tank.

"Beneath the surface of the ground" means beneath the ground surface or otherwise covered with earthen materials.

"Cathodic protection" is a technique to prevent corrosion of a metal surface by making that surface the cathode of an electrochemical cell. For example, a tank system can be cathodically protected through the application of either galvanic anodes or impressed current.

"Cathodic protection tester" means a person who can demonstrate an understanding of the principles and measurements of all common types of cathodic protection systems as applied to buried or submerged metal piping and tank systems. At a minimum, such persons must have education and experience in soil resistivity, stray current, structure-to-soil potential, and component electrical isolation measurements of buried metal piping and tank systems.

"CERCLA" means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended.

"Compatible" means the ability of two or more substances to maintain their respective physical and chemical properties upon contact with one another for the design life of the tank system under conditions likely to be encountered in the UST.

"Connected piping" means all underground piping including valves, elbows, joints, flanges, and flexible connectors attached to tank system through which regulated substances flow. For the purpose of determining how much piping is connected to any individual UST system, the piping that joins two UST systems should be allocated equally between them.

"Consumptive use" with respect to heating oil means consumed on the premises.

"Corrosion expert" means a person who, by reason of thorough knowledge of the physical sciences and the principles of engineering and mathematics acquired by a professional education and related practical experience, is qualified to engage in the practice of corrosion control on buried or submerged metal piping systems and metal tanks. Such a person must be accredited or certified as being qualified by the National Association of Corrosion Engineers or be a registered professional engineer who has certification or licensing that includes education and experience in corrosion control of buried or submerged metal piping systems and metal tanks.

"Dielectric meterial" means a material that does not conduct direct electrical current. Dielectric coatings are used to electrically isolate UST systems from the surrounding soils. Dielectric bushings are used to electrically isolate portions of the UST system (e.g., tank from piping).

"Electrical equipment" means underground equipment that contains dielectric fluid that is necessary for the operation of equipment such as transformers and buried electrical cable.

"Excavation zone" means the volume containing the tank system and backfill material bounded by the ground surface, walls, and floor of the pit and trenches into which the UST system is placed at the time of installation.

" Existing tank system" means a tank system used to contain an accumulation of regulated substances or for which installation has commenced on or before

December 22, 1988. Installation is considered to have commenced if:

(a) The owner or operator has obtained all federal, state, and local approvals or permits necessary to begin physical construction of the site or installation of the tank system; and if,

(b)(1) Either a continuous on-site physical construction or installation program has begun; or,

(2) The owner or operator has entered into contractual obligations—which cannot be cancelled or modified without substantial loss—for physical construction at the site or installation of the tank system to be completed within a reasonable time.

"Farm tank" is a tank located on a tract of land devoted to the production of crops or raising animals, including fish, and associated residences and improvements. A farm tank must be located on the farm property. "Farm" includes fish hatcheries, rangeland and nurseries with growing operations.

"Flow-through process tank" is a tank that forms an integral part of a production process through which there is a steady, variable, recurring, or intermittent flow of materials during the operation of the process. Flow-through process tanks do not include tanks used for the storage of materials prior to their introduction into the production process or for the storage of finished products or by-products from the production process.

"Free product" refers to a regulated substance that is present as a non-aqueous phase liquid (e.g., liquid not dissolved in water.)

"Gathering lines" means any pipeline, equipment, facility, or building used in the transportation of oil or gas during oil or gas production or gathering operations.

"Hazardous substance UST system" means an underground storage tank system that contains a hazardous substance defined in section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (but not including any substance regulated as a hazardous waste under subtitle C) or any mixture of such substances and petroleum, and which is not a petroleum UST system.

"Heating oil" means petroleum that is No. 1, No. 2, No. 4—light, No. 4—heavy, No. 5—light, No. 5—heavy, and No. 6 technical grades of fuel oil; other residual fuel oils (including Navy Special Fuel Oil and Bunker C); and other fuels when used as substitutes for one of these fuel oils. Heating oil is typically used in the operation of heating equipment, boilers, or furnaces.

"Hydraulic lift tank" means a tank holding hydraulic fluid for a closed-loop mechanical system that uses compressed air or hydraulic fluid to operate lifts, elevators, and other similar devices.

"Implementing agency" means EPA, or, in the case of a state with a program approved under section 9004 (or pursuant to a memorandum of agreement with EPA), the designated state or local agency responsible for carrying out an approved UST program.

"Liquid trap" means sumps, well cellars, and other traps used in association with oil and gas production, gathering, and extraction operations (including gas production plants), for the purpose of collecting oil, water, and other liquids. These liquid traps may temporarily collect liquids for subsequent disposition or reinjection into a production or pipeline stream, or may collect and separate liquids from a gas stream.

"Maintenance" means the normal operational upkeep to prevent an underground storage tank system from releasing product.

"Motor fuel" means petroleum or a petroleum-based substance that is motor gasoline, aviation gasoline, No. 1 or No. 2 diesel fuel, or any grade of gasohol, and is typically used in the operation of a motor engine.

"New tank system" means a tank system that will be used to contain an accumulation of regulated substances and for which installation has commenced after December 22, 1988. (See also "Existing Tank System.")

"Noncommercial purposes" with respect to motor fuel means not for resale.

"On the premises where stored" with respect to heating oil means UST systems located on the same property where the stored heating oil is used.

"Operational life" refers to the period beginning when installation of the tank system has commenced until the time the tank system is properly closed under Subpart G.

"Operator" means any person in control of, or having responsibility for, the daily operation of the UST system.

"Overfill release" is a release that occurs when a tank is filled beyond its capacity, resulting in a discharge of the regulated substance to the environment.

"Owner" means:

(a) In the case of an UST system in use on November 8, 1984, or brought into use after that date, any person who owns an UST system used for storage, use, or dispensing of regulated substances; and

(b) In the case of any UST system in use before November 8, 1984, but no longer in use on that date, any person who owned such UST immediately before the discontinuation of its use.

"Person" means an individual, trust, firm, joint stock company, Federal agency, corporation, state, municipality, commission, political subdivision of a state, or any interstate body. "Person" also includes a consortium, a joint venture, a commercial entity, and the United States Government.

"Petroleum UST system" means an underground storage tank system that contains petroleum or a mixture of petroleum with *de minimis* quantities of other regulated substances. Such systems include those containing motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils.

"Pipe" or "Piping" means a hollow cylinder or tubular conduit that is constructed of non-earthen materials.

"Pipeline facilities (including gathering lines)" are new and existing pipe rights-of-way and any associated equipment, facilities, or buildings.

"Regulated substance" means:

(a) Any substance defined in section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 (but not including any substance regulated as a hazardous waste under subtitle C), and

(b) Petroleum, including crude oil or any fraction thereof that is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute).

The term "regulated substance" includes but is not limited to petroleum and petroleum-based substances comprised of a complex blend of hydrocarbons derived from crude oil though processes of separation, conversion, upgrading,

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and finishing, such as motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils.

"Release" means any spilling, leaking, emitting, discharging, escaping, leaching or disposing from an UST into ground water, surface water or subsurface soils.

"Release detection" means determining whether a release of a regulated substance has occurred from the UST system into the environment or into the interstitial space between the UST system and its secondary barrier or secondary containment around it.

"Repair" means to restore a tank or UST system component that has caused a release of product from the UST system.

"Residential tank" is a tank located on property used primarily for dwelling purposes.

"SARA" means the Superfund Amendments and Reauthorization Act of 1986.

"Septic tank" is a water-tight covered receptacle designed to receive or process, through liquid separation or biological digestion, the sewage discharged from a building sewer. The effluent from such receptacle is distributed for disposal through the soil and settled solids and scum from the tank are pumped out periodically and hauled to a treatment facility.

"Storm-water or wastewater collection system" means piping, pumps, conduits, and any other equipment necessary to collect and transport the flow of surface water run-off resulting from precipitation, or domestic, commercial, or industrial wastewater to and from retention areas or any areas where treatment is designated to occur. The collection of storm water and wastewater does not include treatment except where incidental to conveyance.

"Surface impoundment" is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials) that is not an injection well.

"Tank" is a stationary device designed to contain an accumulation of regulated substances and constructed of non-earthen materials (e.g., concrete, steel, plastic) that provide structural support.

"Underground area" means an underground room, such as a basement, cellar, shaft or vault, providing enough space for physical inspection of the exterior of the tank situated on or above the surface of the floor.

"Underground release" means any belowground release.

"Underground storage tank" or "UST" means any one or combination of tanks (including underground pipes connected thereto) that is used to contain an accumulation of regulated substances, and the volume of which (including the volume of underground pipes connected thereto) is 10 percent or more beneath the surface of the ground. This term does not include any:

(a) Farm or residential tank of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes;

(b) Tank used for storing heating oil for consumptive use on the premises where stored;

(c) Septic tank;

(d) Pipeline facility (including gathering lines) regulated under:

(1) The Natural Gas Pipeline Safety Act of 1968 (49 U.S.C. App. 1671, *et seq.*), or

(2) The Hazardous Liquid Pipeline Safety Act of 1979 (49 U.S.C. App. 2001, *et seq.*), or

(3) Which is an intrastate pipeline facility regulated under state laws comparable to the provisions of the law referred to in paragraph (d)(1) or (d)(2) of this definition;

(e) Surface impoundment, pit, pond, or lagoon;

(f) Storm-water or wastewater collection system;

(g) Flow-through process tank;

(h) Liquid trap or associated gathering lines directly related to oil or gas production and gathering operations; or

(i) Storage tank situated in an underground area (such as a basement, cellar, mineworking, drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor.

The term "underground storage tank" or "UST" does not include any pipes connected to any tank which is described in paragraphs (a) through (i) of this definition.

"Upgrade" means the addition or retrofit of some systems such as cathodic protection, lining, or spill and overfill controls to improve the ability of an underground storage tank system to prevent the release of product.

"UST system" or "Tank system" means an underground storage tank, connected underground piping, underground ancillary equipment, and containment system, if any.

"Wastewater treatment tank" means a tank that is designed to receive and treat an influent wastewater through physical, chemical, or biological methods.

Subpart B—UST Systems: Design, Construction, Installation and Notification

§ 280.20 Performance standards for new UST systems.

In order to prevent releases due to structural failure, corrosion, or spills and overfills for as long as the UST system is used to store regulated substances, all owners and operators of new UST systems must meet the following requirements.

(a) *Tanks.* Each tank must be properly designed and constructed, and any portion underground that routinely contains product must be protected from corrosion, in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory as specified below:

(1) The tank is constructed of fiberglass-reinforced plastic; or

Note: The following industry codes may be used to comply with paragraph (a)(1) of this section: Underwriters Laboratories Standard 1316, "Standard for Glass- Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products"; Underwriter's Laboratories of Canada CAN4–S615–M83, "Standard for Reinforced Plastic Underground Tanks for Petroleum Products"; or American Society of Testing and Materials Standard D4021–86, "Standard Specification for Glass-Fiber-Reinforced Polyester Underground Petroleum Storage Tanks."

(2) The tank is constructed of steel and cathodically protected in the following manner:

(i) The tank is coated with a suitable dielectric material;

(ii) Field-installed cathodic protection systems are designed by a corrosion expert;

(iii) Impressed current systems are designed to allow determination of current operating status as required in § 280.31(c); and

(iv) Cathodic protection systems are operated and maintained in accordance with § 280.31 or according to guidelines

established by the implementing agency: or

Note: The following codes and standards may be used to comply with paragraph (a)(2) of this section:

(A) Steel Tank Institute "Specification for STI-P3 System of External Corrosion Protection of Underground Steel Storage Tanks";

(B) Underwriters Laboratories Standard 1746, "Corrosion Protection Systems for Underground Storage Tanks";

(C) Underwriters Laboratories of Canada CAN4-S603-M85, "Standard for Steel Underground Tanks for Flammable and Combustible Liquids," and CAN4-G03.1-M85, "Standard for Galvanic Corrosion Protection Systems for Underground Tanks for Flammable and Combustible Liquids," and CAN4-S631-M84, "Isolating Bushings for Steel Underground Tanks Protected with Coatings and Galvanic Systems"; or

(D) National Association of Corrosion Engineers Standard RP-02-85, "Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems," and Underwriters Laboratories Standard 58, "Standard for Steel Underground Tanks for Flammable and Combustible Liquids."

(3) The tank is constructed of a steel-fiberglass-reinforced-plastic composite; or

Note: The following industry codes may be used to comply with paragraph (a)(3) of this section: Underwriters Laboratories Standard 1746, "Corrosion Protection Systems for Underground Storage Tanks," or the Association for Composite Tanks ACT-100, "Specification for the Fabrication of FRP Clad Underground Storage Tanks."

(4) The tank is constructed of metal without additional corrosion protection measures provided that:

(i) The tank is installed at a site that is determined by a corrosion expert not to be corrosive enough to cause it to have a release due to corrosion during its operating life; and

(ii) Owners and operators maintain records that demonstrate compliance with the requirements of paragraphs (a)(4)(i) for the remaining life of the tank; or

(5) The tank construction and corrosion protection are determined by the implementing agency to be designed to prevent the release or threatened release of any stored regulated substance in a manner that is no less protective of human health and the environment than paragraphs (a) (1) through (4) of this section.

(b) *Piping.* The piping that routinely contains regulated substances and is in contact with the ground must be properly designed, constructed, and protected from corrosion in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory as specified below:

(1) The piping is constructed of fiberglass-reinforced plastic; or

Note: The following codes and standards may be used to comply with paragraph (b)(1) of this section:

(A) Underwriters Laboratories Subject 971, "UL Listed Non-Metal Pipe";

(B) Underwriters Laboratories Standard 567, "Pipe Connectors for Flammable and Combustible and LP Gas";

(C) Underwriters Laboratories of Canada Guide ULC-107, "Glass Fiber Reinforced Plastic Pipe and Fittings for Flammable Liquids"; and

(D) Underwriters Laboratories of Canada Standard CAN 4-S633-M81, "Flexible Underground Hose Connectors."

(2) The piping is constructed of steel and cathodically protected in the following manner:

(i) The piping is coated with a suitable dielectric material;

(ii) Field-installed cathodic protection systems are designed by a corrosion expert;

(iii) Impressed current systems are designed to allow determination of current operating status as required in § 280.31(c); and

(iv) Cathodic protection systems are operated and maintained in accordance with § 280.31 or guidelines established by the implementing agency; or

Note: The following codes and standards may be used to comply with paragraph (b)(2) of this section:

(A) National Fire Protection Association Standard 30, "Flammable and Combustible Liquids Code";

(B) American Petroleum Institute Publication 1615, "Installation of Underground Petroleum Storage Systems";

(C) American Petroleum Institute Publication 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems"; and

(D) National Association of Corrosion Engineers Standard RP-01-69, "Control of External Corrosion on Submerged Metallic Piping Systems."

(3) The piping is constructed of metal without additional corrosion protection measures provided that:

(i) The piping is installed at a site that is determined by a corrosion expert to not be corrosive enough to cause it to have a release due to corrosion during its operating life; and

(ii) Owners and operators maintain records that demonstrate compliance with the requirements of paragraph (b)(3)(i) of this section for the remaining life of the piping; or

Note: National Fire Protection Association Standard 30, "Flammable and Combustible Liquids Code"; and National Association of Corrosion Engineers Standard RP-01-69, "Control of External Corrosion on Submerged Metallic Piping Systems," may be used to comply with paragraph (b)(3) of this section.

(4) The piping construction and corrosion protection are determined by the implementing agency to be designed to prevent the release or threatened release of any stored regulated substance in a manner that is no less protective of human health and the environment than the requirements in paragraphs (b) (1) through (3) of this section.

(c) *Spill and overfill prevention equipment.* (1) Except as provided in paragraph (c)(2) of this section, to prevent spilling and overfilling associated with product transfer to the UST system, owners and operators must use the following spill and overfill prevention equipment:

(i) Spill prevention equipment that will prevent release of product to the environment when the transfer hose is detached from the fill pipe (for example, a spill catchment basin); and

(ii) Overfill prevention equipment that will:

(A) Automatically shut off flow into the tank when the tank is no more than 95 percent full; or

(B) Alert the transfer operator when the tank is no more than 90 percent full by restricting the flow into the tank or triggering a high-level alarm.

(2) Owners and operators are not required to use the spill and overfill prevention equipment specified in paragraph (c)(1) of this section if:

(i) Alternative equipment is used that is determined by the implementing agency to be no less protective of human health and the environment than the equipment specified in paragraph (c)(1)

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(i) or (ii) of this section: or

(ii) The UST system is filled by transfers of no more than 25 gallons at one time.

(d) *Installation.* All tanks and piping must be properly installed in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory and in accordance with the manufacturer's instructions.

Note: Tank and piping system installation practices and procedures described in the following codes may be used to comply with the requirements of paragraph (d) of this section:

(i) American Petroleum Institute Publication 1615, "Installation of Underground Petroleum Storage System"; or

(ii) Petroleum Equipment Institute Publication RP100, "Recommended Practices for Installation of Underground Liquid Storage Systems"; or

(iii) American National Standards Institute Standard B31.3, "Petroleum Refinery Piping," and American National Standards Institute Standard B31.4 "Liquid Petroleum Transportation Piping System."

(e) *Certification of installation.* All owners and operators must ensure that one or more of the following methods of certification, testing, or inspection is used to demonstrate compliance with paragraph (d) of this section by providing a certification of compliance on the UST notification form in accordance with § 280.22.

(1) The installer has been certified by the tank and piping manufacturers: or

(2) The installer has been certified or licensed by the implementing agency: or

(3) The installation has been inspected and certified by a registered professional engineer with education and experience in UST system installation: or

(4) The installation has been inspected and approved by the implementing agency: or

(5) All work listed in the manufacturer's installation checklists has been completed: or

(6) The owner and operator have complied with another method for ensuring compliance with paragraph (d) of this section that is determined by the implementing agency to be no less protective of human health and the environment.

§ 280.21 Upgrading of existing UST systems.

(a) *Alternatives allowed.* Not later than December 22, 1998, all existing UST systems must comply with one of the following requirements:

(1) New UST system performance standards under § 280.20:

(2) The upgrading requirements in paragraphs (b) through (d) of this section: or

(3) Closure requirements under Subpart G of this part, including applicable requirements for corrective action under Subpart F.

(b) *Tank upgrading requirements.* Steel tanks must be upgraded to meet one of the following requirements in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory:

(1) *Interior lining.* A tank may be upgraded by internal lining if:

(i) The lining is installed in accordance with the requirements of § 280.33, and

(ii) Within 10 years after lining, and every 5 years thereafter, the lined tank is internally inspected and found to be structurally sound with the lining still performing in accordance with original design specifications.

(2) *Cathodic protection.* A tank may be upgraded by cathodic protection if the cathodic protection system meets the requirements of § 280.20(a)(2) (ii), (iii), and (iv) and the integrity of the tank is ensured using one of the following methods:

(i) The tank is internally inspected and assessed to ensure that the tank is structurally sound and free of corrosion holes prior to installing the cathodic protection system: or

(ii) The tank has been installed for less than 10 years and is monitored monthly for releases in accordance with § 280.43 (d) through (h); or

(iii) The tank has been installed for less than 10 years and is assessed for corrosion holes by conducting two (2) tightness tests that meet the requirements of § 280.43(c). The first tightness test must be conducted prior to installing the cathodic protection system. The second tightness test must be conducted between three (3) and six (6) months following the first operation of the cathodic protection system: or

(iv) The tank is assessed for corrosion holes by a method that is determined by the implementing agency to prevent releases in a manner that is no less protective of human health and the environment than paragraphs (b)(2) (i) through (iii) of this section.

(3) *Internal lining combined with cathodic protection.* A tank may be upgraded by both internal lining and cathodic protection if:

(i) The lining is installed in accordance with the requirements of § 280.33: and

(ii) The cathodic protection system meets the requirements of § 280.20(a)(2) (ii), (iii), and (iv).

Note: The following codes and standards may be used to comply with this section:

(A) American Petroleum Institute Publication 1631, "Recommended Practice for the Interior Lining of Existing Steel Underground Storage Tanks";

(B) National Leak Prevention Association Standard 631, "Spill Prevention, Minimum 10 Year Life Extension of Existing Steel Underground Tanks by Lining Without the Addition of Cathodic Protection";

(C) National Association of Corrosion Engineers Standard RP-02-85, "Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems"; and

(D) American Petroleum Institute Publication 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems."

(c) *Piping upgrading requirements.* Metal piping that routinely contains regulated substances and is in contact with the ground must be cathodically protected in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory and must meet the requirements of § 280.20(b)(2) (ii), (iii), and (iv).

Note: The codes and standards listed in the note following § 280.20(b)(2) may be used to comply with this requirement.

(d) *Spill and overfill prevention equipment:* To prevent spilling and overfilling associated with product transfer to the UST system, all existing UST systems must comply with new UST system spill and overfill prevention equipment requirements specified in § 280.20(c).

§ 280.22 Notification requirements.

(a) Any owner who brings an underground storage tank system into

use after May 8, 1986, must within 30 days of bringing such tank into use, submit, in the form prescribed in Appendix I of this part, a notice of existence of such tank system to the state or local agency or department designated in Appendix II of this part to receive such notice.

Note: Owners and operators of UST systems that were in the ground on or after May 8, 1986, unless taken out of operation on or before January 1, 1974, were required to notify the designated state or local agency in accordance with the Hazardous and Solid Waste Amendments of 1984, Pub. L. 98-616, on a form published by EPA on November 8, 1985 (50 FR 46602) unless notice was given pursuant to section 103(c) of CERCLA. Owners and operators who have not complied with the notification requirements may use portions I through VI of the notification form contained in Appendix I of this part.

(b) In states where state law, regulations, or procedures require owners to use forms that differ from those set forth in Appendix I of this part to fulfill the requirements of this section, the state forms may be submitted in lieu of the forms set forth in Appendix I of this part. If a state requires that its form be used in lieu of the form presented in this regulation, such form must meet the requirements of section 9002.

(c) Owners required to submit notices under paragraph (a) of this section must provide notices to the appropriate agencies or departments identified in Appendix II of this part for each tank they own. Owners may provide notice for several tanks using one notification form, but owners who own tanks located at more than one place of operation must file a separate notification form for each separate place of operation.

(d) Notices required to be submitted under paragraph (a) of this section must provide all of the information in sections I through VI of the prescribed form (or appropriate state form) for each tank for which notice must be given. Notices for tanks installed after December 22, 1988 must also provide all of the information in section VII of the prescribed form (or appropriate state form) for each tank for which notice must be given.

(e) All owners and operators of new UST systems must certify in the notification form compliance with the following requirements:

(1) Installation of tanks and piping under § 280.20(e);

(2) Cathodic protection of steel tanks and piping under § 280.20 (a) and (b);

(3) Financial responsibility under Subpart H of this part; and

(4) Release detection under §§ 280.41 and 280.42.

(f) All owners and operators of new UST systems must ensure that the installer certifies in the notification form that the methods used to install the tanks and piping complies with the requirements in § 280.20(d).

(g) Beginning October 24, 1988, any person who sells a tank intended to be used as an underground storage tank must notify the purchaser of such tank of the owner's notification obligations under paragraph (a) of this section. The form provided in Appendix III of this part may be used to comply with this requirement.

Subpart C—General Operating Requirements

§ 280.30 Spill and overfill control.

(a) Owners and operators must ensure that releases due to spilling or overfilling do not occur. The owner and operator must ensure that the volume available in the tank is greater than the volume of product to be transferred to the tank before the transfer is made and that the transfer operation is monitored constantly to prevent overfilling and spilling.

Note: The transfer procedures described in National Fire Protection Association Publication 385 may be used to comply with paragraph (a) of this section. Further guidance on spill and overfill prevention appears in American Petroleum Institute Publication 1621, "Recommended Practice for Bulk Liquid Stock Control at Retail Outlets," and National Fire Protection Association Standard 30, "Flammable and Combustible Liquids Code."

(b) The owner and operator must report, investigate, and clean up any spills and overfills in accordance with § 280.53.

§ 280.31 Operation and maintenance of corrosion protection.

All owners and operators of steel UST systems with corrosion protection must comply with the following requirements to ensure that releases due to corrosion are prevented for as long as the UST system is used to store regulated substances:

(a) All corrosion protection systems must be operated and maintained to continuously provide corrosion protection to the metal components of that portion of the tank and piping that routinely contain regulated substances and are in contact with the ground.

(b) All UST systems equipped with cathodic protection systems must be inspected for proper operation by a qualified cathodic protection tester in accordance with the following requirements:

(1) *Frequency.* All cathodic protection systems must be tested within 6 months of installation and at least every 3 years thereafter or according to another reasonable time frame established by the implementing agency; and

(2) *Inspection criteria.* The criteria that are used to determine that cathodic protection is adequate as required by this section must be in accordance with a code of practice developed by a nationally recognized association.

Note: National Association of Corrosion Engineers Standard RP-02-85, "Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems," may be used to comply with paragraph (b)(2) of this section.

(c) UST systems with impressed current cathodic protection systems must also be inspected every 60 days to ensure the equipment is running properly.

(d) For UST systems using cathodic protection, records of the operation of the cathodic protection must be maintained (in accordance with § 280.34) to demonstrate compliance with the performance standards in this section. These records must provide the following:

(1) The results of the last three inspections required in paragraph (c) of this section; and

(2) The results of testing from the last two inspections required in paragraph (b) of this section.

§ 280.32 Compatibility.

Owners and operators must use an UST system made of or lined with materials that are compatible with the substance stored in the UST system.

Note: Owners and operators storing alcohol blends may use the following codes

to comply with the requirements of this section:

(a) American Petroleum Institute Publication 1626. "Storing and Handling Ethanol and Gasoline-Ethanol Blends at Distribution Terminals and Service Stations"; and

(b) American Petroleum Institute Publication 1627. "Storage and Handling of Gasoline-Methanol/Cosolvent Blends at Distribution Terminals and Service Stations."

§ 280.33 Repairs allowed.

Owners and operators of UST systems must ensure that repairs will prevent releases due to structural failure or corrosion as long as the UST system is used to store regulated substances. The repairs must meet the following requirements:

(a) Repairs to UST systems must be properly conducted in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory.

Note: The following codes and standards may be used to comply with paragraph (a) of this section: National Fire Protection Association Standard 30, "Flammable and Combustible Liquids Code"; American Petroleum Institute Publication 2200, "Repairing Crude Oil, Liquified Petroleum Gas, and Product Pipelines"; American Petroleum Institute Publication 1631, "Recommended Practice for the Interior Lining of Existing Steel Underground Storage Tanks"; and National Leak Prevention Association Standard 631, "Spill Prevention, Minimum 10 Year Life Extension of Existing Steel Underground Tanks by Lining Without the Addition of Cathodic Protection."

(b) Repairs to fiberglass-reinforced plastic tanks may be made by the manufacturer's authorized representatives or in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory.

(c) Metal pipe sections and fittings that have released product as a result of corrosion or other damage must be replaced. Fiberglass pipes and fittings may be repaired in accordance with the manufacturer's specifications.

(d) Repaired tanks and piping must be tightness tested in accordance with § 280.43(c) and § 280.44(b) within 30 days following the date of the completion of the repair except as provided in paragraphs (d) (1) through (3), of this section:

(1) The repaired tank is internally inspected in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory; or

(2) The repaired portion of the UST system is monitored monthly for releases in accordance with a method specified in § 280.43 (d) through (h); or

(3) Another test method is used that is determined by the implementing agency to be no less protective of human health and the environment than those listed above.

(e) Within 6 months following the repair of any cathodically protected UST system, the cathodic protection system must be tested in accordance with § 280.31 (b) and (c) to ensure that it is operating properly.

(f) UST system owners and operators must maintain records of each repair for the remaining operating life of the UST system that demonstrate compliance with the requirements of this section.

§ 280.34 Reporting and recordkeeping.

Owners and operators of UST systems must cooperate fully with inspections, monitoring and testing conducted by the implementing agency, as well as requests for document submission, testing, and monitoring by the owner or operator pursuant to section 9005 of Subtitle I of the Resource Conservation and Recovery Act, as amended.

(a) *Reporting.* Owners and operators must submit the following information to the implementing agency:

(1) Notification for all UST systems (§ 280.22), which includes certification of installation for new UST systems (§ 280.20(e)),

(2) Reports of all releases including suspected releases (§ 280.50), spills and overfills (§ 280.53), and confirmed releases (§ 280.61);

(3) Corrective actions planned or taken including initial abatement measures (§ 280.62), initial site characterization (§ 280.63), free product removal (§ 280.64), investigation of soil and ground-water cleanup (§ 280.65), and corrective action plan (§ 280.66); and

(4) A notification before permanent closure or change-in-service (§ 280.71).

(b) *Recordkeeping.* Owners and operators must maintain the following information:

(1) A corrosion expert's analysis of site corrosion potential if corrosion protection equipment is not used (§ 280.20(a)(4); § 280.20(b)(3)).

(2) Documentation of operation of corrosion protection equipment (§ 280.31);

(3) Documentation of UST system repairs (§ 280.33(f));

(4) Recent compliance with release detection requirements (§ 280.45); and

(5) Results of the site investigation conducted at permanent closure (§ 280.74).

(c) *Availability and Maintenance of Records.* Owners and operators must keep the records required either:

(1) At the UST site and immediately available for inspection by the implementing agency; or

(2) At a readily available alternative site and be provided for inspection to the implementing agency upon request.

(3) In the case of permanent closure records required under § 280.74, owners and operators are also provided with the additional alternative of mailing closure records to the implementing agency if they cannot be kept at the site or an alternative site as indicated above.

Note: The recordkeeping and reporting requirements in this section have been approved by the Office of Management and Budget and have been assigned OMB Control No. 2050–0068.

Subpart D—Release Detection

§ 280.40 General requirements for all UST systems.

(a) Owners and operators of new and existing UST systems must provide a method, or combination of methods, of release detection that:

(1) Can detect a release from any portion of the tank and the connected underground piping that routinely contains product;

(2) Is installed, calibrated, operated, and maintained in accordance with the manufacturer's instructions, including routine maintenance and service checks for operability or running condition; and

(3) Meets the performance requirements in § 280.43 or 280.44, with any performance claims and their manner of determination described in

writing by the equipment manufacturer or installer. In addition, methods used after December 22, 1990 except for methods permanently installed prior to that date, must be capable of detecting the leak rate or quantity specified for that method in § 280.43 (b), (c), and (d) or 280.44 (a) and (b) with a probability of detection of 0.95 and a probability of false alarm of 0.05.

(b) When a release detection method operated in accordance with the performance standards in § 280.43 and § 280.44 indicates a release may have occurred, owners and operators must notify the implementing agency in accordance with Subpart E.

(c) Owners and operators of all UST systems must comply with the release detection requirements of this subpart by December 22 of the year listed in the following table:

SCHEDULE FOR PHASE-IN OF RELEASE DETECTION

Year system was installed	Year when release detection is required (by December 22 of the year indicated)				
	1989	1990	1991	1992	1993
Before 1965 or date unknown	RD	P			
1965–69		P/RD			
1970–74		P	RD		
1975–79		P		RD	
1980–88		P			RD
New tanks (after December 22) immediately upon installation.					

P = Must begin release detection for all pressurized piping in accordance with § 280.41(b)(1) and § 280.42(b)(4).
RD = Must begin release detection for tanks and suction piping in accordance with § 280.41(a), § 280.41(b)(2), and § 280.42.

(d) Any existing UST system that cannot apply a method of release detection that complies with the requirements of this subpart must complete the closure procedures in Subpart G by the date on which release detection is required for that UST system under paragraph (c) of this section.

§ 280.41 Requirements for petroleum UST systems.

Owners and operators of petroleum UST systems must provide release detection for tanks and piping as follows:

(a) *Tanks.* Tanks must be monitored at least every 30 days for releases using one of the methods listed in § 280.43 (d) through (h) except that:

(1) UST systems that meet the performance standards in § 280.20 or § 280.21, and the monthly inventory control requirements in § 280.43 (a) or (b), may use tank tightness testing (conducted in accordance with § 280.43(c)) at least every 5 years until December 22, 1998, or until 10 years after the tank is installed or upgraded under § 280.21(b), whichever is later;

(2) UST systems that do not meet the performance standards in § 280.20 or § 280.21 may use monthly inventory controls (conducted in accordance with § 280.43(a) or (b)) and annual tank tightness testing (conducted in accordance with § 280.43(c)) until December 22, 1998 when the tank must be upgraded under § 280.21 or permanently closed under § 280.71; and

(3) Tanks with capacity of 550 gallons or less may use weekly tank gauging (conducted in accordance with § 280.43(b)).

(b) *Piping.* Underground piping that routinely contains regulated substances must be monitored for releases in a manner that meets one of the following requirements:

(1) *Pressurized piping.* Underground piping that conveys regulated substances under pressure must:

(i) Be equipped with an automatic line leak detector conducted in accordance with § 280.44(a); and

(ii) Have an annual line tightness test conducted in accordance with § 280.44(b) or have monthly monitoring conducted in accordance with § 280.44(c).

(2) *Suction piping.* Underground piping that conveys regulated substances under suction must either have a line tightness test conducted at least every 3 years and in accordance with § 280.44(b), or use a monthly monitoring method conduct in accordance with § 280.44(c). No release detection is required for suction piping that is designed and constructed to meet the following standards:

(i) The below-grade piping operates at less than atmospheric pressure;

(ii) The below-grade piping is sloped so that the contents of the pipe will drain back into the storage tank if the suction is released;

(iii) Only one check valve is included in each suction line;

(iv) The check valve is located directly below and as close as practical to the suction pump; and

(v) A method is provided that allows compliance with paragraphs (b)(2) (ii)–(iv) of this section to be readily determined.

§ 280.42 Requirements for hazardous substance UST systems.

Owners and operators of hazardous substance UST systems must provide release detection that meets the following requirements:

(a) Release detection at existing UST systems must meet the requirements for petroleum UST systems in § 280.41. By December 22, 1998, all existing hazardous substance UST systems must meet the release detection requirements for new systems in paragraph (b) of this section.

(b) Release detection at new hazardous substance UST systems must meet the following requirements:

(1) Secondary containment systems must be designed, constructed and installed to:

(i) Contain regulated substances released from the tank system until they are detected and removed;

(ii) Prevent the release of regulated substances to the environment at any time during the operational life of the UST system; and

(iii) Be checked for evidence of a release at least every 30 days.

Note.—The provisions of 40 CFR 265.193, Containment and Detection of Releases, may be used to comply with these requirements.

(2) Double-walled tanks must be designed, constructed, and installed to:

(i) Contain a release from any portion of the inner tank within the outer wall; and

(ii) Detect the failure of the inner wall.

(3) External liners (including vaults) must be designed, constructed, and installed to:

(i) Contain 100 percent of the capacity of the largest tank within its boundary;

(ii) Prevent the interference of precipitation or ground-water intrusion with the ability to contain or detect a release of regulated substances; and

[Sec. 280.42(b)(3)(ii)]

(iii) Surround the tank completely (i.e., it is capable of preventing lateral as well as vertical migration of regulated substances).

(4) Underground piping must be equipped with secondary containment that satisfies the requirements of paragraph (b)(1) of this section (e.g., trench liners, jacketing of double-walled pipe). In addition, underground piping that conveys regulated substances under pressure must be equipped with an automatic line leak detector in accordance with § 280.44(a).

(5) Other methods of release detection may be used if owners and operators:

(i) Demonstrate to the implementing agency that an alternate method can detect a release of the stored substance as effectively as any of the methods allowed in §§ 280.43(b) through (h) can detect a release of petroleum;

(ii) Provide information to the implementing agency on effective corrective action technologies, health risks, and chemical and physical properties of the stored substance, and the characteristics of the UST site; and,

(iii) Obtain approval from the implementing agency to use the alternate release detection method before the installation and operation of the new UST system.

§ 280.43 Methods of release detection for tanks.

Each method of release detection for tanks used to meet the requirements of § 280.41 must be conducted in accordance with the following:

(a) *Inventory control.* Product inventory control (or another test of equivalent performance) must be conducted monthly to detect a release of at least 1.0 percent of flow-through plus 130 gallons on a monthly basis in the following manner:

(1) Inventory volume measurements for regulated substance inputs, withdrawals, and the amount still remaining in the tank are recorded each operating day;

(2) The equipment used is capable of measuring the level of product over the full range of the tank's height to the nearest one-eighth of an inch;

(3) The regulated substance inputs are reconciled with delivery receipts by measurement of the tank inventory volume before and after delivery;

(4) Deliveries are made through a drop tube that extends to within one foot of the tank bottom;

(5) Product dispensing is metered and recorded within the local standards for meter calibration or an accuracy of 6 cubic inches for every 5 gallons of product withdrawn; and

(6) The measurement of any water level in the bottom of the tank is made to the nearest one-eighth of an inch at least once a month.

Note: Practices described in the American Petroleum Institute Publication 1621, "Recommended Practice for Bulk Liquid Stock Control at Retail Outlets," may be used, where applicable, as guidance in meeting the requirements of this paragraph.

(b) *Manual tank gauging.* Manual tank gauging must meet the following requirements:

(1) Tank liquid level measurements are taken at the beginning and ending of a period of at least 36 hours during which no liquid is added to or removed from the tank;

(2) Level measurements are based on an average of two consecutive stick readings at both the beginning and ending of the period;

(3) The equipment used is capable of measuring the level of product over the full range of the tank's height to the nearest one-eighth of an inch;

(4) A leak is suspected and subject to the requirements of Subpart E if the variation between beginning and ending measurements exceeds the weekly or monthly standards in the following table:

Nominal tank capacity	Weekly standard (one test)	Monthly standard (average of four tests)
550 gallons or less.	10 gallons	5 gallons.
551–1,000 gallons.	13 gallons	7 gallons.
1,001–2,000 gallons.	26 gallons	13 gallons.

(5) Only tanks of 550 gallons or less nominal capacity may use this as the sole method of release detection. Tanks of 551 to 2,000 gallons may use the method in place of manual inventory control in § 280.43(a). Tanks of greater than 2,000 gallons nominal capacity may not use this method to meet the requirements of this subpart.

(c) *Tank tightness testing.* Tank tightness testing (or another test of equivalent performance) must be capable of detecting a 0.1 gallon per hour leak rate from any portion of the tank that routinely contains product while accounting for the effects of thermal expansion or contraction of the product, vapor pockets, tank deformation, evaporation or condensation, and the location of the water table.

(d) *Automatic tank gauging.* Equipment for automatic tank gauging that tests for the loss of product and conducts inventory control must meet the following requirements:

(1) The automatic product level monitor test can detect a 0.2 gallon per hour leak rate from any portion of the tank that routinely contains product; and

(2) Inventory control (or another test of equivalent performance) is conducted in accordance with the requirements of § 280.43(a).

(e) *Vapor monitoring.* Testing or monitoring for vapors within the soil gas of the excavation zone must meet the following requirements:

(1) The materials used as backfill are sufficiently porous (e.g., gravel, sand, crushed rock) to readily allow diffusion of vapors from releases into the excavation area;

(2) The stored regulated substance, or a tracer compound placed in the tank system, is sufficiently volatile (e.g., gasoline) to result in a vapor level that is detectable by the monitoring devices located in the excavation zone in the event of a release from the tank;

(3) The measurement of vapors by the monitoring device is not rendered inoperative by the ground water, rainfall, or soil moisture or other known interferences so that a release could go undetected for more than 30 days;

(4) The level of background contamination in the excavation zone will not interfere with the method used to detect releases from the tank;

(5) The vapor monitors are designed and operated to detect any significant increase in concentration above background of the regulated substance stored in the tank system, a component or components of that substance, or a tracer compound placed in the tank system;

(6) In the UST excavation zone, the site is assessed to ensure compliance with the requirements in paragraphs (e) (1) through (4) of this section and to establish the number and positioning of monitoring wells that will detect releases within the excavation zone from any portion of the tank that routinely contains product; and

(7) Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering.

(f) *Ground-water monitoring.* Testing or monitoring for liquids on the ground water must meet the following requirements:

(1) The regulated substance stored is immiscible in water and has a specific gravity of less than one;

(2) Ground water is never more than 20 feet from the ground surface and the hydraulic conductivity of the soil(s) between the UST system and the monitoring wells or devices is not less than 0.01 cm/sec (e.g., the soil should consist of gravels, coarse to medium sands, coarse silts or other permeable materials);

(3) The slotted portion of the monitoring well casing must be designed to prevent migration of natural soils or filter pack into the well and to allow entry of regulated substance on the water table into the well under both high and low ground-water conditions;

(4) Monitoring wells shall be sealed from the ground surface to the top of the filter pack;

(5) Monitoring wells or devices intercept the excavation zone or are as close to it as is technically feasible;

(6) The continuous monitoring devices or manual methods used can detect the presence of at least one-eighth of an inch of free product on top of the ground water in the monitoring wells;

(7) Within and immediately below the UST system excavation zone, the site is assessed to ensure compliance with the requirements in paragraphs (f) (1) through (5) of this section and to establish the number and positioning of monitoring wells or devices that will detect releases from any portion of the tank that routinely contains product; and

(8) Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering.

(g) *Interstitial monitoring.* Interstitial monitoring between the UST system and a secondary barrier immediately around or beneath it may be used, but only if the system is designed, constructed and installed to detect a leak from any portion of the tank that routinely contains product and also meets one of the following requirements:

(1) For double-walled UST systems, the sampling or testing method can detect a release through the inner wall in any portion of the tank that routinely contains product;

Note: The provisions outlined in the Steel Tank Institute's "Standard for Dual Wall Underground Storage Tanks" may be used as guidance for aspects of the design and construction of underground steel double-walled tanks.

(2) For UST systems with a secondary barrier within the excavation zone, the sampling or testing method used can detect a release between the UST system and the secondary barrier;

(i) The secondary barrier around or beneath the UST system consists of artificially constructed material that is sufficiently thick and impermeable (at least 10^{-6} cm/sec for the regulated substance stored) to direct a release to the monitoring point and permit its detection;

(ii) The barrier is compatible with the regulated substance stored so that a release from the UST system will not cause a deterioration of the barrier allowing a release to pass through undetected;

(iii) For cathodically protected tanks, the secondary barrier must be installed so that it does not interfere with the proper operation of the cathodic protection system;

(iv) The ground water, soil moisture, or rainfall will not render the testing or sampling method used inoperative so that a release could go undetected for more than 30 days;

(v) The site is assessed to ensure that the secondary barrier is always above the ground water and not in a 25-year flood plain, unless the barrier and monitoring designs are for use under such conditions; and,

(vi) Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering.

(3) For tanks with an internally fitted liner, an automated device can detect a release between the inner wall of the tank and the liner, and the liner is compatible with the substance stored.

(h) *Other methods.* Any other type of release detection method, or combination of methods, can be used if:

(1) It can detect a 0.2 gallon per hour leak rate or a release of 150 gallons within a month with a probability of detection of 0.95 and a probability of false alarm of 0.05; or

(2) The implementing agency may approve another method if the owner and operator can demonstrate that the method can detect a release as effectively as any of the methods allowed in paragraphs (c) through (h) of this section. In comparing methods, the implementing agency shall consider the size of release that the method can detect and the frequency and reliability with which it can be detected. If the method is approved, the owner and operator must comply with any conditions imposed by the implementing agency on its use to ensure the protection of human health and the environment.

§ 280.44 Methods of release detection for piping.

Each method of release detection for piping used to meet the requirements of § 280.41 must be conducted in accordance with the following:

(a) *Automatic line leak detectors.* Methods which alert the operator to the presence of a leak by restricting or shutting off the flow of regulated substances through piping or triggering an audible or visual alarm may be used only if they detect leaks of 3 gallons per hour at 10 pounds per square inch line pressure within 1 hour. An annual test of the operation of the leak detector must be conducted in accordance with the manufacturer's requirements.

(b) *Line tightness testing.* A periodic test of piping may be conducted only if it can detect a 0.1 gallon per hour leak rate at one and one-half times the operating pressure.

(c) *Applicable tank methods.* Any of the methods in § 280.43 (e) through (h) may be used if they are designed to detect a release from any portion of the underground piping that routinely contains regulated substances.

§ 280.45 Release detection recordkeeping.

All UST system owners and operators must maintain records in accordance with § 280.34 demonstrating compliance

with all applicable requirements of this Subpart. These records must include the following:

(a) All written performance claims pertaining to any release detection system used, and the manner in which these claims have been justified or tested by the equipment manufacturer or installer, must be maintained for 5 years, or for another reasonable period of time determined by the implementing agency, from the date of installation;

(b) The results of any sampling, testing, or monitoring must be maintained for at least 1 year, or for another reasonable period of time determined by the implementing agency, except that the results of tank tightness testing conducted in accordance with § 280.43(c) must be retained until the next test is conducted; and

(c) Written documentation of all calibration, maintenance, and repair of release detection equipment permanently located on-site must be maintained for at least one year after the servicing work is completed, or for another reasonable time period determined by the implementing agency. Any schedules of required calibration and maintenance provided by the release detection equipment manufacturer must be retained for 5 years from the date of installation.

Subpart E—Release Reporting, Investigation, and Confirmation

§ 280.50 Reporting of suspected releases.

Owners and operators of UST systems must report to the implementing agency within 24 hours, or another reasonable time period specified by the implementing agency, and follow the procedures in § 280.52 for any of the following conditions:

(a) The discovery by owners and operators or others of released regulated substances at the UST site or in the surrounding area (such as the presence of free product or vapors in soils, basements, sewer and utility lines, and nearby surface water).

(b) Unusual operating conditions observed by owners and operators (such as the erratic behavior of product dispensing equipment, the sudden loss of product from the UST system, or an unexplained presence of water in the tank), unless system equipment is found to be defective but not leaking, and is immediately repaired or replaced; and,

(c) Monitoring results from a release detection method required under § 280.41 and § 280.42 that indicate a release may have occurred unless:

(1) The monitoring device is found to be defective, and is immediately repaired, recalibrated or replaced, and additional monitoring does not confirm the initial result; or

(2) In the case of inventory control, a second month of data does not confirm the initial result.

§ 280.51 Investigation due to off-site impacts.

When required by the implementing agency, owners and operators of UST systems must follow the procedures in § 280.52 to determine if the UST system is the source of off-site impacts. These impacts include the discovery of regulated substances (such as the presence of free product or vapors in soils, basements, sewer and utility lines, and nearby surface and drinking waters) that has been observed by the implementing agency or brought to its attention by another party.

§ 280.52 Release investigation and confirmation steps.

Unless corrective action is initiated in accordance with Subpart F, owners and operators must immediately investigate and confirm all suspected releases of regulated substances requiring reporting under § 280.50 within 7 days, or another reasonable time period specified by the implementing agency, using either the following steps or another procedure approved by the implementing agency:

(a) *System test.* Owners and operators must conduct tests (according to the requirements for tightness testing in § 280.43(c) and § 280.44(b)) that determine whether a leak exists in that portion of the tank that routinely contains product, or the attached delivery piping, or both.

(1) Owners and operators must repair, replace or upgrade the UST system, and begin corrective action in accordance with Subpart F if the test results for the system, tank, or delivery piping indicate that a leak exists.

(2) Further investigation is not required if the test results for the system, tank, and delivery piping do not indicate that a leak exists and if environmental contamination is not the basis for suspecting a release.

(3) Owners and operators must conduct a site check as described in paragraph (b) of this section if the test results for the system, tank, and delivery piping do not indicate that a leak exists but environmental contamination is the basis for suspecting a release.

(b) *Site check.* Owners and operators must measure for the presence of a release where contamination is most likely to be present at the UST site. In selecting sample types, sample locations, and measurement methods, owners and operators must consider the nature of the stored substance, the type of initial alarm or cause for suspicion, the type of backfill, the depth of ground water, and other factors appropriate for identifying the presence and source of the release.

(1) If the test results for the excavation zone or the UST site indicate that a release has occurred, owners and operators must begin corrective action in accordance with Subpart F;

(2) If the test results for the excavation zone or the UST site do not indicate that a release has occurred, further investigation is not required.

§ 280.53 Reporting and cleanup of spills and overfills.

(a) Owners and operators of UST systems must contain and immediately clean up a spill or overfill and report to the implementing agency within 24 hours, or another reasonable time period specified by the implementing agency, and begin corrective action in accordance with Subpart F in the following cases:

(1) Spill or overfill of petroleum that results in a release to the environment that exceeds 25 gallons or another reasonable amount specified by the implementing agency, or that causes a sheen on nearby surface water; and

(2) Spill or overfill of a hazardous substance that results in a release to the environment that equals or exceeds its reportable quantity under CERCLA (40 CFR Part 302).

(b) Owners and operators of UST systems must contain and immediately clean up a spill or overfill of petroleum that is less than 25 gallons or another reasonable amount specified by the implementing agency, and a spill or

overfill of a hazardous substance that is less than the reportable quantity. If cleanup cannot be accomplished within 24 hours, or another reasonable time period established by the implementing agency, owners and operators must immediately notify the implementing agency.

Note: Pursuant to §§ 302.6 and 355.40, a release of a hazardous substance equal to or in excess of its reportable quantity must also be reported immediately (rather than within 24 hours) to the National Response Center under sections 102 and 103 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and to appropriate state and local authorities under Title III of the Superfund Amendments and Reauthorization Act of 1986.

Subpart F—Release Response and Corrective Action for UST Systems Containing Petroleum or Hazardous Substances

§ 280.60 General.

Owners and operators of petroleum or hazardous substance UST systems must, in response to a confirmed release from the UST system, comply with the requirements of this subpart except for USTs excluded under § 280.10(b) and UST systems subject to RCRA Subtitle C corrective action requirements under section 3004(u) of the Resource Conservation and Recovery Act, as amended.

§ 280.61 Initial response.

Upon confirmation of a release in accordance with § 280.52 or after a release from the UST system is identified in any other manner, owners and operators must perform the following initial response actions within 24 hours of a release or within another reasonable period of time determined by the implementing agency:

(a) Report the release to the implementing agency (e.g., by telephone or electronic mail);

(b) Take immediate action to prevent any further release of the regulated substance into the environment; and

(c) Identify and mitigate fire, explosion, and vapor hazards.

§ 280.62 Initial abatement measures and site check.

(a) Unless directed to do otherwise by the implementing agency, owners and operators must perform the following abatement measures:

(1) Remove as much of the regulated substance from the UST system as is necessary to prevent further release to the environment;

(2) Visually inspect any aboveground releases or exposed belowground releases and prevent further migration of the released substance into surrounding soils and ground water;

(3) Continue to monitor and mitigate any additional fire and safety hazards posed by vapors or free product that have migrated from the UST excavation zone and entered into subsurface structures (such as sewers or basements);

(4) Remedy hazards posed by contaminated soils that are excavated or exposed as a result of release confirmation, site investigation, abatement, or corrective action activities. If these remedies include treatment or disposal of soils, the owner and operator must comply with applicable State and local requirements;

(5) Measure for the presence of a release where contamination is most likely to be present at the UST site, unless the presence and source of the release have been confirmed in accordance with the site check required by § 280.52(b) or the closure site assessment of § 280.72(a). In selecting sample types, sample locations, and measurement methods, the owner and operator must consider the nature of the stored substance, the type of backfill, depth to ground water and other factors as appropriate for identifying the presence and source of the release; and

(6) Investigate to determine the possible presence of free product, and begin free product removal as soon as practicable and in accordance with § 280.64.

(b) Within 20 days after release confirmation, or within another reasonable period of time determined by the implementing agency, owners and operators must submit a report to the implementing agency summarizing the initial abatement steps taken under paragraph (a) of this section and any resulting information or data.

§ 280.63 Initial site characterization.

(a) Unless directed to do otherwise by the implementing agency, owners and operators must assemble information about the site and the nature of the release, including information gained while confirming the release or completing the initial abatement measures in § 280.60 and § 280.61. This information must include, but is not necessarily limited to the following:

(1) Data on the nature and estimated quantity of release;

(2) Data from available sources and/or site investigations concerning the following factors: surrounding populations, water quality, use and approximate locations of wells potentially affected by the release, subsurface soil conditions, locations of subsurface sewers, climatological conditions, and land use;

(3) Results of the site check required under § 280.62(a)(5); and

(4) Results of the free product investigations required under § 280.62(a)(6), to be used by owners and operators to determine whether free product must be recovered under § 280.64.

(b) Within 45 days of release confirmation or another reasonable period of time determined by the implementing agency, owners and operators must submit the information collected in compliance with paragraph (a) of this section to the implementing agency in a manner that demonstrates its applicability and technical adequacy, or in a format and according to the schedule required by the implementing agency.

§ 280.64 Free product removal.

At sites where investigations under § 280.62(a)(6) indicate the presence of free product, owners and operators must remove free product to the maximum extent practicable as determined by the implementing agency while continuing, as necessary, any actions initiated under §§ 280.61 through 280.63, or preparing for actions required under §§ 280.65 through 280.66. In meeting the requirements of this section, owners and operators must:

(a) Conduct free product removal in a manner that minimizes the spread of contamination into previously uncontaminated zones by using recovery and disposal techniques appropriate to the hydrogeologic conditions at the site, and that properly treats, discharges or disposes of recovery byproducts in compliance with

applicable local, State and Federal regulations;

(b) Use abatement of free product migration as a minimum objective for the design of the free product removal system;

(c) Handle any flammable products in a safe and competent manner to prevent fires or explosions; and

(d) Unless directed to do otherwise by the implementing agency, prepare and submit to the implementing agency, within 45 days after confirming a release, a free product removal report that provides at least the following information:

(1) The name of the person(s) responsible for implementing the free product removal measures;

(2) The estimated quantity, type, and thickness of free product observed or measured in wells, boreholes, and excavations;

(3) The type of free product recovery system used;

(4) Whether any discharge will take place on-site or off-site during the recovery operation and where this discharge will be located;

(5) The type of treatment applied to, and the effluent quality expected from, any discharge;

(6) The steps that have been or are being taken to obtain necessary permits for any discharge; and

(7) The disposition of the recovered free product.

§ 280.65 Investigations for soil and ground-water cleanup.

(a) In order to determine the full extent and location of soils contaminated by the release and the presence and concentrations of dissolved product contamination in the ground water, owners and operators must conduct investigations of the release, the release site, and the surrounding area possibly affected by the release if any of the following conditions exist:

(1) There is evidence that ground-water wells have been affected by the release (e.g., as found during release confirmation or previous corrective action measures);

(2) Free product is found to need recovery in compliance with § 280.64;

(3) There is evidence that contaminated soils may be in contact with ground water (e.g., as found during conduct of the initial response measures or investigations required under §§ 280.60 through 280.64); and

(4) The implementing agency requests an investigation, based on the potential effects of contaminated soil or ground water on nearby surface water and ground-water resources.

(b) Owners and operators must submit the information collected under paragraph (a) of this section as soon as practicable or in accordance with a schedule established by the implementing agency.

§ 280.66 Corrective action plan.

(a) At any point after reviewing the information submitted in compliance with § 280.61 through § 280.63, the implementing agency may require owners and operators to submit additional information or to develop and submit a corrective action plan for responding to contaminated soils and ground water. If a plan is required, owners and operators must submit the plan according to a schedule and format established by the implementing agency. Alternatively, owners and operators may, after fulfilling the requirements of § 280.61 through § 280.63, choose to submit a corrective action plan for responding to contaminated soil and ground water. In either case, owners and operators are responsible for submitting a plan that provides for adequate protection of human health and the environment as determined by the implementing agency, and must modify their plan as necessary to meet this standard.

(b) The implementing agency will approve the corrective action plan only after ensuring that implementation of the plan will adequately protect human health, safety, and the environment. In making this determination, the implementing agency should consider the following factors as appropriate:

(1) The physical and chemical characteristics of the regulated substance, including its toxicity, persistence, and potential for migration;

(2) The hydrogeologic characteristics of the facility and the surrounding area;

(3) The proximity, quality, and current and future uses of nearby surface water and ground water;

(4) The potential effects of residual contamination on nearby surface water and ground water;

(5) An exposure assessment; and

(6) Any information assembled in compliance with this subpart.

(c) Upon approval of the corrective action plan or as directed by the implementing agency, owners and operators must implement the plan, including modifications to the plan made by the implementing agency. They must monitor, evaluate, and report the results of implementing the plan in accordance with a schedule and in a format established by the implementing agency.

(d) Owners and operators may, in the interest of minimizing environmental contamination and promoting more effective cleanup, begin cleanup of soil and ground water before the corrective action plan is approved provided that they:

(1) Notify the implementing agency of their intention to begin cleanup;

(2) Comply with any conditions imposed by the implementing agency, including halting cleanup or mitigating adverse consequences from cleanup activities; and

(3) Incorporate these self-initiated cleanup measures in the corrective action plan that is submitted to the implementing agency for approval.

§ 280.67 Public participation.

(a) For each confirmed release that requires a corrective action plan, the implementing agency must provide notice to the public by means designed to reach those members of the public directly affected by the release and the planned corrective action. This notice may include, but is not limited to, public notice in local newspapers, block advertisements, public service announcements, publication in a state register, letters to individual households, or personal contacts by field staff.

(b) The implementing agency must ensure that site release information and decisions concerning the corrective action plan are made available to the public for inspection upon request.

(c) Before approving a corrective action plan, the implementing agency may hold a public meeting to consider comments on the proposed corrective

action plan if there is sufficient public interest, or for any other reason.

(d) The implementing agency must give public notice that complies with paragraph (a) of this section if implementation of an approved corrective action plan does not achieve the established cleanup levels in the plan and termination of that plan is under consideration by implementing agency.

Subpart G — Out-of-Service UST Systems and Closure

§280.70 Temporary closure.

(a) When an UST system is temporarily closed, owners and operators must continue operation and maintenance of corrosion protection in accordance with §280.31, and any release detection in accordance with Subpart D. Subparts E and F must be complied with if a release is suspected or confirmed. However, release detection is not required as long as the UST system is empty. The UST system is empty when all materials have been removed using commonly employed practices so that no more than 2.5 centimeters (one inch) of residue, or 0.3 percent by weight of the total capacity of the UST system, remain in the system.

(b) When an UST system is temporarily closed for 3 months or more, owners and operators must also comply with the following requirements:

(1) Leave vent lines open and functioning; and

(2) Cap and secure all other lines, pumps, manways, and ancillary equipment.

(c) When an UST system is temporarily closed for more than 12 months, owners and operators must permanently close the UST system if it does not meet either performance standards in §280.20 for new UST systems or the upgrading requirements in §280.21, *except that* the spill and overfill equipment requirements do not have to be met. Owners and operators must permanently close the substandard UST systems at the end of this 12-month period in accordance with §§280.71-280.74, *unless* the implementing agency provides an extension of the 12-month temporary closure period. Owners and operators must complete a site assessment in accordance with §280.72 before such an extension can be applied for.

§280.71 Permanent closure and changes-in-service.

(a) At least 30 days before beginning either permanent closure or a change-in-service under paragraphs (b) and (c) of this section, or within another reasonable time period determined by the implementing agency, owners and operators must notify the implementing agency of their intent to permanently close or make a change-in-service, *unless* such action is in response to corrective action. The required assessment of the excavation zone under §280.72 must be performed after notifying the implementing agency but before completion of the permanent closure or a change-in-service.

(b) To permanently close a tank, owners and operators must empty and clean it by removing all liquids and accumulated sludges. All tanks taken out of service permanently must also be either removed from the ground or filled with an inert solid material.

(c) Continued use of an UST system to store a non-regulated substance is considered a change-in-service. Before a change-in-service, owners and operators must empty and clean the tank by removing all liquid and accumulated sludge and conduct a site assessment in accordance with §280.72.

Note: The following cleaning and closure procedures may be used to comply with this section:

(A) American Petroleum Institute Recommended Practice 1604, "Removal and Disposal of Used Underground Petroleum Storage Tanks";

(B) American Petroleum Institute Publication 2015, "Cleaning Petroleum Storage Tanks";

(C) American Petroleum Institute Recommended Practice 1631, "Interior Lining of Underground Storage Tanks," may be used as guidance for compliance with this section; and

(D) The National Institute for Occupational Safety and Health "Criteria for a Recommended Standard • • • Working in Confined Space" may be used as guidance for conducting safe closure procedures at some hazardous substance tanks.

§280.72 Assessing the site at closure or change-in-service.

(a) Before permanent closure or a change-in-service is completed, owners and operators must measure for the presence of a release where contamination is most likely to be present at the UST site. In selecting sample types, sample locations, and measurement methods, owners and operators must consider the method of closure, the nature of the stored substance, the type of backfill, the depth to ground water, and other factors appropriate for identifying the presence of a release. The requirements of this section are satisfied if one of the external release detection methods allowed in §280.43(e) and (f) is operating in accordance with the requirements in §280.43 at the time of closure, and indicates no release has occurred.

(b) If contaminated solid, contaminated ground water, or free product as a liquid or vapor is discovered under paragraph (a) of this section, or by any other manner, owners and operators must begin corrective action in accordance with Subpart F.

§280.73 Applicability to previously closed UST systems.

When directed by the implementing agency, the owner and operator of an UST system permanently closed before December 22, 1988 must assess the excavation zone and close the UST system in accordance with this Subpart if releases from the UST may, in the judgment of the implementing agency, pose a current or potential threat to human health and the environment.

§280.74 Closure records.

Owners and operators must maintain records in accordance with §280.34 that are capable of demonstrating compliance with closure requirements under this Subpart. The results of the excavation zone assessment required in §280.72 must be maintained for at least 3 years after completion of permanent closure or change-in-service in one of the following ways:

(a) By the owners and operators who took the UST system out of service;

(b) By the current owners and operators of the UST system site; or

(c) By mailing these records to the implementing agency if they cannot be maintained at the closed facility.

Subpart H — Financial Responsibility

[Added by 53 FR 43370, October 26, 1988]

[Sec. 280.74(c)]

§280.90 Applicability.

(a) This subpart applies to owners and operators of all petroleum underground storage tank (UST) systems except as otherwise provided in this section.

(b) Owners and operators of petroleum UST systems are subject to these requirements if they are in operation on or after the date for compliance established in §280.91.

(c) State and Federal government entities whose debts and liabilities are the debts and liabilities of a state or the United States are exempt from the requirements of this subpart.

(d) The requirements of this subpart do not apply to owners and operators of any UST system described in §280.10(b) or (c).

(e) If the owner and operator of a petroleum underground storage tank are separate persons, only one person is required to demonstrate financial responsibility; however, both parties are liable in event of noncompliance. Regardless of which party complies, the date set for compliance at a particular facility is determined by the characteristics of the owner as set forth in §280.91

§ 280.91 Compliance dates.

Owners of petroleum underground storage tanks are required to comply with the requirements of this subpart by the following dates:

(a) All petroleum marketing firms owning 1,000 or more USTs and all other UST owners that report a tangible net worth of $20 million or more to the U.S. Securities and Exchange Commission (SEC), Dun and Bradstreet, the Energy Information Administration, or the Rural Electrification Administration: January 24, 1989, except that compliance with §280.94(b) is required by: July 24, 1989.

[280.91(a) amended by 54 FR 5452, February 3, 1989]

(b) All petroleum marketing firms owning 100–999 USTs: October 26, 1989.

(c) All petroleum marketing firms owning 13–99 USTs at more than one facility: April 26, 1990.

(d) All petroleum UST owners not described in paragraphs (a), (b), or (c) of this section, including all local government entities: October 26, 1990.

§ 280.92 Definition of terms.

When used in this subpart, the following terms shall have the meanings given below:

(a) "Accidental release" means any sudden or nonsudden release of petroleum from an underground storage tank that results in a need for corrective action and/or compensation for bodily injury or property damage neither expected nor intended by the tank owner or operator.

(b) "Bodily injury" shall have the meaning given to this term by applicable state law; however, this term shall not include those liabilities which, consistent with standard insurance industry practices, are excluded from coverage in liability insurance policies for bodily injury.

(c) "Controlling interest" means direct ownership of at least 50 percent of the voting stock of another entity.

(d) "Director of the Implementing Agency" means the EPA Regional Administrator, or, in the case of a state with a program approved under section 9004, the Director of the designated state or local agency responsible for carrying out an approved UST program.

(e) "Financial reporting year" means the latest consecutive twelve-month period for which any of the following reports used to support a financial test is prepared:

(1) a 10–K report submitted to the SEC;

(2) an annual report of tangible net worth submitted to Dun and Bradstreet; or

(3) annual reports submitted to the Energy Information Administration or the Rural Electrification Administration. "Financial reporting year" may thus comprise a fiscal or a calendar year period.

(f) "Legal defense cost" is any expense that an owner or operator or provider of financial assurance incurs in defending against claims or actions brought.

(1) By EPA or a state to require corrective action or to recover the costs of corrective action;

(2) By or on behalf of a third party for bodily injury or property damage caused by an accidental release; or

(3) By any person to enforce the terms of a financial assurance mechanism.

(g) "Occurrence" means an accident, including continuous or repeated exposure to conditions, which results in a release from an underground storage tank.

Note: This definition is intended to assist in the understanding of these regulations and is not intended either to limit the meaning of "occurrence" in a way that conflicts with standard insurance usage or to prevent the use of other standard insurance terms in place of "occurrence."

(h) "Owner or operator," when the owner or operator are separate parties, refers to the party that is obtaining or has obtained financial assurances.

(i) "Petroleum marketing facilities" include all facilities at which petroleum is produced or refined and all facilities from which petroleum is sold or transferred to other petroleum marketers or to the public.

(j) "Petroleum marketing firms" are all firms owning petroleum marketing facilities. Firms owning other types of facilities with USTs as well as petroleum marketing facilities are considered to be petroleum marketing firms.

(k) "Property damage" shall have the meaning given this term by applicable state law. This term shall not include those liabilities which, consistent with standard insurance industry practices, are excluded from coverage in liability insurance policies for property damage. However, such exclusions for property damage shall not include corrective action associated with releases from tanks which are covered by the policy.

(l) "Provider of financial assurance" means an entity that provides financial assurance to an owner or operator of an underground storage tank through one of the mechanisms listed in §§ 280.95–280.103, including a guarantor, insurer, risk retention group, surety, issuer of a letter of credit, issuer of a state-required mechanism, or a state.

(m) "Substantial business relationship" means the extent of a business relationship necessary under applicable state law to make a guarantee contract issued incident to that relationship valid and enforceable. A guarantee contract is issued "incident

to that relationship" if it arises from and depends on existing economic transactions between the guarantor and the owner or operator.

(n) "Tangible net worth" means the tangible assets that remain after deducting liabilities; such assets do not include intangibles such as goodwill and rights to patents or royalties. For purposes of this definition, "assets" means all existing and all probable future economic benefits obtained or controlled by a particular entity as a result of past transactions.

§ 280.93 Amount and scope of required financial responsibility.

(a) Owners or operators of petroleum underground storage tanks must demonstrate financial responsibility for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum underground storage tanks in at least the following per-occurrence amounts:

(1) For owners or operators of petroleum underground storage tanks that are located at petroleum marketing facilities, or that handle an average of more than 10,000 gallons of petroleum per month based on annual throughput for the previous calendar year: $1 million.

(2) For all other owners or operators of petroleum underground storage tanks: $500,000.

(b) Owners or operators of petroleum underground storage tanks must demonstrate financial responsibility for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum underground storage tanks in at least the following annual aggregate amounts:

(1) For owners or operators of 1 to 100 petroleum underground storage tanks, $1 million; and

(2) For owners or operators of 101 or more petroleum underground storage tanks, $2 million.

(c) For the purposes of paragraphs (b) and (f) of this section, only, "a petroleum underground storage tank" means a single containment unit and does not mean combinations of single containment units.

(d) Except as provided in paragraph (e) of this section, if the owner or operator uses separate mechanisms or separate combinations of mechanisms to demonstrate financial responsibility for:

(1) Taking corrective action;
(2) Compensating third parties for bodily injury and property damage caused by sudden accidental releases; or
(3) Compensating third parties for bodily injury and property damage caused by nonsudden accidental releases, the amount of assurance provided by each mechanism or combination of mechanisms must be in the full amount specified in paragraphs (a) and (b) of this section.
(e) If an owner or operator uses separate mechanisms or separate combinations of mechanisms to demonstrate financial responsibility for different petroleum underground storage tanks, the annual aggregate required shall be based on the number of tanks covered by each such separate mechanism or combination of mechanisms.
(f) Owners or operators shall review the amount of aggregate assurance provided whenever additional petroleum underground storage tanks are acquired or installed. If the number of petroleum underground storage tanks for which assurance must be provided exceeds 100, the owner or operator shall demonstrate financial responsibility in the amount of at least $2 million of annual aggregate assurance by the anniversary of the date on which the mechanism demonstrating financial responsibility became effective. If assurance is being demonstrated by a combination of mechanisms, the owner or operator shall demonstrate financial responsibility in the amount of at least $2 million of annual aggregate assurance by the first-occurring effective date anniversary of any one of the mechanisms combined (other than a financial test or guarantee) to provide assurance.
(g) The amounts of assurance required under this section exclude legal defense costs.
(h) The required per-occurrence and annual aggregate coverage amounts do not in any way limit the liability of the owner or operator.

§ 280.94 Allowable mechanisms and combinations of mechanisms.

(a) Subject to the limitations of paragraphs (b) and (c) of this section, an owner or operator may use any one or combination of the mechanisms listed in §§ 280.95 through 280.103 to demonstrate financial responsibility under this subpart for one or more underground storage tanks.
(b) An owner or operator may use a guarantee or surety bond to establish financial responsibility only if the Attorney(s) General of the state(s) in which the underground storage tanks are located has (have) submitted a written statement to the implementing agency that a guarantee or surety bond executed as described in this section is a legally valid and enforceable obligation in that state.
(c) An owner or operator may use self-insurance in combination with a guarantee only if, for the purpose of meeting the requirements of the financial test under this rule, the financial statements of the owner or operator are not consolidated with the financial statements of the guarantor.

§ 280.95 Financial test of self-insurance.

(a) An owner or operator, and/or guarantor, may satisfy the requirements of § 280.93 by passing a financial test as specified in this section. To pass the financial test of self-insurance, the owner or operator, and/or guarantor must meet the criteria of paragraph (b) or (c) of this section based on year-end financial statements for the latest completed fiscal year.
(b)(1) The owner or operator, and/or guarantor, must have a tangible net worth of at least ten times:
(i) The total of the applicable aggregate amount required by § 280.93, based on the number of underground storage tanks for which a financial test is used to demonstrate financial responsibility to EPA under this section or to a state implementing agency under a state program approved by EPA under 40 CFR Part 281;
(ii) The sum of the corrective action cost estimates, the current closure and post-closure care cost estimates, and amount of liability coverage for which a financial test is used to demonstrate financial responsibility to EPA under 40 CFR 264.101, 264.143, 264.145, 265.143, 265.145, 264.147, and 265.147 or to a state implementing agency under a state program authorized by EPA under 40 CFR Part 271; and
(iii) The sum of current plugging and abandonment cost estimates for which a financial test is used to demonstrate financial responsibility to EPA under 40 CFR 144.63 or to a state implementing agency under a state program authorized by EPA under 40 CFR Part 145.
(2) The owner or operator, and/or guarantor, must have a tangible net worth of at least $10 million.
(3) The owner or operator, and/or guarantor, must have a letter signed by the chief financial officer worded as specified in paragraph (d) of this section.
(4) The owner or operator, and/or guarantor, must either:
(i) File financial statements annually with the U.S. Securities and Exchange Commission, the Energy Information Administration, or the Rural Electrification Administration; or
(ii) Report annually the firm's tangible net worth to Dun and Bradstreet, and Dun and Bradstreet must have assigned the firm a financial strength rating of 4A or 5A.
(5) The firm's year-end financial statements, if independently audited, cannot include an adverse auditor's opinion, a disclaimer of opinion, or a "going concern" qualification.
(c)(1) The owner or operator, and/or guarantor must meet the financial test requirements of 40 CFR 264.147(f)(1), substituting the appropriate amounts specified in § 280.93 (b)(1) and (b)(2) for the "amount of liability coverage" each time specified in that section.
(2) The fiscal year-end financial statements of the owner or operator, and/or guarantor, must be examined by an independent certified public accountant and be accompanied by the accountant's report of the examination.
(3) The firm's year-end financial statements cannot include an adverse auditor's opinion, a disclaimer of opinion, or a "going concern" qualification.
(4) The owner or operator, and/or guarantor, must have a letter signed by the chief financial officer, worded as specified in paragraph (d) of this section.
(5) If the financial statements of the owner or operator, and/or guarantor, are not submitted annually to the U.S. Securities and Exchange Commission, the Energy Information Administration or the Rural Electrification Administration, the owner or operator, and/or guarantor, must obtain a special report by an independent certified public accountant stating that:
(i) He has compared the data that the letter form the chief financial officer specifies as having been derived from the latest year-end financial statements of the owner or operator, and/or guarantor, with the amounts in such financial statements; and
(ii) In connection with that comparison, no matters came to his attention which caused him to believe that the specified data should be adjusted.
(d) To demonstrate that it meets the financial test under paragraph (b) or (c) of this section, the chief financial officer of the owner or operator, or guarantor, must sign, within 120 days of the close of each financial reporting year, as defined by the twelve-month period for which financial statements used to

support the financial test are prepared, a letter worded exactly as follows, except that the instructions in brackets are to be replaced by the relevant information and the brackets deleted:

Letter from Chief Financial Officer

I am the chief financial officer of [insert: name and address of the owner or operator, or guarantor]. This letter is in support of the use of [insert: "the financial test of self-insurance," and/or "guarantee"] to demonstrate financial responsibility for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage"] caused by [insert: "suddent accidential releases" and/or "nonsudden accidential releases"] in the amount of at least [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate arising from operating [an] underground storage tank(s).

Underground storage tanks at the following facilities are assured by this financial test or a financial test under an authorized State program by this [insert: "owner or operator," and/or "guarantor"]: [List for each facility: the name and address of the facility where tanks assured by this financial test are located, and whether tanks are assured by this financial test or a financial test under a State program approved under 40 CFR Part 281. If separate mechanisms or combinations of mechanisms are being used to assure any of the tanks at this facility, list each tank assured by this financial test or a financial test under a State program authorized under 40 CFR Part 281 by the tank identification number provided in the notification submitted pursuant to 40 CFR 280.22 or the corresponding State requirements.]

A [insert: "financial test," and/or "guarantee"] is also used by this [insert: "owner or operator," or "guarantor"] to demonstrate evidence of financial responsibility in the following amounts under other EPA regulations or state programs authorized by EPA under 40 CFR Parts 271 and 145:

EPA Regulations	*Amount*
Closure (§§ 264.143 and 265.143)	$
Post-Closure Care (§§ 264.145 and 265.145)	$
Liability Coverage (§§ 264.147 and 265.147)	$
Corrective Action (§§ 264.101(b))	$
Plugging and Abandonment (§ 144.63)	$
Closure	$
Post-Closure Care	$
Liability Coverage	$
Corrective Action	$
Plugging and Abandonment	$
Total	$

This [insert: "owner or operator," or "guarantor"] has not received an adverse opinion, a disclaimer of opinion, or a "going concern" qualification from an independent auditor on his financial statements for the latest completed fiscal year.

[Fill in the information for Alternative I if the criteria of paragraph (b) of § 280.95 are being used to demonstrate compliance with the financial test requirements. Fill in the information for Alternative II if the criteria of paragraph (c) of § 280.95 are being used to demonstrate compliance with the financial test requirements.]

Alternative I

1. Amount of annual UST aggregate coverage being assured by a financial test, and/or guarantee ..... $
2. Amount of corrective action, closure and post-closure care costs, liability coverage, and plugging and abandonment costs covered by a financial test, and/or guarantee ..... $
3. Sum of lines 1 and 2 ..... $
4. Total tangible assets ..... $
5. Total liabilities [if any of the amount reported on line 3 is included in total liabilities, you may deduct that amount from this line and add that amount to line 6] ..... $
6. Tangible net worth [subtract line 5 from line 4] ..... $

	Yes	No
7. Is line 6 at least $10 million?	____	____
8. Is line 6 at least 10 times line 3?	____	____
9. Have financial statements for the latest fiscal year been filed with the Securities and Exchange Commission?	____	____
10. Have financial statements for the latest fiscal year been filed with the Energy Information Administration?	____	____
11. Have financial statements for the lastest fiscal year been filed with the Rural Electrification Administration?	____	____
12. Has financial information been provided to Dun and Bradstreet, and has Dun and Bradstreet provided a financial strength rating of 4A or 5A? [Answer "Yes" only if both criteria have been met.]	____	____

Alternative II

1. Amount of annual UST aggregate coverage being assured by a test, and/or guarantee ..... $
2. Amount of corrective action, closure and post-closure care costs, liability coverage, and plugging and abandonment costs covered by a financial test, and/or guarantee ..... $
3. Sum of lines 1 and 2 ..... $
4. Total tangible assets ..... $
5. Total liabilities [if any of the amount reported on line 3 is included in total liabilities, you may deduct that amount from this line and add that amount to line 6] ..... $
6. Tangible net worth [subtract line 5 from line 4] ..... $

Alternative I—Continued

7. Total assets in the U.S. [required only if less than 90 percent of assets are located in the U.S.] ..... $

	Yes	No
8. Is line 6 at least $10 million?	____	____
9. Is line 6 at least 6 times line 3?	____	____
10. Are at least 90 percent of assets located in the U.S.? [If "No," complete line 11.]	____	____
11. Is line 7 at least 6 times line 3?	____	____

[Fill in either lines 12–15 or lines 16–18:]

12. Current assets ..... $
13. Current liabilities .....
14. Net working capital [subtract line 13 from line 12] .....

	Yes	No
15. Is line 14 at least 6 times line 3?	____	____
16. Current bond rating of most recent bond issue	____	____
17. Name of rating service	____	____
18. Date of maturity of bond	____	____
19. Have financial statements for the latest fiscal year been filed with the SEC, the Energy Information Administration, or the Rural Electrification Administration?	____	____

[If "No," please attach a report from an independent certified public accountant certifying that there are no material differences between the data as reported in lines 4–18 above and the financial statements for the latest fiscal year.]

[For both Alternative I and Alternative II complete the certification with this statement.]

I hereby certify that the wording of this letter is identical to the wording specified in 40 CFR Part 280.95(d) as such regulations were constituted on the date shown immediately below.

[Signature]
[Name]
[Title]
[Date]

(e) If an owner or operator using the test to provide financial assurance finds that he or she no longer meets the requirements of the financial test based on the year-end financial statements, the owner or operator must obtain alternative coverage within 150 days of the end of the year for which financial statements have been prepared.

(f) The Director of the implementing agency may require reports of financial condition at any time from the owner or operator, and/or guarantor. If the Director finds, on the basis of such reports or other information, that the owner or operator, and/or guarantor, no longer meets the financial test requirements of § 280.95(b) or (c) and (d), the owner or operator must obtain

alternate coverage within 30 days after notification of such a finding.

(g) If the owner or operator fails to obtain alternate assurance within 150 days of finding that he or she no longer meets the requirements of the financial test based on the year-end financial statements, or within 30 days of notification by the Director of the implementing agency that he or she no longer meets the requirements of the financial test, the owner or operator must notify the Director of such failure within 10 days.

§ 280.96 Guarantee.

(a) An owner or operator may satisfy the requirements of § 280.93 by obtaining a guarantee that conforms to the requirements of this section. The guarantor must be:

(1) A firm that (i) possesses a controlling interest in the owner or operator; (ii) possesses a controlling interest in a firm described under paragraph (a)(1)(i) of this section; or, (iii) is controlled through stock ownership by a common parent firm that possesses a controlling interest in the owner or operator; or,

(2) A firm engaged in a substantial business relationship with the owner or operator and issuing the guarantee as an act incident to that business relationship.

(b) Within 120 days of the close of each financial reporting year the guarantor must demonstrate that it meets the financial test criteria of § 280.95 based on year-end financial statements for the latest completed financial reporting year by completing the letter from the chief financial officer described in § 280.95(d) and must deliver the letter to the owner or operator. If the guarantor fails to meet the requirements of the financial test at the end of any financial reporting year, within 120 days of the end of that financial reporting year the guarantor shall send by certified mail, before cancellation or nonrenewal of the guarantee, notice to the owner or operator. If the Director of the implementing agency notifies the guarantor that he no longer meets the requirements of the financial test of § 280.95 (b) or (c) and (d), the guarantor must notify the owner or operator within 10 days of receiving such notification from the Director. In both cases, the guarantee will terminate no less than 120 days after the date the owner or operator receives the notification, as evidenced by the return receipt. The owner or operator must obtain alternative coverage as specified in § 280.110(c).

(c) The guarantee must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Guarantee

Guarantee made this [date] by [name of guaranteeing entity], a business entity organized under the laws of the state of [name of state], herein referred to as guarantor, to [the state implementing agency] and to any and all third parties, and obligees, on behalf of [owner or operator] of [business address].

Recitals.

(1) Guarantor meets or exceeds the financial test criteria of 40 CFR 280.93 (b) or (c) and (d) and agrees to comply with the requirements for guarantors as specified in 40 CFR 280.96(b).

(2) [Owner or operator] owns or operates the following underground storage tank(s) covered by this guarantee: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR 280.22 or the corresponding state requirement, and the name and address of the facility.] This guarantee satisfies 40 CFR Part 280, Subpart H requirements for assuring funding for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the above-identified underground storage tank(s) in the amount of [insert dollar amount] per occurrence and [insert dollar amount] annual aggregate.

(3) [Insert appropriate phrase: "On behalf of our subsidiary" (if guarantor is corporate parent of the owner or operator); "On behalf of our affiliate" (if guarantor is a related firm of the owner or operator); or "Incident to our business relationship with" (if guarantor is providing the guarantee as an incident to a substantial business relationship with owner or operator)] [owner or operator], guarantor guarantees to [implementing agency] and to any and all third parties that:

In the event that [owner or operator] fails to provide alternative coverage within 60 days after receipt of a notice of cancellation of this guarantee and the [Director of the implementing agency] has determined or suspects that a release has occurred at an underground storage tank covered by this guarantee, the guarantor, upon instructions from the [Director], shall fund a standby trust fund in accordance with the provisions of 40 CFR 280.108, in an amount not to exceed the coverage limits specified above.

In the event that the [Director] determines that [owner or operator] has failed to perform corrective action for releases arising out of the operation of the above-identified tank(s) in accordance with 40 CFR Part 280, Subpart F, the guarantor upon written instructions from the [Director] shall fund a standby trust in accordance with the provisions of 40 CFR 280.108, in an amount not to exceed the coverage limits specified above.

If [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by ["sudden" and/or "nonsudden"] accidential releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor, upon written instructions from the [Director], shall fund a standby trust in accordance with the provisions of 40 CFR 280.108 to satisfy such judgment(s), award(s), or settlement agreement(s) up to the limits of coverage specified above.

(4) Guarantor agrees that if, at the end of any fiscal year before cancellation of this guarantee, the guarantor fails to meet the financial test criteria of 40 CFR 280.95 (b) or (c) and (d), guarantor shall send within 120 days of such failure, by certified mail, notice to [owner or operator]. The guarantee will terminate 120 days from the date of receipt of the notice by [owner or operator], as evidenced by the return receipt.

(5) Guarantor agrees to notify [owner or operator] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code naming guarantor as debtor, within 10 days after commencement of the proceeding.

(6) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [owner or operator] pursuant to 40 CFR Part 280.

(7) Guarantor agrees to remain bound under this guarantee for so long as [owner or operator] must comply with the applicable financial responsibility requirements of 40 CFR Part 280, Subpart H for the above-identified tank(s), except that guarantor may cancel this guarantee by sending notice by certified mail to [owner or operator], such cancellation to become effective no earlier than 120 days after receipt of such notice by [owner or operator], as evidenced by the return receipt.

(8) The guarantor's obligation does not apply to any of the following:

(a) Any obligation of [insert owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;

(b) Bodily injury to an employee of [insert owner or operator] arising from, and in the course of, employment by [insert owner or operator];

(c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(d) Property damage to any property owned, rented, loaded to, in the care, custody, or control of, or occupied by [insert owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

(e) Bodily damage or property damage for which [insert owner or operator] is obligated

to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 40 CFR 280.93.

(9) Guarantor expressly waives notice of acceptance of this guarantee by [the implementing agency], by any or all third parties, or by [owner or operator].

I hereby certify that the wording of this guarantee is identical to the wording specified in 40 CFR 280.96(c) as such regulations were constituted on the effective date shown immediately below.

Effective date: _____

[Name of guarantor]

[Authorized signature for guarantor]

[Name of person signing]

[Title of person signing]

Signature of witness or notary: _____

(d) An owner or operator who uses a guarantee to satisfy the requirements of § 280.93 must establish a standby trust fund when the guarantee is obtained. Under the terms of the guarantee, all amounts paid by the guarantor under the guarantee will be deposited directly into the standby trust fund in accordance with instructions from the Director of the implementing agency under § 280.108. This standby trust fund must meet the requirements specified in § 280.103.

§ 280.97 Insurance and risk retention group coverage.

(a) An owner or operator may satisfy the requirements of § 290.93 by obtaining liability insurance that conforms to the requirements of this section from a qualified insurer or risk retention group. Such insurance may be in the form of a separate insurance policy or an endorsement to an existing insurance policy.

(b) Each insurance policy must be amended by an endorsement worded as specified in paragraph (b)(1) of this section, or evidenced by a certificate of insurance worded as specified in paragraph (b)(2) of this section, except that instructions in brackets must be replaced with the relevant information and the brackets deleted:

(1) Endorsement

Name: [name of each covered location] _____

Address: [address of each covered location] _____

Policy Number: _____

Period of Coverage: [current policy period] _____

Name of [Insurer or Risk Retention Group]: _____

Address of [Insurer or Risk Retention Group]: _____

Name of Insured: _____

Address of Insured: _____

Endorsement:

1. This endorsement certifies that the policy to which the endorsement is attached provides liability insurance covering the following underground storage tanks:

[List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR 280.22, or the corresponding state requirement, and the name and address of the facility.]

for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the underground storage tank(s) identified above.

The limits of liability are [insert the dollar amount of the "each occurrence" and "annual aggregate" limits of the Insurer's or Group's liability; if the amount of coverage is different for different types of coverage or for different underground storage tanks or locations, indicate the amount of coverage for each type of coverage and/or for each underground storage tank or location], exclusive of legal defense costs. This coverage is provided under [policy number]. The effective date of said policy is [date].

2. The insurance afforded with respect to such occurrences is subject to all of the terms and conditions of the policy; provided, however, that any provisions inconsistent with subsections (a) through (e) of this Paragraph 2 are hereby amended to conform with subsections (a) through (e):

a. Bankruptcy or insolvency of the insured shall not relieve the ["Insurer" or "Group"] of its obligations under the policy to which this endorsement is attached.

b. The ["Insurer" or "Group"] is liable for the payment of amounts within any deductible applicable to the policy to the provider of corrective action or a damaged third-party, with a right of reimbursement by the insured for any such payment made by the ["Insurer" or "Group"]. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated under another mechanism or combination of mechanisms as specified in 40 CFR 280.95–280.102.

c. Whenever requested by [a Director of an implementing agency], the ["Insurer" or "Group"] agrees to furnish to [the Director] a signed duplicate original of the policy and all endorsements.

d. Cancellation or any other termination of the insurance by the ["Insurer" or "Group"] will be effective only upon written notice and only after the expiration of 60 days after a copy of such written notice is received by the insured.

[Insert for claims-made policies:

e. The insurance covers claims for any occurrence that commenced during the term of the policy that is discovered and reported to the ["Insurer" or "Group"] within six months of the effective date of the cancellation or termination of the policy.]

I hereby certify that the wording of this instrument is identical to the wording in 40 CFR 280.97(b)(1) and that the ["Insurer" or "Group"] is ["licensed to transact the business of insurance or eligible to provide insurance as an excess or surplus lines insurer in one or more states"].

[Signature of authorized representative of Insurer or Risk Retention Group]

[Name of person signing]

[Title of person signing], Authorized Representative of [name of Insurer or Risk Retention Group]

[Address of Representative]

(2) Certificate of Insurance

Name: [name of each covered location] _____

Address: [address of each covered location] _____

Policy Number: _____

Endorsement (if applicable): _____

Period of Coverage: [current policy period] _____

Name of [Insurer or Risk Retention Group]: _____

Address of [Insurer or Risk Retention Group]: _____

Name of Insured: _____

Address of Insured: _____

Certification:

1. [Name of Insurer or Risk Retention Group], [the "Insurer" or "Group"], as identified above, hereby certifies that it has issued liability insurance covering the following underground storage tank(s):

[List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR 280.22, or the corresponding state requirement, and the name and address of the facility.]

for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the underground storage tank(s) identified above.

The limits of liability are [insert the dollar amount of the "each occurrence" and "annual aggregate" limits of the Insurer's or Group's liability; if the amount of coverage is different for different types of coverage or for different underground storage tanks or locations,

indicate the amount of coverage for each type of coverage and/or for each underground storage tank or location], exclusive of legal defense costs. This coverage is provided under [policy number]. The effective date of said policy is [date].

2. The ["Insurer" or "Group"] further certifies the following with respect to the insurance described in Paragraph 1:

a. Bankruptcy or insolvency of the insured shall not relieve the ["Insurer" or "Group"] of its obligations under the policy to which this certificate applies.

b. The ["Insurer" or "Group"] is liable for the payment of amounts within any deductible applicable to the policy to the provider of corrective action or a damaged third-party, with a right of reimbursement by the insured for any such payment made by the ["Insurer" or "Group"]. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated under another mechanism or combination of mechanisms as specified in 40 CFR 280.95–280.102.

c. Whenever requested by [a Director of an implementing agency], the ["Insurer" or "Group"] agrees to furnish to [the Director] a signed duplicate original of the policy and all endorsements.

d. Cancellation or any other termination of the insurance by the ["Insurer" or "Group"] will be effective only upon written notice and only after the expiration of 60 days after a copy of such written notice is received by the insured.

[Insert for claims-made policies:

e. The insurance covers claims for any occurrence that commenced during the term of the policy that is discovered and reported to the ["Insurer" or "Group"] within six months of the effective date of the cancellation or other termination of the policy.]

I hereby certify that the wording of this instrument is identical to the wording in 40 CFR 280.97(b)(2) and that the ["Insurer" or "Group"] is ["licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more states"].

[Signature of authorized representative of Insurer]
[Type name]
[Title], Authorized Representative of [name of Insurer or Risk Retention Group]
[Address of Representative]

(c) Each insurance policy must be issued by an insurer or a risk retention group that, at a minimum, is licensed to transact the business of insurance or eligible to provide insurance as an excess or surplus lines insurer in one or more states.

§ 280.98 Surety bond.

(a) An owner or operator may satisfy the requirements of § 280.93 by obtaining a surety bond that conforms to the requirements of this section. The surety company issuing the bond must be among those listed as acceptable sureties on federal bonds in the latest Circular 570 of the U.S. Department of the Treasury.

(b) The surety bond must be worded as follows, except that instructions in brackets must be replaced with the relevant information and the brackets deleted:

Performance Bond

Date bond executed: _____
Period of coverage: _____
Principal: [legal name and business address of owner or operator]

Type of organization: [insert "individual," "joint venture," "partnership," or "corporation"]

State of incorporation (if applicable):

Surety(ies): [name(s) and business address(es)]

Scope of Coverage: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR 280.22, or the corresponding state requirement, and the name and address of the facility. List the coverage guaranteed by the bond: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases" "arising from operating the underground storage tank"].

Penal sums of bond:
Per occurrence $ _____
Annual aggregate $ _____
Surety's bond number: _____

Know All Persons by These Presents, that we, the Principal and Surety(ies), hereto are firmly bound to [the implementing agency], in the above penal sums for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sums jointly and severally only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sums only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sums.

Whereas said Principal is required under Subtitle I of the Resource Conservation and Recovery Act (RCRA), as amended, to provide financial assurance for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the underground storage tanks identified above, and

Whereas said Principal shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance;

Now, therefore, the conditions of the obligation are such that if the Principal shall faithfully ["take corrective action, in accordance with 40 CFR Part 280, Subpart F and the Director of the state implementing agency's instructions for," and/or "compensate injured third parties for bodily injury and property damage caused by" either "sudden" or "nonsudden" or "sudden and nonsudden"] accidental releases arising from operating the tank(s) indentified above, or if the Principal shall provide alternate financial assurance, as specified in 40 CFR Part 280, Subpart H, within 120 days after the date the notice of cancellation is received by the Principal from the Surety(ies), then this obligation shall be null and void; otherwise it is to remain in full force and effect.

Such obligation does not apply to any of the following:

(a) Any obligation of [insert owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;

(b) Bodily injury to an employee of [insert owner or operator] arising from, and in the course of, employment by [insert owner or operator];

(c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

(e) Bodily injury or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 40 CFR 280.93.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above.

Upon notification by [the Director of the implementing agency] that the Principal has failed to ["take corrective action, in accordance with 40 CFR Part 280, Subpart F and the Director's instructions," and/or "compensate injured third parties"] as guaranteed by this bond, the Surety(ies) shall either perform ["corrective action in accordance with 40 CFR Part 280 and the Director's instructions," and/or "third-party liability compensation"] or place funds in an amount up to the annual aggregate penal sum into the standby trust fund as directed by [the Regional Administrator or the Director] under 40 CFR 280.108.

Upon notification by [the Director] that the Principal has failed to provide alternate financial assurance within 60 days after the date the notice of cancellation is received by the Principal from the Surety(ies) and that [the Director] has determined or suspects that

a release has occurred, the Surety(ies) shall place funds in an amount not exceeding the annual aggregate penal sum into the standby trust fund as directed by [the Director] under 40 CFR 280.108.

The Surety(ies) hereby waive(s) notification of amendments to applicable laws, statutes, rules, and regulations and agrees that no such amendment shall in any way alleviate its (their) obligation on this bond.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the annual aggregate to the penal sum shown on the face of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said annual aggregate penal sum.

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal, provided, however, that cancellation shall not occur during the 120 days beginning on the date of receipt of the notice of cancellation by the Principal, as evidenced by the return receipt.

The Principal may terminate this bond by sending written notice to the Surety(ies).

In Witness Thereof, the Principal and Surety(ies) have executed this Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in 40 CFR 280.98(b) as such regulations were constituted on the date this bond was executed.

Principal

[Signature(s)]
[Names(s)]
[Title(s)]
[Corporate seal]

Corporate Surety(ies)

[Name and address]
[State of Incorporation: _____]
[Liability limit: $_____]
[Signature(s)]
[Names(s) and title(s)]
[Corporate seal]

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.]

Bond premium: $_____

(c) Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond. In all cases, the surety's liability is limited to the per-occurrence and annual aggregate penal sums.

(d) The owner or operator who uses a surety bond to satisfy the requirements of § 280.93 must establish a standby trust fund when the surety bond is acquired. Under the terms of the bond, all amounts paid by the surety under the bond will be deposited directly into the standby trust fund in accordance with instructions from the Director under § 280.108. This standby trust fund must meet the requirements specified in § 280.103.

§ 280.99 Letter of credit.

(a) An owner or operator may satisfy the requirements of § 280.93 by obtaining an irrevocable standby letter of credit that conforms to the requirements of this section. The issuing institution must be an entity that has the authority to issue letters of credit in each state where used and whose letter-of-credit operations are regulated and examined by a federal or state agency.

(b) The letter of credit must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Irrevocable Standby Letter of Credit

[Name and address of issuing institution]
[Name and address of Director(s) of state implementing agency(ies)]

Dear Sir or Madam: We hereby establish our irrevocable Standby Letter of Credit No. —— in your favor, at the request and for the account of [owner or operator name] of [address] up to the aggregate amount of [in words] U.S. dollars ($[insert dollar amount]), available upon presentation [insert, if more than one Director of a state implementing agency is a beneficiary, "by any one of you"] of

(1) your sight draft, bearing reference to this letter of credit, No. ——, and

(2) your signed statement reading as follows: "I certify that the amount of the draft is payable pursuant to regulations issued under authority of Subtitle I of the Resource Conservation and Recovery Act of 1976, as amended."

This letter of credit may be drawn on to cover [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"] arising from operating the underground storage tank(s) identified below in the amount of [in words] $[insert dollar amount] per occurrence and [in words] $[insert dollar amount] annual aggregate:

[List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR 280.22, or the corresponding state requirement, and the name and address of the facility.]

The letter of credit may not be drawn on to cover any of the following:

(a) Any obligation of [insert owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;

(b) Bodily injury to an employee of [insert owner or operator] arising from, and in the course of, employment by [insert owner or operator];

(c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

(e) Bodily injury or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 40 CFR 280.93.

This letter of credit is effective as of [date] and shall expire on [date], but such expiration date shall be automatically extended for a period of [at least the length of the original term] on [expiration date] and on each successive expiration date, unless, at least 120 days before the curent expiration date, we notify [owner or operator] by certified mail that we have decided not to extend this letter of credit beyond the current expiration date. In the event that [owner or operator] is so notified, any unused portion of the credit shall be available upon presentation of your sight draft for 120 days after the date of receipt by [owner or operator], as shown on the signed return receipt.

Whenever this letter of credit is drawn on under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us, and we shall deposit the amount of the draft directly into the standby trust fund of [owner or operator] in accordance with your instructions.

We certify that the wording of this letter of credit is identical to the wording specified in 40 CFR 280.99(b) as such regulations were constituted on the date shown immediately below.

[Signature(s) and title(s) of official(s) of issuing institution]

[Date]

This credit is subject to [insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits, published by the International Chamber of Commerce," or "the Uniform Commercial Code"].

(c) An owner or operator who uses a letter of credit to satisfy the requirements of § 280.93 must also establish a standby trust fund when the letter of credit is acquired. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the Director of the implementing agency will be deposited by the issuing institution directly into the standby trust fund in accordance with instructions from the Director under § 280.108. This standby trust fund must meet the requirements specified in § 280.103.

(d) The letter of credit must be irrevocable with a term specified by the issuing institution. The letter of credit

must provide that credit be automatically renewed for the same term as the original term, unless, at least 120 days before the current expiration date, the issuing institution notifies the owner or operator by certified mail of its decision not to renew the letter of credit. Under the terms of the letter of credit, the 120 days will begin on the date when the owner or operator receives the notice, as evidenced by the return receipt.

§ 280.100 Use of state-required mechanism.

(a) For underground storage tanks located in a state that does not have an approved program, and where the state requires owners or operators of underground storage tanks to demonstrate financial responsibility for taking corrective action and/or for compensating third parties for bodily injury and property damage, an owner or operator may use a state-required financial mechanism to meet the requirements of § 280.93 if the Regional Administrator determines that the state mechanism is at least equivalent to the financial mechanisms specified in this subpart.

(b) The Regional Administrator will evaluate the equivalency of a state-required mechanism principally in terms of: certainty of the availability of funds for taking corrective action and/or for compensating third parties; the amount of funds that will be made available; and the types of costs covered. The Regional Administrator may also consider other factors as is necessary.

(c) The state, an owner or operator, or any other interested party may submit to the Regional Administrator a written petition requesting that one or more of the state-required mechanisms be considered acceptable for meeting the requirements of § 280.93. The submission must include copies of the appropriate state statutory and regulatory requirements and must show the amount of funds for corrective action and/or for compensating third parties assured by the mechanism(s). The petitioner to submit additional information as is deemed necessary to make this determination.

[280.100(c) amended by 53 FR 51274, December 21, 1988]

(d) Any petition under this section may be submitted on behalf of all of the state's underground storage tank owners and operators.

(e) The Regional Administrator will notify the petitioner of his determination regarding the mechanism's acceptability in lieu of financial mechanisms specified in this subpart. Pending this determination, the owners and operators using such mechanisms will be deemed to be in compliance with the requirements of §280.93 for underground storage tanks located in the state for the amounts and types of costs covered by such mechanisms.

§280.101 State fund or other state assurance.

(a) An owner or operator may satisfy the requirements of § 280.93 for underground storage tanks located in a state, where EPA is administering the requirements of this subpart, which assures that monies will be available from a state fund or state assurance program to cover costs up to the limits specified in § 280.93 or otherwise assures that such costs will be paid if the Regional Administrator determines that the state's assurance is at least equivalent to the financial mechanisms specified in this subpart.

(b) The Regional Administrator will evaluate the equivalency of a state fund or other state assurance principally in terms of: Certainty of the availability of funds for taking corrective action and/or for compensating third parties; the amount of funds that will be made available; and the types of costs covered. The Regional Administrator may also consider other factors as is necessary.

(c) The state must submit to the Regional Administrator a description of the state fund or other state assurance to be supplied as financial assurance, along with a list of the classes of underground storage tanks to which the funds may be applied. The Regional Administrator may require the state to submit additional information as is deemed necessary to make a determination regarding the acceptability of the state fund or other state assurance. Pending the determination by the Regional Administrator, the owner or operator of a covered class of USTs will be deemed to be in compliance with the requirements of § 280.93 for the amounts and types of costs covered by the state fund or other state assurance.

(d) The Regional Administrator will notify the state of his determination regarding the acceptability of the state's fund or other assurance in lieu of financial mechanisms specified in this subpart. Within 60 days after the Regional Administrator notifies a state that a state fund or other state assurance is acceptable, the state must provide to each owner or operator for which it is assuming financial responsibility a letter or certificate describing the nature of the state's assumption of responsibility. The letter or certificate from the state must include, or have attached to it, the following information: the facility's name and address and the amount of funds for corrective action and/or for compensating third parties that is assured by the state. The owner or operator must maintain this letter or certificate on file as proof of financial responsibility in accordance with §280.107(b)(5).

§ 280.102 Trust fund.

(a) An owner or operator may satisfy the requirements of § 280.93 by establishing a trust fund that conforms to the requirements of this section. The trustee must be an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal agency or an agency of the state in which the fund is established.

(b) The wording of the trust agreement must be identical to the wording specified in § 280.103(b)(1), and must be accompanied by a formal certification of acknowledgement as specified in § 280.103(b)(2).

(c) The trust fund, when established, must be funded for the full required amount of coverage, or funded for part of the required amount of coverage and used in combination with other mechanism(s) that provide the remaining required coverage.

(d) If the value of the trust fund is greater than the required amount of coverage, the owner or operator may submit a written request to the Director of the implementing agency for release of the excess.

(e) If other financial assurance as specified in this subpart is substituted for all or part of the trust fund, the owner or operator may submit a written request to the Director of the implementing agency for release of the excess.

(f) Within 60 days after receiving a request from the owner or operator for release of funds as specified in paragraph (d) or (e) of this section, the Director of the implementing agency will instruct the trustee to release to the owner or operator such funds as the Director specifies in writing.

§ 280.103 Standby trust fund.

(a) An owner or operator using any one of the mechanisms authorized by §§ 280.96, 280.98, or 280.99 must establish a standby trust fund when the mechanism is acquired. The trustee of the standby trust fund must be an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal agency or an agency of the state in which the fund is established.

(b)(1) The standby trust agreement, or trust agreement, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:
[280.103(b)(1) corrected by 53 FR 51274, December 21, 1988]

Trust Agreement

Trust agreement, the "Agreement," entered into as of [date] by and between [name of the owner or operator], a [name of state] [insert "corporation," "partnership," "association," or "proprietorship"], the "Grantor," and [name of corporate trustee], [insert "Incorporated in the state of _____" or "a national bank"], the "Trustee."

Whereas, the United States Environmental Protection Agency, "EPA," an agency of the United States Government, has established certain regulations applicable to the Grantor, requiring that an owner or operator of an underground storage tank shall provide assurance that funds will be available when needed for corrective action and third-party compensation for bodily injury and property damage caused by sudden and nonsudden accidental releases arising from the operation of the underground storage tank. The attached Schedule A lists the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located that are covered by the standby trust agreement.

[Whereas, the Grantor has elected to establish [insert either "a guarantee," "surety bond," or "letter of credit"] to provide all or part of such financial assurance for the underground storage tanks identified herein and is required to establish a standby trust fund able to accept payments from the instrument [This paragraph is only applicable to the standby trust agreement.]];

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the Trustee is willing to act as trustee;

Now, therefore, the Grantor and the Trustee agree as follows:

Section 1. Definitions

As used in this Agreement:

(a) The term "Grantor" means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.

(b) The term "Trustee" means the Trustee who enters into this Agreement and any successor Trustee.

Section 2. Identification of the Financial Assurance Mechanism.

This Agreement pertains to the [identify the financial assurance mechanism, either a guarantee, surety bond, or letter of credit, from which the standby trust fund is established to receive payments [This paragraph is only applicable to the standby trust agreement.]].

Section 3. Establishment of Fund.

The Grantor and the Trustee hereby establish a trust fund, the "Fund," for the benefit of [implementing agency]. The Grantor and the Trustee intend that no third party have access to the Fund except as herein provided. [The Fund is established initially as a standby to receive payments and shall not consist of any property.] Payments made by the provider of financial assurance pursuant to [the Director of the implementing agency's] instruction are transferred to the Trustee and are referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor as provider of financial assurance, any payments necessary to discharge any liability of the Grantor established by [the state implementing agency].

Section 4. Payment for ["Corrective Action" and/or Third-Party Liability Claims"].

The Trustee shall make payments from the Fund as [the Director of the implementing agency] shall direct, in writing, to provide for the payment of the costs of [insert: "taking corrective action" and/or compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"] arising from operating the tanks covered by the financial assurance mechanism identified in this Agreement.

The Fund may not be drawn upon to cover any of the following:

(a) Any obligation of [insert owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;

(b) Bodily injury to an employee of [insert owner or operator] arising from, and in the course of employment by [insert owner or operator];

(c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

(e) Bodily injury or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 40 CFR 280.93.

The Trustee shall reimburse the Grantor, or other persons as specified by [the Director], from the Fund for corrective action expenditures and/or third-party liability claims in such amounts as [the Director] shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as [the Director] specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 5. Payments Comprising the Fund

Payments made to the Trustee for the Fund shall consist of cash and securities acceptable to the Trustee.

Section 6. Trustee Management.

The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiaries and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

(i) Securities or other obligations of the Grantor, or any other owner or operator of the tanks, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2(a), shall not be acquired or held, unless they are securities or other obligations of the federal or a state government;

(ii) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the federal or state government; and

(iii) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment

The Trustee is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee

Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with

certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the federal or state government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses

All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Advice of Counsel

The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any questions arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 11. Trustee Compensation

The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 12. Successor Trustee

The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in writing sent to the Grantor and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 13. Instructions to the Trustee.

All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Schedule B or such other designees as the Grantor may designate by amendment to Schedule B. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by [the Director of the implementing agency] to the Trustee shall be in writing, signed by [the Director], and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or [the director] hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or [the Director], except as provided for herein.

Section 14. Amendment of Agreement

This Agreement may be amended by an instrument in writing executed by the Grantor and the Trustee, or by the Trustee and [the Director of the implementing agency] if the Grantor ceases to exist.

Section 15. Irrevocability and Termination

Subject to the right of the parties to amend this Agreement as provided in Section 14, this Trust shall be irrevocable and shall continue until terminated at the written direction of the Grantor and the Trustee, or by the Trustee and [the Director of the implementing agency], if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

Section 16. Immunity and Indemnification

The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor or [the Director of the implementing agency] issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 17. Choice of Law

This Agreement shall be administered, construed, and enforced according to the laws of the state of [insert name of state], or the Comptroller of the Currency in the case of National Association banks.

Section 18. Interpretation

As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

In Witness whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals (if applicable) to be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this Agreement is identical to the wording specified in 40 CFR 280.103(b)(1) as such regulations were constituted on the date written above.

[Signature of Grantor]
[Name of the Grantor]
[Title]

Attest:

[Signature of Trustee]
[Name of the Trustee]
[Title]
[Seal]
[Signature of Witness]
[Name of the Witness]
[Title]
[Seal]

(2) The standby trust agreement, or trust agreement, must be accompanied by a formal certification of acknowledgment similar to the following. State requirements may differ on the proper content of this acknowledgment.

State of _____

County of _____

On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that she/he resides at [address], that she/he is [title] of [corporation], the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation; and that she/he signed her/his name thereto by like order.

[Signature of Notary Public]
[Name of Notary Public]

(c) The Director of the implementing agency will instruct the trustee to refund the balance of the standby trust fund to the provider of financial assurance if the Director determines that no additional corrective action costs or third-party liability claims will occur as a result of a release covered by the financial assurance mechanism for which the standby trust fund was established.

(d) An owner or operator may establish one trust fund as the depository mechanism for all funds assured in compliance with this rule.

§ 280.104 Substitution of financial assurance mechanisms by owner or operator.

(a) An owner or operator may substitute any alternate financial assurance mechanisms as specified in this subpart, provided that at all times he maintains an effective financial assurance mechanism or combination of

mechanisms that satisfies the requirements of § 280.93.

(b) After obtaining alternate financial assurance as specified in this subpart, an owner or operator may cancel a financial assurance mechanism by providing notice to the provider of financial assurance.

§ 280.105 Cancellation or nonrenewal by a provider of financial assurance.

(a) Except as otherwise provided, a provider of financial assurance may cancel or fail to renew an assurance mechanism by sending a notice of termination by certified mail to the owner or operator.

(1) Termination of a guarantee, a surety bond, or a letter of credit may not occur until 120 days after the date on which the owner or operator receives the notice of termination, as evidenced by the return receipt.

(2) Termination of insurance, risk retention group coverage, or state-funded assurance may not occur until 60 days after the date on which the owner or operator receives the notice of termination, as evidenced by the return receipt.

(b) If a provider of financial responsibility cancels or fails to renew for reasons other than incapacity of the provider as specified in §280.106, the owner or operator must obtain alternate coverage as specified in this section within 60 days after receipt of the notice of termination. If the owner or operator fails to obtain alternate coverage within 60 days after receipt of the notice of termination, the owner or operator must notify the Director of the implementing agency of such failure and submit:

(1) The name and address of the provider of financial assurance;

(2) The effective date of termination; and

(3) The evidence of the financial assistance mechanism subject to the termination maintained in accordance with § 280.107(b).

§ 280.106 Reporting by owner or operator.

(a) An owner or operator must submit the appropriate forms listed in § 280.107(b) documenting current evidence of financial responsibility to the Director of the implementing agency:

(1) Within 30 days after the owner or operator identifies a release from an underground storage tank required to be reported under § 280.53 or § 280.61;

(2) If the owner or operator fails to obtain alternate coverage as required by this subpart, within 30 days after the owner or operator receives notice of:

(i) Commencement of a voluntary or involuntary proceeding under Title 11 (Bakruptcy), U.S. Code, naming a provider of financial assurance as a debtor,

(ii) Suspension or revocation of the authority of a provider of financial assurance to issue a financial assurance mechanism,

(iii) Failure of a guarantor to meet the requirements of the financial test,

(iv) Other incapacity of a provider of financial assurance; or

(3) As required by § 280.95(g) and § 280.105(b).

(b) An owner or operator must certify compliance with the financial responsibility requirements of this part as specified in the new tank notification form when notifying the appropriate state or local agency of the installation of a new underground storage tank under § 280.22.

(c) The Director of the Implementing Agency may require an owner or operator to submit evidence of financial assurance as described in § 280.107(b) or other information relevant to compliance with this subpart at any time.

(The information requirements in this section have been approved by the Office of Management and Budget and assigned OMB control number 2050-0068.)

§ 280.107 Recordkeeping.

(a) Owners or operators must maintain evidence of all financial assurance mechanisms used to demonstrate financial responsibility under this subpart for an underground storage tank until released from the requirements of this subpart under § 208.109. An owner or operator must maintain such evidence at the underground storage tank site or the owner's or operator's place of business. Records maintained off-site must be made available upon request of the implementing agency.

(b) An owner or operator must maintain the following types of evidence of financial responsibility:

(1) An owner or operator using an assurance mechanism specified in §§ 280.95 through 280.100 or § 280.102 must maintain a copy of the instrument worded as specified.

(2) An owner or operator using a financial test or guarantee must maintain a copy of the chief financial officer's letter based on year-end financial statements for the most recent completed financial reporting year. Such evidence must be on file no later than 120 days after the close of the financial reporting year.

(3) An owner or operator using a guarantee, surety bond, or letter of credit must maintain a copy of the signed standby trust fund agreement and copies of any amendments to the agreement.

(4) An owner or operator using an insurance policy or risk retention group coverage must maintain a copy of the signed insurance policy or risk retention group coverage policy, with the endorsement or certificate of insurance and any amendments to the agreements.

(5) An owner or operator covered by a state fund or other state assurance must maintain on file a copy of any evidence of coverage supplied by or required by the State under § 280.101(d).

(6) An owner or operator using an assurance mechanism specified in §§ 280.95 through 280.102 must maintain an updated copy of a certification of financial responsibility worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Certification of Financial Responsibility

[Owner or operator] hereby certifies that it is in compliance with the requirements of Subpart H of 40 CFR Part 280.

The financial assurance mechanism(s) used to demonstrate financial responsibility under Subpart H of 40 CFR Part 280 is [are] as follows:

[For each mechanism, list the type of mechanism, name of issuer, mechanism number (if applicable), amount of coverage, effective period of coverage and whether the mechanism covers "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidential releases" or "nonsudden accidential releases" or "accidental releases."]

[Signature of owner or operator]
[Name of owner or operator]
[Title]
[Date]

[Signature of witness or notary]
[Name of witness or notary]
[Date]

The owner or operator must update this certification whenever the financial assurance mechanism(s) used to demonstrate financial responsibility change(s).

(The information requirements in this section have been approved by the Office of Management and Budget and assigned OMB control number 2050-0068.)

§ 280.108 Drawing on financial assurance mechanisms.

(a) The Director of the implementing agency shall require the guarantor, surety, or institution issuing a letter of credit to place the amount of funds stipulated by the Director, up to the limit of funds provided by the financial assurance mechanism, into the standby trust if:

(1)(i) The owner or operator fails to establish alternate financial assurance within 60 days after receiving notice of cancellation of the guarantee, surety bond, letter of credit, or, as applicable, other financial assurance mechanism; and

(ii) The Director determines or suspects that a release from an underground storage tank covered by the mechanism has occurred and so notifies the owner or operator or the owner or operator has notified the Director pursuant to Subparts E or F of a release from an underground storage tank covered by the mechanism; or

(2) The conditions of paragraph (b)(1) or (b)(2)(i) or (ii) of this section are satisfied.

(b) The Director of the implementing agency may draw on a standby trust fund when:

(1) The Director makes a final determination that a release has occurred and immediate or long-term corrective action for the release is needed, and the owner or operator, after appropriate notice and opportunity to comply, has not conducted corrective action as required under 40 CFR Part 280, Subpart F; or

(2) The Director has received either:

(i) Certification from the owner or operator and the third-party liability claimant(s) and from attorneys representing the owner or operator and the third-party liability claimant(s) that a third-party liability claim should be paid. The certification must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Certification of Valid Claim

The undersigned, as principals and as legal representatives of [insert owner or operator] and [insert name and address of third-party claimant], hereby certify that the claim of bodily injury [and/or] property damage caused by an accidental release arising from operating [owner's or operator's] underground storage tank should be paid in the amount of $[ ].

[Signatures]
Owner or Operator
Attorney for Owner or Operator
(Notary) Date
[Signature(s)]
Claimant(s)
Attorney(s) for Claimant(s)
(Notary) Date

or (ii) A valid final court order establishing a judgment against the owner or operator for bodily injury or property damage caused by an accidental release from an underground storage tank covered by financial assurance under this subpart and the Director determines that the owner or operator has not satisfied the judgment.

(c) If the Director of the implementing agency determines that the amount of corrective action costs and third-party liability claims eligible for payment under paragraph (b) of this section may exceed the balance of the standby trust fund and the obligation of the provider of financial assurance, the first priority for payment shall be corrective action costs necessary to protect human health and the environment. The Director shall pay third-party liability claims in the order in which the Director receives certifications under paragraph (b)(2)(i) of this section, and valid court orders under paragraph (b)(2)(ii) of this section.

§ 280.109 Release from the requirements.

An owner or operator is no longer required to maintain financial responsibility under this subpart for an underground storage tank after the tank has been properly closed or, if corrective action is required, after corrective action has been completed and the tank has been properly closed as required by 40 CFR Part 280, Subpart G.

§ 280.110 Bankruptcy or other incapacity of owner or operator or provider of financial assurance.

(a) Within 10 days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming an owner or operator as debtor, the owner or operator must notify the Director of the implementing agency by certified mail of such commencement and submit the appropriate forms listed in § 280.107(b) documenting current financial responsibility.

(b) Within 10 days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming a guarantor providing financial assurance as debtor, such guarantor must notify the owner or operator by certified mail of such commencement as required under the terms of the guarantee specified in § 280.96.

(c) An owner or operator who obtains financial assurance by a mechanism other than the financial test of self-insurance will be deemed to be without the required financial assurance in the event of a bankruptcy or incapacity of its provider of financial assurance, or a suspension or revocation of the authority of the provider of financial assurance to issue a guarantee, insurance policy, risk retention group coverage policy, surety bond, letter of credit, or state-required mechanism. The owner or operator must obtain alternate financial assurance as specified in this subpart within 30 days after receiving notice of such an event. If the owner or operator does not obtain alternate coverage within 30 days after such notification, he must notify the Director of the implementing agency.

(d) Within 30 days after receipt of notification that a state fund or other state assurance has become incapable of paying for assured corrective action or third-party compensation costs, the owner or operator must obtain alternate financial assurance.

§ 280.111 Replenishment of guarantees, letters of credit, or surety bonds.

(a) If at any time after a standby trust is funded upon the instruction of the Director of the implementing agency with funds drawn from a guarantee, letter of credit, or surety bond, and the amount in the standby trust is reduced below the full amount of coverage required, the owner or operator shall by the anniversary date of the financial mechanism from which the funds were drawn:

(1) Replenish the value of financial assurance to equal the full amount of coverage required, *or*

(2) Acquire another financial assurance mechanism for the amount by which funds in the standby trust have been reduced.

(b) For purposes of this section, the full amount of coverage required is the amount of coverage to be provided by § 280.93 of this subpart. If a combination of mechanisms was used to provide the assurance funds which were drawn upon, replenishment shall occur by the earliest anniversary date among the mechanisms.

§ 280.112 Suspension of enforcement. [Reserved]

Appendix I—Notification for Underground Storage Tanks (Form)

Notification for Underground Storage Tanks

FORM APPROVED
OMB NO. 2050-0068
APPROVAL EXPIRES 8-30-91

EPA estimates public reporting burden for this form to average 30 minutes per response, including time for reviewing instructions, gathering and maintaining the data needed, and completing and reviewing the form. Send comments regarding the burden estimate to Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M St., S.W., Washington, D.C. 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503, marked "Attention: Desk Officer for EPA."

STATE USE ONLY	
ID Number	
Date Received	

GENERAL INFORMATION

Notification is required by Federal law for all underground tanks that have been used to store regulated substances since January 1, 1974, that are in the ground as of May 8, 1986, or that are brought into use after May 8, 1986. The information requested is required by Section 9002 of the Resource Conservation and Recovery Act (RCRA, as amended.

The primary purpose of this notification program is to locate and evaluate underground tanks that store or have stored petroleum or hazardous substances. It is expected that the information you provide will be based on reasonably available records, or, in the absence of such records, your knowledge, belief, or estimation.

Who Must Notify? Section 9002 of RCRA, as amended, requires that, unless exempted, owners of underground tanks that store regulated substances must notify designated State or local agencies of the existence of their tanks. Owners include:

(a) in the case of an underground storage tank in use on November 8, 1984, or brought into use after that date, any person who owns an underground storage tank used for the storage, use, or dispensing of regulated substances; and

(b) in the case of any underground storage tank in use before November 8, 1984, but not in use on that date, any person who owned such tank immediately before the discontinuation of its use.

What Tanks Are Included? Underground storage tank is defined as any one or combination of tanks that (1) is used to contain an accumulation of "regulated substances," and (2) whose volume, including connected underground pipework is 10% or more beneath the ground. Some examples are underground tanks storing: 1. gasoline used on- or diesel fuel, and 2. industrial solvents, pesticides, herbicides or fumigants.

What Tanks Are Excluded? Tanks removed from the ground are not subject to notification. Other tanks excluded from notification are:

1. farm or residential tanks of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes;
2. tanks used for storing heating oil for consumptive use on the premises where stored;
3. septic tanks;
4. pipeline facilities (including gathering lines) regulated under the Natural Gas Pipeline Safety Act of 1968, or the Hazardous Liquid Pipeline Safety Act of 1979, or which is an intrastate pipeline facility regulated under State laws;
5. surface impoundments, pits, ponds, or lagoons;
6. storm water or waste water collection systems;
7. flow-through process tanks;
8. liquid traps or associated gathering lines directly related to oil or gas production and gathering operations;
9. storage tanks situated in an underground area (such as a basement, cellar, mineworking, drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor.

What Substances Are Covered? The notification requirements apply to underground storage tanks that contain regulated substances. This includes any substance defined as hazardous in section 101 (14) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) with the exception of those substances regulated as hazardous waste under Subtitle C of RCRA. It also includes petroleum, e.g. crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute).

Where To Notify? Completed notification forms should be sent to the address given at the top of this page.

When To Notify? 1. Owners of underground storage tanks in use on or after May 8, 1986 must notify within 30 days of bringing the tanks into use. 2. Owners who have underground storage tanks taken out of operation after January 1, 1974 but still in the ground, must notify by May 8, 1986. 3. Owners who have tanks taken out of operation before January 1, 1974 must notify within 30 days of bringing the tanks into use.

Penalties: Any owner who knowingly fails to notify or submits false information shall be subject to a civil penalty not to exceed $10,000 for each tank for which notification is not given or for which false information is submitted.

INSTRUCTIONS

Please type or print in ink all items except "signature" in Section V. This form must be completed for each location containing underground storage tanks. If more than 5 tanks are owned at this location, photocopy the reverse side, and staple continuation sheets to this form.

Indicate number of continuation sheets attached: ☐

I. OWNERSHIP OF TANK(S)

Owner Name (Corporation, Individual, Public Agency, or Other Entity)

Street Address

County

City | State | ZIP Code

Area Code | Phone Number

Type of Owner *(Mark all that apply ☒)*

☐ Current ☐ Former ☐ State or Local Gov't ☐ Federal Gov't (GSA facility I.D. no. _____) ☐ Private or Corporate ☐ Ownership uncertain

II. LOCATION OF TANK(S)

(If same as Section I, mark box here ☐)

Facility Name or Company Site Identifier, as applicable

Street Address or State Road, as applicable

County

City (nearest) | State | ZIP Code

Indicate number of tanks at this location: ☐

Mark box here if tank(s) are located on land within an Indian reservation or on other Indian trust lands ☐

III. CONTACT PERSON AT TANK LOCATION

Name (If same as Section I, mark box here ☐) | Job Title | Area Code | Phone Number

IV. TYPE OF NOTIFICATION

☐ Mark box here only if this is an amended or subsequent notification for this location

V. CERTIFICATION (Read and sign after completing Section VI.)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Name and official title of owner or owner's authorized representative	Signature	Date Signed

CONTINUE ON REVERSE SIDE

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Owner Name (from Section I) _____ Location (from Section II) _____ Page No. ____ of ____ Pages

VI. DESCRIPTION OF UNDERGROUND STORAGE TANKS *(Complete for each tank at this location.)*

Tank Identification No. (e.g., ABC-123), or Arbitrarily Assigned Sequential Number (e.g., 1,2,3...)		Tank No.	Tank No.	Tank No.	Tank No.	Tank No.
1. Status of Tank *(Mark all that apply ☒)*	Currently in Use	☐	☐	☐	☐	☐
	Temporarily Out of Use	☐	☐	☐	☐	☐
	Permanently Out of Use	☐	☐	☐	☐	☐
	Brought into Use after 5/8/86	☐	☐	☐	☐	☐
2. Estimated Age (Years)						
3. Estimated Total Capacity (Gallons)						
4. Material of Construction *(Mark one ☒)*	Steel	☐	☐	☐	☐	☐
	Concrete	☐	☐	☐	☐	☐
	Fiberglass Reinforced Plastic	☐	☐	☐	☐	☐
	Unknown	☐	☐	☐	☐	☐
	Other. Please Specify	_____	_____	_____	_____	_____
5. Internal Protection *(Mark all that apply ☒)*	Cathodic Protection	☐	☐	☐	☐	☐
	Interior Lining (e.g., epoxy resins)	☐	☐	☐	☐	☐
	None	☐	☐	☐	☐	☐
	Unknown	☐	☐	☐	☐	☐
	Other. Please Specify	_____	_____	_____	_____	_____
6. External Protection *(Mark all that apply ☒)*	Cathodic Protection	☐	☐	☐	☐	☐
	Painted (e.g., asphaltic)	☐	☐	☐	☐	☐
	Fiberglass Reinforced Plastic Coated	☐	☐	☐	☐	☐
	None	☐	☐	☐	☐	☐
	Unknown	☐	☐	☐	☐	☐
	Other. Please Specify	_____	_____	_____	_____	_____
7. Piping *(Mark all that apply ☒)*	Bare Steel	☐	☐	☐	☐	☐
	Galvanized Steel	☐	☐	☐	☐	☐
	Fiberglass Reinforced Plastic	☐	☐	☐	☐	☐
	Cathodically Protected	☐	☐	☐	☐	☐
	Unknown	☐	☐	☐	☐	☐
	Other. Please Specify	_____	_____	_____	_____	_____
8. Substance Currently or Last Stored in Greatest Quantity by Volume *(Mark all that apply ☒)*	**a. Empty**	☐	☐	☐	☐	☐
	b. Petroleum					
	Diesel	☐	☐	☐	☐	☐
	Kerosene	☐	☐	☐	☐	☐
	Gasoline (including alcohol blends)	☐	☐	☐	☐	☐
	Used Oil	☐	☐	☐	☐	☐
	Other. Please Specify	_____	_____	_____	_____	_____
	c. Hazardous Substance	☐	☐	☐	☐	☐
	Please Indicate Name of Principal CERCLA Substance or Chemical Abstract Service (CAS) No	_____	_____	_____	_____	_____
	Mark box ☒ if tank stores a mixture of substances	☐	☐	☐	☐	☐
	d. Unknown	☐	☐	☐	☐	☐
9. Additional Information (for tanks permanently taken out of service)						
	a. Estimated date last used (mo. yr)	_____	_____	_____	_____	_____
	b. Estimated quantity of substance remaining (gal.)	_____	_____	_____	_____	_____
	c. Mark box ☒ if tank was filled with inert material (e.g., sand, concrete)	☐	☐	☐	☐	☐

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Page 2

[Appendix I]

Owner Name (from Section I) _____ Location (from Section II) _____ Page No. _____ of _____ Pages

VII. CERTIFICATION OF COMPLIANCE (COMPLETE FOR ALL NEW TANKS AT THIS LOCATION)

10. Installation (mark all that apply):

- ☐ The installer has been certified by the tank and piping manufacturers.
- ☐ The installer has been certified or licensed by the implementing agency.
- ☐ The installation has been inspected and certified by a registered professional engineer.
- ☐ The installation has been inspected and approved by the implementing agency.
- ☐ All work listed on the manufacturer's installation checklists has been completed.
- ☐ Another method was used as allowed by the implementing agency. Please specify:

_____

11. Release Detection (mark all that apply):

- ☐ Manual tank gauging.
- ☐ Tank tightness testing with inventory controls.
- ☐ Automatic tank gauging.
- ☐ Vapor monitoring.
- ☐ Ground-water monitoring.
- ☐ Interstitial monitoring within a secondary barrier
- ☐ Interstitial monitoring within secondary containment.
- ☐ Automatic line leak detectors.
- ☐ Line tightness testing.
- ☐ Another method allowed by the implementing agency. Please specify

_____

12 Corrosion Protection (if applicable)

- ☐ As specified for coated steel tanks with cathodic protection
- ☐ As specified for coated steel piping with cathodic protection
- ☐ Another method allowed by the implementing agency Please specify

_____

13 I have financial responsibility in accordance with Subpart I Please specify

Method _____

Insurer _____

Policy Number _____

14 OATH I certify that the information concerning installation provided in item 10 is true to the best of my belief and knowledge.

Installer _____ Name _____ Date

_____ Position

_____ Company

EPA Form 7530-1 (9-88) Page 3

Appendix II—List of Agencies Designated To Receive Notifications

Alabama (EPA Form), Alabama Department of Environmental Management, Ground Water Section/Water Division, 1751 Congressman W.L. Dickinson Drive, Montgomery, Alabama 36130, 205/271-7823

Alaska (EPA Form), Department of Environmental Conservation, Box 0, Juneau, Alaska 99811-1800, 970/465-2853

American Samoa (EPA Form), Executive Secretary, Environmental Quality Commission, Office of the Governor, American Samoan Government, Pago Pago, American Samoa 96799; Attention: UST Notification

Arizona (EPA Form), Attention: UST Coordinator, Arizona Department of Environmental Quality, Environmental Health Services, 2005 N. Central, Phoenix, Arizona 85004

Arkansas (EPA Form), Arkansas Department of Pollution Control and Ecology, P.O. Box 9583, Little Rock, Arkansas 72219, 501/562-7444

California (State Form), Executive Director, State Water Resources Control Board, P.O. Box 100, Sacramento, California 95801, 916/445-1533

Colorado (EPA Form), Section Chief, Colorado Department of Health, Waste Management Division, Underground Tank Program, 4210 East 11th Avenue, Denver, Colorado 80220, 303/320-8333

Connecticut (State Form), Hazardous Materials Management Unit, Department of Environmental Protection, State Office Building, 165 Capitol Avenue, Hartford, Connecticut 06106

Delaware (State Form), Division of Air and Waste Management, Department of Natural Resources and Environmental Control, P.O. Box 1401, 89 Kings Highway, Dover, Delaware 19903, 302/736-5409

District of Columbia (EPA Form), Attention: UST Notification Form, Department of Consumer and Regulatory Affairs, Pesticides and Hazardous Waste Management Branch, Room 114, 5010 Overlook Avenue SW., Washington, DC 20032

Florida (State Form), Florida Department of Environmental Regulation, Solid Waste Section, Twin Towers Office Building, 2600 Blair Stone Road, Tallahassee, Florida 32399, 904/487-4398

Georgia (EPA Form), Georgia Department of Natural Resources, Environmental Protection Division, Underground Storage Tank Program, 3420 Norman Berry Drive, 7th Floor, Hapeville, Georgia 30354, 404/656-7404

Guam (State Form), Administrator, Guam Environmental Protection Agency, P.O. Box 2999, Agana, Guam 96910, Overseas Operator (Commercial call 646-8863)

Hawaii (EPA Form), Administrator, Hazardous Waste Program, 645 Halekauwila Street, Honolulu, Hawaii 96813, 808/548-2270

Idaho (EPA Form), Underground Storage Tank Coordinator, Water Quality Bureau, Division of Environmental Quality, Idaho Department of Health and Welfare, 450 W. State Street, Boise, Idaho 83720, 208/334-4251

Illinois (EPA Form), Underground Storage Tank Coordinator, Division of Fire Prevention, Office of State Fire Marshal, 3150 Executive Park Drive, Springfield, Illinois 62703-4599

Indiana (EPA Form), Underground Storage Tank Program, Office of Environmental Response, Indiana Department of Environmental Management, 105 South Meridian Street, Indianapolis, Indiana 46225

Iowa (State Form), UST Coordinator, Iowa Department of Natural Resources, Henry A. Wallace Building, 900 East Grand, Des Moines, Iowa 50219, 512/281-8135

Kansas (EPA Form), Kansas Department of Health and Environment, Forbes Field, Building 740, Topeka, Kansas 66620, 913/296-1594

Kentucky (State Form), Department of Environmental Protection, Hazardous Waste Branch, Fort Boone Plaza, Building #2, 18 Reilly Road, Frankfort, Kentucky 40601, 501/564-6716

Louisiana (State Form), Secretary, Louisiana Department of Environmental Quality, P.O. Box 44066, Baton Rouge, Louisiana 70804, 501/342-1265

Maine (State Form), Attention: Underground Tanks Program, Bureau of Oil and Hazardous Material Control, Department of Environmental Protection, State House—Station 17, Augusta, Maine 04333

Maryland (EPA Form), Science and Health Advisory Group, Office of Environmental Programs, 201 West Preston Street, Baltimore, Maryland 21201

Massachusetts (EPA Form), UST Registry, Department of Public Safety, 1010 Commonwealth Avenue, Boston, Massachusetts 02215, 617/566-4500

Michigan (EPA Form), Michigan Department of State Police, Fire Marshal Division, General Office Building, 7150 Harris Drive, Lansing, Michigan 48913

Minnesota (State Form), Underground Storage Tank Program, Division of Solid and Hazardous Wastes, Minnesota Pollution Control Agency, 520 West Lafayette Road, St. Paul, Minnesota 55155

Mississippi (State Form), Department of Natural Resources, Bureau of Pollution Control, Underground Storage Tank Section, P.O. Box 10385, Jackson, Mississippi 39209, 601/961-5171

Missouri (EPA Form), UST Coordinator, Missouri Department of Natural Resources, P.O. Box 176, Jefferson City, Missouri 65102, 314/751-7428

Montana (EPA Form), Solid and Hazardous Waste Bureau, Department of Health and Environmental Science, Cogswell Bldg., Room B-201, Helena, Montana 59620

Nebraska (EPA Form), Nebraska State Fire Marshal, P.O. Box 94677, Lincoln, Nebraska 68509-4677, 402/471-9465

Nevada (EPA Form), Attention: UST Coordinator, Division of Environmental Protection, Department of Conservation and Natural Resources, Capitol Complex 201 S. Fall Street, Carson City, Nevada 89710, 800/992-0900, Ext. 4670, 702/885-4670

New Hampshire (EPA Form), NH Dept. of Environmental Services, Water Supply and Pollution Control Division, Hazen Drive, P.O. Box 95, Concord, New Hampshire 03301, Attention: UST Registration

New Jersey (State Form), Underground Storage Tank Coordinator, Department of Environmental Protection, Division of Water Resources (CN-029), Trenton, New Jersey 08625, 609/292-0424

New Mexico (EPA Form), New Mexico Environmental Improvement Division, Groundwater/Hazardous Waste Bureau, P.O. Box 968, Santa Fe, New Mexico 37504, 505/827-2933

New York (EPA Form), Bulk Storage Section, Division of Water, Department of Environmental Conservation, 50 Wolf Road, Room 326, Albany, New York 12233-0001, 518/457-4351

North Carolina (EPA Form), Division of Environmental Management, Ground-Water Operations Branch, Department of Natural Resources and Community Development, P.O. Box 27687, Raleigh, North Carolina 27611, 919/733-3221

North Dakota (State Form), Division of Hazardous Management and Special Studies, North Dakota Department of Health, Box 5520, Bismarck, North Dakota 58502-5520

Northern Mariana Islands (EPA Form), Chief, Division of Environmental Quality, P.O. Box 1304, Commonwealth of Northern Mariana Islands, Saipan, CM 96950, Cable Address: Gov. NMI Saipan, Overseas Operator: 6984

Ohio (State Form), State Fire Marshal's Office, Department of Commerce, 8895 E. Main Street, Reynoldsburg, Ohio 43068, State Hotline: 800/282-1927

Oklahoma (EPA Form), Underground Storage Tank Program, Oklahoma Corporation Comm., Jim Thorpe Building, Oklahoma City, Oklahoma 73105

Oregon (State Form), Underground Storage Tank Program, Hazardous and Solid Waste Division, Department of Environmental Quality, 811 S.W. Sixth Avenue, Portland, Oregon 98204, 503/229-5788

Pennsylvania (EPA Form), PA Department of Environmental Resources, Bureau of Water Quality Management, Ground Water Unit, 9th Floor Fulton Building, P.O. Box 2063, Harrisburg, Pennsylvania 17120

Puerto Rico (EPA Form), Director, Water Quality Control Area, Environmental Quality Board, Commonwealth of Puerto Rico, Santurce, Puerto Rico, 809/725-0717

Rhode Island (EPA Form), UST Registration, Department of Environmental Management, 83 Park Street, Providence, Rhode Island 02903, 401/277-2234

South Carolina (State Form), Ground-Water Protection Division, South Carolina Department of Health and Environmental Control, 2600 Bull Street, Columbia, South Carolina 29201, 803/758-5213

South Dakota (EPA Form), Office of Water Quality, Department of Water and Natural Resources, Joe Foss Building, Pierre, South Dakota 57501.

Tennessee (EPA Form), Tennessee Department of Health and Environment, Division of Superfund Underground Storage Tank Section, 150 Ninth Avenue, North, Nashville, Tennessee 37219-5404, 615/741-0690

Texas (EPA Form), Underground Storage Tank Program, Texas Water Commission, P.O. Box 13087, Austin, Texas 78711

Utah (EPA Form), Division of Environmental Health, P.O. Box 45500, Salt Lake City, Utah 84145-0500

Vermont (State Form), Underground Storage Tank Program, Vermont AEC/Waste Management Division, State Office Building, Montpelier, Vermont 05602, 802/828-3395

Virginia (EPA Form), Virginia Water Control Board, P.O. Box 11143, Richmond, Virginia 23230-1143, 804/257-6585

Virgin Islands (EPA Form), 205(j) Coordinator, Division of Natural Resources Management, 14 F Building 111, Watergut Homes, Christianstead, St. Croix, Virgin Islands 00820

Washington (State Form), Underground Storage Tank Notification, Solid and Hazardous Waste Program, Department of Ecology, M/S PV-11, Olympia, Washington 98504-8711, 206/459-6316

West Virginia (EPA Form), Attention: UST Notification, Solid and Hazardous Waste, Ground Water Branch, West Virginia Department of Natural Resources, 1201 Greenbriar Street, Charleston, West Virginia 25311

Wisconsin (State Form), Bureau of Petroleum Inspection, P.O. Box 7969, Madison, Wisconsin 53707, 608/266-7605

Wyoming (EPA Form), Water Quality Division, Department of Environmental Quality, Herschler Building, 4th Floor West, 122 West 25th Street, Cheyenne, Wyoming 82002, 307/777-7781.

Appendix III—Statement for Shipping Tickets and Invoices

Note.—A Federal law (the Resource Conservation and Recovery Act (RCRA), as amended (Pub. L. 98-616)) requires owners of certain underground storage tanks to notify designated State or local agencies by May 8, 1986, of the existence of their tanks. Notifications for tanks brought into use after May 8, 1986, must be made within 30 days. Consult EPA's regulations, issued on November 8, 1985 (40 CFR Part 280) to determine if you are affected by this law.

Attachment C
Agenda Item M
1-19-90 EQC Meeting

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

IN THE MATTER OF MODIFYING OAR Chapter 340, Division 150	)))	STATEMENT OF NEED FOR RULES

Statutory Authority

ORS 466.705 through ORS 466.835 and ORS 466.895 through ORS 466.995 authorizes rule adoption for the purpose of regulating underground storage tanks. Specifically, Section 466.745 authorizes the Commission to adopt rules governing the standards for the installation of underground storage tanks, reporting of releases, permit requirements, requirements for maintaining records, procedures for distributors of regulated substances and sellers of underground storage tanks, decommissioning of underground storage tanks, procedures by which an owner or permittee may demonstrate financial responsibility, requirements for taking corrective action, civil penalties, and criminal penalties.

Section 466.720 authorizes the Commission and the Department to perform or cause to be performed any act necessary to obtain authorization of a state program for regulation of underground storage tanks under the provisions of Section 9004 of the Federal Resource Conservation and Recovery Act.

Section 466.745 authorized the Commission to adopt rules establishing more stringent underground storage tank rules to protect specific waters of the state.

Section 466.730 allows the Commission to authorize the Department to enter into an agreement with an agency of the state or a local unit of government to administer all or part of the underground storage tank program.

Need for the Rules

The proposed rule modifications are needed to carry out the authority given to the Commission to adopt rules for regulation of Underground storage tanks and to obtain federal authorization of the state underground storage tank program.

Principal Documents Relied Upon

Oregon Revised Statutes, ORS 466.705 through 466.835, 466.895 and 466.995.

40 CFR 280; 50 FR 28742, July 15, 1985; Amended by 50 FR 46612, November 8, 1985; Corrected by 51 FR 13497, April 21, 1986; Revised by 53 FR 37194, September 23, 1988, Effective December 22, 1988; Amended by 53 FR 43370, October 26, 1988; Corrected by 53 FR 51274, December 21, 1988; Amended by 54 FR 5452, February 3, 1989; Amended by 54 FR 47077, November 9, 1989.

The Comprehensive Environmental Response, Compensation and Liability Act of 1980.

Superfund Amendments and Reauthorization Act of 1986.

Fiscal and Economic Impact

Fiscal Impact

There should not be any new or additional fiscal impact resulting from the proposed rule modifications including the adoption of the federal underground storage tank regulations. This is because the federal technical standards became effective on December 23, 1988 and the financial responsibility regulations became effective on January 24, 1989

Small Business Impact

The department has currently issued permits to 19,000 tanks. The majority of businesses owning and operating underground storage tank are classified as small businesses. The federal underground storage tank technical standards and financial responsibility regulations are having a significant impact on small businesses. Department records show that approximately 900 facilities have removed their tanks since the federal UST program was first adopted in 1986. Most of these facilities do not retail motor fuel. It is likely additional facilities will remove their tanks as tank owners become aware of technical and financial responsibility requirements.

Since the owners and operators of underground storage tanks are required to comply with federal regulations, the Department does not believe that state authorization will have any additional impact on Oregon businesses.

The proposed rules are more stringent in a number of areas. The increased record keeping, notification and reporting requirements can be carried out at minimal cost. The increased technical requirements will add costs to each UST system. All UST owners and operators must demonstrate financial responsibility by October 26, 1990. Financial responsibility will likely be provided by a risk pool or insurance. The risk organization will require UST upgrading or replacement to qualify for coverage at the lowest premium. Upgrading a service station with three USTs will cost approximately $40,000 while replacement of the USTs would cost approximately $100,000. Insurance

for the typical service station is estimated to cost $3,000 to $10,000 per year. The increased requirements required by these rules will be needed to qualify for financial responsibility coverage and will be offset by reduced cost of the financial responsibility coverage.

The rules require distributors to spend time to determine and maintain records of the size of each tank into which they deposit a regulated substance. Each delivery person regularly monitors the tank size and tank contents to prevent overfilling the tank. In addition to this normal practice, the proposed rule requires recording the measurements and the size of the tank. The costs should be minimal.

The owner and operator of USTs would face additional costs where a local unit of government obtains more stringent UST requirements to protect a ground water resource. This financial impact would not occur until the Commission acts on a petition by adopting these more stringent rules.

1/2/90
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Attachment D
Agenda Item M
1-19-90 EQC Meeting

Oregon Department of Environmental Quality

A CHANCE TO COMMENT ON...

Modification to Underground Storage Tank Interim Rules

WHO IS AFFECTED: Persons who own or are in control of underground storage tanks used to store regulated substances. Persons affected may be tank owners or operators or owners of land in which the tanks are located and commercial lending institutions who make loans to these persons. Underground storage tanks are found at gasoline stations, marinas, automobile dealerships, nurseries, commercial fleets, manufacturing firms, and farming operations. Federal facilities, state agencies, school districts, port districts, and local governments are also included within this regulatory program.

BACKGROUND: Subtitle I, of the Hazardous and Solid Waste Amendments of 1984 to the Resource conservation and Recovery Act, authorized the implementation of a federal UST program. Congress intended that this program be run by state or local governments with minimum federal involvement. The U.S. Environmental Protection Agency (USEPA) adopted UST regulations in 1988 requiring owners and operators of USTs to meet new technical and financial responsibility requirements. The 1985 and 1987 legislature gave the Department authority over underground storage tank to include all elements of the federal program and certain additional state requirements. The Environmental Quality Commission adopted interim UST rules in 1988.

WHAT IS PROPOSED: The purposes of these modifications to the rules are:

1. To include all portions of the federal UST regulations, including technical and financial responsibility requirements so that the Department may receive program approval to regulate USTs in lieu of federal regulation.

2. To allow the Department to delegate all or a portion of the UST program administration to state agencies and local government.

3. To allow a local unit of government to petition the Commission for more stringent UST requirements to protect an underground water resource.

WHAT ARE THE HIGHLIGHTS: All federal UST regulations are adopted as state UST rules including technical and financial responsibility requirements.

The proposed rules are more stringent in the following areas.

* Notification required for field constructed tanks.
* Installing an unprotected UST in a noncorrosive environment must approved by the Department.
* Test stations are required on USTs with cathodic protection.
* Cathodic protection on bare steel tanks by December 22, 1998.
* All groundwater leak detection systems must be approved by the Department.

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

11/1/86

FOR FURTHER INFORMATION:

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

* Require daily or continuous monitoring on groundwater or vapor monitoring systems.
* Site assessment is required on all UST decommissionings.
* 3 working day notice before decommissioning site work is started.
* Decommissioning records must be maintained for 10 years.

Additional Changes to the Rules:

* Local unit of government may petition for more stringent UST requirements.

* Department may delegate program administration to a state agency or local government.

* Require sellers and distributors of regulated substances to maintain a written record of the maximum capacity of each UST into which they deposit product.

HOW TO COMMENT: Public Hearings Schedule

Bend
April 2, 1990
4:00 P.M.
Cascade Natural Gas
334 N.E. Hawthorne
Bend, Oregon

Pendleton
April 3, 1990
4:00 P.M.
Blue Mountain Community College
Room P12, Pioneer Hall
2411 N.W. Garden
Pendleton, Oregon

Portland
April 5, 1990
4:00 P.M.
DEQ Headquarters
Fourth Floor
811 S.W. Sixth Ave.
Portland, Oregon

Eugene
April 6, 1990
4:00 P.M.
Lane Community College
Room 308, The Forum
4000 E. 30th Avenue
Eugene, Oregon

A Department staff member will be appointed to preside over and conduct the hearings. Written comments should be sent to:

Department of Environmental Quality
811 S.W. Sixth Avenue
Portland, Oregon 97204

The comment period will end April 30, 1990. All comments should be received at the Department by 5:00 P.M.

For more information or copies of the proposed rules, contact Larry Frost at (502) 229-5769 or toll-free at 1-800-452-4011

WHAT IS THE NEXT STEP: After public testimony has been received and evaluated, the proposed rules will be revised as appropriate and presented to the Environmental Quality Commission in May 1990. The Commission may adopt the Department's recommendation, amend the Department's recommendation, or take no action.

Attachment E
Agenda Item M
1-19-90 EQC Meeting

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

IN THE MATTER OF MODIFYING OAR Chapter 340, Division 150	)))	LAND USE CONSISTENCY

The proposed rule modifications appears to affect land use and to be consistent with the Statewide Planning Goals.

With regard to Goal 6, the proposed rule is consistent with the goal to maintain and improve the quality of the air, water, and land resources of the state. Permit requirements, standards regarding the installation of tanks, reporting of releases, requirements for maintaining records, decommission of tanks, procedures by which an owner or permittee may demonstrate financial responsibility, and requirements for taking corrective action are consistent with the goal to maintain and improve air, land, and water resources. Limitations on the distribution of regulated substances to permitted tanks, and requirements to ensure that permit information is distributed by distributors of regulated substances and sellers of tanks are also consistent with Goal 6. The rules does not appear to conflict with other goals.

Public comment on any land use issue involved is welcome and may be submitted in the same fashion as indicated for testimony in this notice.

It is requested that local, state, and federal agencies review the proposed action and comment on possible conflicts with their programs affecting land use with Statewide Planning Goals within their expertise and jurisdiction.

The Department of Environmental Quality intends to ask the Department of Land Conservation and Development to mediate any appropriate conflicts brought to our attention by local, state or federal authorities.

NEIL GOLDSCHMIDT
GOVERNOR

Environmental Quality Commission

811 SW SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

REQUEST FOR EQC ACTION

Meeting Date: January 19, 1990
Agenda Item: N
Division: HSW
Section: UST

SUBJECT:

Oil Contaminated Soil Cleanup Contractors: Authorization for Hearing on Amendments to Registration and Licensing Requirements for Underground Storage Tank Service providers and Supervisors to Add Certification and Licensing for remedial action and cleanup Service providers and Supervisors.

PURPOSE:

To improve and regulate the quality of remedial action and cleanup work performed on releases from underground storage and heating oil tanks. This rule applies to sites involving soil contamination where Department of Environmental Quality (Department) oversight is minimal and does not apply to contaminated groundwater sites which receive extensive Department oversight of work performed.

ACTION REQUESTED:

___ Work Session Discussion
___ General Program Background
___ Potential Strategy, Policy, or Rules
___ Agenda Item ___ for Current Meeting
___ Other: (specify)

_X_ Authorize Rulemaking Hearing
___ Adopt Rules
Proposed Rules — Attachment B
Rulemaking Statements — Attachment C
Fiscal and Economic Impact Statement — Attachment D
Public Notice — Attachment E

___ Issue a Contested Case Order
___ Approve a Stipulated Order
___ Enter an Order
Proposed Order — Attachment ___

___ Approve Department Recommendation
___ Variance Request — Attachment ___
___ Exception to Rule — Attachment ___
___ Informational Report — Attachment ___
___ Other: (specify) — Attachment ___

DESCRIPTION OF REQUESTED ACTION:

Prior to the 1989 Legislative session neither the federal nor state underground tank program regulated heating oil tanks. HB 3456 was introduced in the 1989 Legislature at the request of the Heating Oil Institute of Oregon. The heating oil industry proposed to tax itself to provide funds for corrective actions involving the release of heating oil. In addition, the industry requested that contractors providing cleanup services at sites having soil contaminated with heating oil be regulated. The Legislature included authority for the Department to license companies doing work at sites with underground storage tanks holding other petroleum products. The Department is requesting authorization to hold public hearings on a registration and licensing program for contractors and a certification program for supervisors performing soil cleanup involving underground storage tanks and heating oil tanks.

AUTHORITY/NEED FOR ACTION:

_X_ Required by Statute: ORS 466.705 - 466.995 — Attachment A
Enactment Date: As Amended by HB 3456 and enacted on July 4, 1989.

___ Statutory Authority: _____ Attachment ___
___ Pursuant to Rule: _____ Attachment ___
___ Pursuant to Federal Law/Rule: _____ Attachment ___

___ Other: Attachment ___

___ Time Constraints: (explain)

DEVELOPMENTAL BACKGROUND:

___ Advisory Committee Report/Recommendation Attachment ___
___ Hearing Officer's Report/Recommendations Attachment ___
___ Response to Testimony/Comments Attachment ___
___ Prior EQC Agenda Items: (list)
Attachment ___
___ Other Related Reports/Rules/Statutes:
Attachment ___
___ Supplemental Background Information Attachment ___

REGULATED/AFFECTED COMMUNITY CONSTRAINTS/CONSIDERATIONS:

Heating oil tank owners, underground storage tank owners, service providers and supervisors will be affected by the rules. The proposed program will affect contractors performing soil cleanup work at sites with underground storage tanks holding oil and at sites with any tanks holding heating oil. The heating oil industry believes that regulating remedial action and cleanup supervisors and service providers will improve the quality of service provided and provide accountability to the public. In addition, licensed supervisors and service providers would be required to follow cleanup regulations necessary for remediating and protecting the environment. Without imposing certification and licensing procedures it would be more difficult to insure adequate cleanup at sites currently considered low priority for extensive Department oversight on the work performed.

The certification and licensing provisions apply only to soil contamination caused by released oil and does not apply to groundwater remediation.

PROGRAM CONSIDERATIONS:

1. Licensing: The legislative intent is for the program to be self supporting. The Department recommends the fee for examination and license be set at $25 each. The projected expenses of implementing and administering the program require a $25 fee for examination and licensing of supervisors and a $100 licensing fee for service providers to become self supporting. The current program of certifying and licensing service providers and supervisors of underground storage installers and decommissioners also has a $25 examination and license fee for supervisors and a $100 licensing fee for service providers. The remedial action and cleanup certification and licensing program will be administrated under the existing licensing program for underground storage tank installers and decommissioners. Having the same fees for all tank service providers will be more equitable to the public and make the program less complex to administer.

2. Program Management: The organizational management of this program has been modified. As this is a remedial action and cleanup oriented program it would normally be the responsibility of the Leaking Underground Storage Tank (LUST) section within the Environmental Cleanup Division. Since the Underground Storage Tank section within the Hazardous and Solid Waste Division already has an operating program to license tank service providers and supervisors doing installation, removal and testing work, the responsibility for implementing the certification and licensing of remedial action and cleanup supervisors was given to the Underground Storage Tank section within the HSW Division.

3. Under 340-160-150 (7) the Department will be allowed to charge $10 to replace an issued license. The $10 fee is the estimated cost to issue a replacement license to a supervisor or service provider.

ALTERNATIVES CONSIDERED BY THE DEPARTMENT:

There are no alternatives for dealing with the provisions of HB 3456 other than not to proceed with rules at this time.

DEPARTMENT RECOMMENDATION FOR ACTION, WITH RATIONALE:

The Department recommends the Environmental Quality Commission (Commission) authorize public hearings on the proposed rules for licensing remedial action and cleanup service at sites containing soil contaminated by oil from underground storage tanks and heating oil tanks.

CONSISTENCY WITH STRATEGIC PLAN, AGENCY POLICY, LEGISLATIVE POLICY:

The proposed rules implement the statutory provisions and the legislative intent of HB 3456 by improving and regulating the quality of remedial action and cleanup services performed on certain releases involving only soil contamination from underground storage tanks and heating oil tanks.

ISSUES FOR COMMISSION TO RESOLVE:

The policy issue for the Commission to resolve is the need of implementing and enforcing regulations requiring remedial action and cleanup service providers and supervisors to be certified and licensed to provide services in the State of Oregon.

assessments. Therefore it becomes important to the entire underground storage tank program that remedial action service providers and supervisors be certified, licensed and regulated to provide consistent and reliable service for underground storage tanks.

The Department recommends the Environmental Quality Commission (Commission) authorize public hearings on the proposed rules for licensing remedial action and cleanup service at sites containing soil contaminated by oil from underground storage tanks and heating oil tanks.

CONSISTENCY WITH STRATEGIC PLAN, AGENCY POLICY, LEGISLATIVE POLICY:

The proposed rules implement the statutory provisions and the legislative intent of HB 3456 by improving and regulating the quality of remedial action and cleanup services performed on certain releases involving only soil contamination from underground storage tanks and heating oil tanks.

ISSUES FOR COMMISSION TO RESOLVE:

1. The policy issue for the Commission to resolve is the need to implement and enforce regulations requiring remedial action and cleanup service providers and supervisors to be certified and licensed to provide services in the State of Oregon.

2. Should the program proposed by the Department be implemented?

INTENDED FOLLOW UP ACTIONS:

Public hearings scheduled for April 1990.

Final rule adoption scheduled for May, 1990.

First exam for remedial action and cleanup supervisors to be held in July 1990.

Remedial action service providers and certified supervisors licensed by September 1990.

Approved:

Section: Richard P. Reid

Division: Stephanie Hallock

Director: ~~Tom Bispham~~ for Fred Hansen

Report Prepared By: Dennis R. Thomason

Phone: 229-5153

Date Prepared: December 9, 1989

(Author: Dennis R. Thomason)
(File EQC/190)
(December 29, 1989)

up to the full amount of the claim by filing a demand for a hearing with the commission. The demand shall identify the name and address of the claimant, the date proof of the remedial action costs was filed and the date of the determination paying the claim, in full or in part, or rejecting the claim. The demand for a hearing must be filed within 30 days of the determination paying the claim, in full or in part, or rejecting the claim.

SECTION 36. (1) If timely demand for a hearing is filed, the commission shall hold a hearing on the order as provided by ORS 183.310 to 183.550. In the absence of a timely demand for a hearing, no person shall be entitled to judicial review of the determination.

(2) After the hearing, the commission shall enter a final order vacating, modifying or affirming the determination.

SECTION 37. A person aggrieved by an order of the commission which has been the subject of a timely application for hearing before the commission shall be entitled to judicial review of the order under ORS 183.310 to 183.550.

SECTION 38. Notwithstanding any other provision of sections 1 to 40 of this Act, the commission has no obligation to pay any claims for remedial action costs if the moneys in the account are insufficient to pay all of the claims for remedial action costs for which forms of written proof have been filed, but which have not yet been determined, paid or rejected. The commission may adopt rules providing for the partial payment of claims for remedial action costs whenever the moneys within the account are insufficient.

SECTION 39. The Oil Heat Commission shall adopt rules to carry out the provisions of sections 1 to 40 of this Act. The rules shall include but need not be limited to:

(1) Procedures for processing remedial action claims that assure speedy processing and payment of claims by the commission.

(2) Procedures for determining the commission's level of involvement in responding to a release in coordination with the Department of Environmental Quality and in compliance with applicable department rules.

SECTION 40. (1) Violation of any provision of sections 1 to 40 of this Act is punishable, upon conviction, by a fine of not more than $500 or by imprisonment in the county jail for not more than 90 days, or both.

(2) District and justice courts shall have concurrent jurisdiction with circuit courts in all prosecutions under sections 1 to 40 of this Act.

SECTION 41. ORS 466.705 is amended to read:

466.705. As used in ORS 466.705 to 466.835 and 466.895:

(1) "Corrective action" means remedial action taken to protect the present or future public health, safety, welfare or the environment from a release of a regulated substance. "Corrective action" includes but is not limited to:

(a) The prevention, elimination, removal, abatement, control, minimization, investigation, assessment, evaluation or monitoring of a hazard or potential hazard or threat, including migration of a regulated substance; or

(b) Transportation, storage, treatment or disposal of a regulated substance or contaminated material from a site.

(2) "Decommission" means to remove from operation an underground storage tank, including temporary or permanent removal from operation, abandonment in place or removal from the ground.

(3) "Fee" means a fixed charge or service charge.

(4) "Guarantor" means any person other than the permittee who by guaranty, insurance, letter of credit or other acceptable device, provides financial responsibility for an underground storage tank as required under ORS 466.815.

(5) "Heating oil tank" has the meaning given that term in section 1 of this 1989 Act.

[*(5)*] **(6)** "Investigation" means monitoring, surveying, testing or other information gathering.

[*(6)*] **(7)** "Local unit of government" means a city, county, special service district, metropolitan service district created under ORS chapter 268 or a political subdivision of the state.

[*(7)*] **(8)** "Oil" means gasoline, crude oil, fuel oil, diesel oil, lubricating oil, sludge, oil refuse and any other petroleum related product or fraction thereof that is liquid at a temperature of 60 degrees Fahrenheit and a pressure of 14.7 pounds per square inch absolute.

[*(8)*] **(9)** "Owner" means the owner of an underground storage tank.

[*(9)*] **(10)** "Permittee" means the owner or a person designated by the owner who is in control of or has responsibility for the daily operation or maintenance of an underground storage tank under a permit issued pursuant to ORS 466.760.

[*(10)*] **(11)** "Person" means an individual, trust, firm, joint stock company, corporation, partnership, joint venture, consortium, association, state, municipality, commission, political subdivision of a state or any interstate body, any commercial entity and the Federal Government or any agency of the Federal Government.

[*(11)*] **(12)** "Regulated substance" means:

(a) Any substance listed by the United States Environmental Protection Agency in 40 CFR Table 302.4 pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980 as amended (P.L. 96-510 and P.L. 98-80), but not including any substance regulated as a hazardous waste under 40 CFR Part 261 and OAR 340 Division 101;

(b) Oil; or

(c) Any other substance designated by the commission under ORS 466.630.

[*(12)*] **(13)** "Release" means the discharge, deposit, injection, dumping, spilling, emitting, leaking or placing of a regulated substance from an underground storage tank into the air or into or on land or the waters of the state, other than as authorized by a permit issued under state or federal law.

[*(13)*] **(14)** "Underground storage tank" means any one or combination of tanks and underground pipes connected to the tank, used to contain an accumulation of a regulated substance, and the volume of which, including the volume of the underground pipes connected to the tank, is 10 percent or more beneath the surface of the ground.

[*(14)*] **(15)** "Waters of the state" has the meaning given that term in ORS 468.700.

SECTION 42. ORS 466.750 is amended to read:

466.750. (1) In order to safeguard the public health, safety and welfare, to protect the state's natural and biological systems, to protect the public from unlawful underground tank installation and retrofit procedures, [*and*] to assure the highest degree of leak prevention from underground storage tanks **and to insure the appropriate cleanup of oil spills and releases**, the commission may adopt a program to regulate persons providing underground storage tank installation and removal, retrofit, testing, [*and*] inspection **and remedial action** services.

(2) As part of the program established under subsection (1) of this section, the commission also may regulate persons who provide remedial action on heating oil tanks covered under sections 1 to 40 of this 1989 Act. As used in this section, "remedial action" has the meaning given that term in section 1 of this 1989 Act.

[*(2)*] **(3)** The program established under subsection (1) of this section may include a procedure to license persons who demonstrate, to the satisfaction of the department, the ability to service underground storage tanks **and heating oil tanks**. This demonstration of ability may consist of written or field examinations. The commission may establish different types of licenses for different types of demonstrations, including but not limited to:

(a) Installation, removal, retrofit and inspection of underground storage tanks;

(b) Tank integrity testing; [*and*]

(c) Installation of leak detection systems; [.]

(d) Cleanup of soil contamination resulting from spills or releases of oil from underground storage tanks; and

(e) Cleanup of soil contamination resulting from the release of heating oil from heating oil tanks under sections 1 to 40 of this 1989 Act.

[*(3)*] **(4)** The program adopted under subsection (1) of this section may allow the department after opportunity for hearing under the provisions of ORS 183.310 to 183.550, to revoke a license of any person offering underground **storage** tank **or heating oil tank** services who commits fraud or deceit in obtaining a license or who demonstrates negligence or incompetence in performing underground tank services.

[*(4)*] **(5)** The program adopted under subsection (1) of this section shall:

(a) Provide that no person may offer to perform or perform services for which a license is required under the program without such license.

(b) Establish a schedule of fees for licensing under the program. The fees shall be in an amount sufficient to cover the costs of the department in administering the program.

[*(5)*] **(6)** The following persons shall apply for an underground storage tank permit from the department:

(a) An owner of an underground storage tank currently in operation;

(b) An owner of an underground storage tank taken out of operation between January 1, 1974, and the operative date of this section; and

(c) An owner of an underground storage tank that was taken out of operation before January 1, 1974, but that still contains a regulated substance.

SECTION 43. ORS 466.760 is amended to read:

466.760. (1) No person shall install, bring into operation, operate or decommission an underground storage tank without first obtaining a permit from the department.

(2) No person shall deposit a regulated substance into an underground storage tank unless the tank is operating under a permit issued by the department.

(3) Any person who assumes ownership of an underground storage tank from a previous permittee must complete and return to the department an application for a new permit before the person begins operation of the underground storage tank under the new ownership.

(4) Any person who deposits a regulated substance into an underground storage tank or sells an underground storage tank shall notify the owner or operator of the tank of the permit requirements of this section.

(5) The following persons must sign an application for a permit submitted to the department under this section or ORS 466.750 [*(5)*] **(6)**:

(a) The owner of an underground storage tank storing a regulated substance;

(b) The owner of the real property in which an underground storage tank is located; and

(c) The proposed permittee, if a person other than the owner of the underground storage tank or the owner of the real property.

SECTION 44. Members of the commission shall be appointed within 120 days of the effective date of this Act. Notwithstanding the term of office specified by section 4 of this Act, of the members first appointed to the commission:

(1) Two shall serve for terms ending June 30, 1990.

(2) Two shall serve for terms ending June 30, 1991.

(3) Three shall serve for terms ending June 30, 1992.

SECTION 45. Notwithstanding any other law limiting expenditures of the Department of Environmental Quality, the amount of $32,504 is established for the biennium beginning July 1, 1989, as the maximum limit for payment of expenses from fees, moneys or other revenues, including Miscellaneous Receipts, excluding federal funds, collected or received by the Department of Environmental Quality.

SECTION 46. Notwithstanding any other law limiting expenditures of the Oil Heat Commission, the amount of $1,250,000 is established in the Heating Oil Remedial Action Account for the biennium beginning July 1, 1989, as the maximum limit for payment of expenses from fees, moneys or other revenues, including Miscellaneous Receipts, excluding federal funds, collected or received by the Oil Heat Commission.

SECTION 47. Notwithstanding any other law limiting expenditures of the Oil Heat Commission, the amount of $1 million is established in the Heating Oil Education and Conservation Account for the biennium beginning July 1, 1989, as the maximum limit for payment of expenses from fees, moneys or other revenues, including Miscellaneous Receipts, excluding federal funds, collected or received by the Oil Heat Commission.

SECTION 48. This Act being necessary for the immediate preservation of the public peace, health and safety, an emergency is declared to exist, and this Act takes effect on its passage.

PROPOSED OREGON ADMINISTRATIVE RULES
CHAPTER 340, DIVISION 16 - DEPARTMENT OF ENVIRONMENTAL QUALITY

REGISTRATION AND LICENSING REQUIREMENTS FOR UNDERGROUND STORAGE TANK SERVICE PROVIDERS

AUTHORITY, PURPOSE, AND SCOPE

340-160-005 (1) These rules are promulgated in accordance with and under the authority of ORS 466.750.

(2) The purpose of these rules is to provide for the regulation of companies and persons performing tank services for underground storage tank systems and who provide remedial action services for underground storage tanks and heating oil tanks and to assure that tank systems are being serviced in a manner which will protect the public health and welfare and the land and waters within the State of Oregon. These rules establish standards for:

(a) Registration and licensing of firms performing tank services on underground storage tanks, and remedial action services for underground storage tanks and heating oil tanks.

(b) Examination, qualification and licensing of individuals who supervise the performance of tank services on underground storage tanks, and remedial action services for underground storage tanks and heating oil tanks.

(c) Administration and enforcement of these rules by the Department.

(3) Scope.

(a) OAR 340-160-005 through -150 applies to the installation, retrofitting, decommissioning and testing, by any person, of underground storage tanks regulated by ORS 466.705 through ORS 466.995 and OAR Chapter 340 Division 150 except as noted in Subsection (3)(b).

(b) OAR 340-160-005 through OAR 340-160-150 do not apply to services performed by the tank owner, property owner or permittee.

DEFINITIONS

340-160-010, As used in these rules,

(1) "Cathodic Protection" means a technique to prevent corrosion of a metal surface by making that surface the cathode of an electrochemical cell. A tank system can be cathodically protected through the application of either galvanic anodes or impressed current.

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

(3) "Decommissioning or [Removal] Closure" means to remove an underground storage tank from operation, either temporarily or permanently, by abandonment in place or by removal from the ground.

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

(5) "Director" means the Director of the Department of Environmental Quality.

(6) "Facility" means the location at which underground storage tanks are in place or will be placed. A facility encompasses the entire property contiguous to the underground storage tanks that is associated with the use of the tanks.

(7) "Fee" means a fixed charge or service charge.

(8) "Firm" means any business, including but not limited to corporations, limited partnerships, and sole proprietorships, engaged in the performance of tank services.

(9) "Heating Oil" means Number 1 or 2 heating oil that is delivered to a tank and used to create heat.

(10) "Heating Oil Tank" means any one or combination of above ground or underground tanks and above ground or underground pipes connected to the tank, which is used to contain heating oil used for space heating a building with human habitation or water heating not used for commercial processing.

([9]11) "Installation" means the work involved in placing an underground storage tank system or any part thereof in the ground and preparing it to be placed in service.

(10[12) "Licensed" means that a firm or an individual with supervisory responsibility for the performance of tank services has met the Department's experience and qualification requirements to offer or perform services related to underground storage tanks and has been issued a license by the Department to perform those services.

(13) "Oil" means gasoline, crude oil, fuel oil, diesel oil, lubrication oil, sludge, oil refuse and any other petroleum related product or fraction thereof that is liquid at a temperature of 60 degrees Fahrenheit and a pressure of 14.7 pounds per square inch absolute.

(14) "Regulated substance" means:

(a) Any substance listed by the United States Environmental Protection Agency in 40 CFR Table 302.4 as amended as of the date October 1, 1987, but not including any substance regulated as a hazardous waste under 40 CFR Part 261 and OAR 340 Division 101, or

(b) Oil.

(15) "Release" means any spilling, leaking, emitting, escaping or leaching into the environment.

(16)(a) "Remedial Action" means those actions consistent with a permanent remedial action taken instead of or in addition to removal actions, in the event of the release from a heating oil tank or underground storage tank into the environment, to prevent or minimize the release from a heating oil tank or underground storage tank so that it does not migrate to cause substantial danger to present or future public health, safety, welfare or the environment. "Remedial action" includes, but is not limited to:

(A) Such actions at the location of the release as storage, confinement, perimeter protection using dikes, trenches or ditches, clay cover, neutralization, cleanup of released from a heating oil tank or underground storage tank and associated contaminated materials, recycling or reuse, diversion, destruction, segregation of reactive wastes, collection of leachate and runoff, onsite treatment or incineration,provision of alternative drinking and household water supplies, and any monitoring reasonably required to assure that such actions protect the public health, safety, welfare and the environment.

(B) Offsite transport and offsite storage, treatment, destruction or secure disposition of oil released from a heating oil tank or underground storage tank and associated contaminated materials.

(C) Such actions as may be necessary to monitor, assess, evaluate or investigate a release from a heating oil tank or under ground storage tank.

(b) "Remedial action" does not include replacement or installation of a new heating oil tank or underground storage tank.

(17) "Remedial action services" includes remedial actions or removal.

(18)(a) "Removal" means:

(A) The cleanup or removal from the environment of a regulated substance or oil released from a heating oil tank or underground storage tank.

(B) Such actions as may be necessary in the event of a release from a heating oil tank or underground storage tank into the environment;

(C) Such actions as may be necessary to monitor, assess and evaluate the release from a heating oil tank or underground storage tank;

(D) The disposal of removed material; or

(E) The taking of such other actions as may be necessary to prevent, minimize or mitigate damage to the public health, safety, welfare or to the environment, which may otherwise result from a release from a heating oil tank or underground storage tank.

(b) "Removal" also includes, but is not limited to, security fencing or other measures to limit access, provisions of alternative drinking and household water supplies, temporary evacuation and housing of threatened individuals and action taken under ORS 466.570 relating to a release from a heating oil tank or underground storage tank.

([11]19) "Retrofitting" means the modification of an existing underground storage tank including but not limited to the replacement of monitoring systems, the addition of cathodic protective systems, tank repair, replacement of piping, valves, fill pipes or vents and the installation of tank liners.

([12]20) "Supervisor" means a licensed individual operating alone or employed by a contractor and charged with the responsibility to direct and oversee the performance of tank services at a facility.

([13]21) "Tank Services" include but are not limited to tank installation, decommissioning, retrofitting, testing, and inspection.

([14]22) "Tank Services Provider" is an individual or firm registered and, if required, licensed to offer or perform tank services on regulated underground storage tanks in Oregon.

([15]23) "Testing" means the application of a method to determine the integrity of an underground storage tank.

([16]24) "Tightness testing" means a procedure for testing the ability of a tank system to prevent an inadvertent release of any stored substance into the environment (or, in the case of an underground storage tank system, intrusion of groundwater into a tank system).

([17]26) "Underground Storage Tank" or "UST" means an underground storage tank as defined in OAR 340-150-010.

GENERAL PROVISIONS

340-160-020 (1) After May 1, 1989, no firm shall offer or perform tank services in the State of Oregon without having first registered with the Department.

(2) After September 1, 1989, no tank services provider may install, retrofit or decommission an underground storage tank in the State of Oregon without first obtaining a license from the Department.

(3) After May 1, 1990, no tank services provider shall offer to test or perform a test on an underground storage tank without first having obtained a license from the Department.

([3]4) After Sept. 1, 1990, no firm shall offer remedial action services without first having obtained a license from the Department.

([4]5) After the required date, any tank or remedial action services provider offering to perform or remedial action services tank services must have registered with or been licensed by the Department. Proof of registration and or licensing must be available at all times a tank or remedial action services provider is performing tank or remedial action services.

([5]6) After the required date, a tank services provider [registered and/or] licensed to perform tank services is prohibited from offering or performing tank services on regulated tanks unless a regulated tank has been issued a permit by the Department.

([6]7) Any tank or remedial action services provider licensed or certified by the Department under the provisions of these rules shall:

(a) comply with the appropriate provisions of OAR 340-160-005 through OAR 340-160-050;

(b) comply with the appropriate provisions of OAR 340-122-205 through OAR 340-122-360;

([b]c) maintain a current address on file with the Department; and

([c]d) perform tank services in a manner which conforms with all federal and state regulations applicable at the time the services are being performed.

([7]8) A firm registered or, if required, licensed to perform tank and remedial action services must submit a checklist to the Department following the completion of a tank installation [or], retrofit[.], decommissioning, cathodic protection, tightness testing , remedial action or removal of a regulated substance.

(a) The checklist will be made available on a form provided by the Department.

(b) The installation and retrofit checklist must be signed by an executive officer of the firm and, following September 1, 1989, by the licensed tank services supervisor.

(c) An as-built drawing of the completed tank installation or retrofit shall be provided with the submission of the installation and retrofit checklist.

([8]9) After September 1, 1989, a licensed tank services supervisor shall be present at a tank installation, retrofit or decommissioning project when the following project tasks are being performed:

(a) Preparation of the excavation immediately prior to receiving backfill and the placement of the tank into the excavation;

(b) Any movement of the tank vessel, including but not limited to transferring the tank vessel from the vehicle used to transport it to the project site;

(c) Setting of the tank and its associated piping into the excavation, including placement of any anchoring devices, backfill to the level of the tank, and strapping, if any;

(d) Placement and connection of the piping system to the tank vessel;

(e) Installation of cathodic protection;

(f) All pressure testing of the underground storage tank system, including associated piping, performed during the installation or retrofitting;

(g) Completion of the backfill and filling of the installation.

(h) Preparation for and installation of tank lining systems.

(h) Tank excavation.

(i) Tank purging or inerting.

(j) Removal and disposal of tank contents from cleaning.

([9]10) A licensed tank services provider shall report the existence of any condition relating to an underground tank system that has or may result in a release of the tank's contents to the environment. This report shall be provided to the Department within 72 hours of the discovery of the condition.

([10]11) The requirements of this part are in addition to and not in lieu of any other licensing and registration requirement imposed by law.

(12) After September 1, 1990, a licensed tank or remedial action services supervisor shall be present at a remedial action or removal site when the following tasks are being performed.

(a) During all excavations made after a leak is suspected or has been confirmed;

(b) When any tanks or lines are removed or decommissioned as a result of a suspected or confirmed release;

(c) When all soil and /or water samples are collected, stored, and packed for shipping to the analytical laboratory;

(d) When any soil borings, back-hoe pits or other excavations are made for the purpose of investigating the extent of contamination;

(e) During removal from the open excavation or disposal of any free product or groundwater; and

(f) When any monitoring or recovery wells are installed at a site as part of the investigation or cleanup of a suspected or confirmed release.

(13) After July 1, 1990 Service providers will notify the Department three (3) working days prior to beginning any field work on underground storage tank installations, decommissionings or remedial action work.

(14) After July 1, 1990 Service Providers shall not backfill or close an installation, decommissioning or soil remedial action excavation site before a Department inspection or unless authorized by the Department.

TYPES OF LICENSES

340-160-025 (1) The Department may issue the following types of licenses:

(a) Tank Services Provider
(b) Supervision of Tank Installation and Retrofitting
(c) Supervision of Tank Decommissioning
(d) Supervision of Tank System Tightness Testing
(e) Supervision of Cathodic Protection System Testing
(g) Supervision of Remedial Action Services

(2) A license will be issued to firms and individuals who meet the qualification requirements, submit an application and pay the required fee.

REGISTRATION AND LICENSING OF TANK SERVICES PROVIDERS

340-160-030 (1) On or before May 1, 1989, all firms offering or performing tank services in the State of Oregon shall register with the Department.

(2) Registration shall be accomplished by:

(a) Completing a registration application provided by the Department; or

(b) Submitting the following information to the Department:

(i) The name, address and telephone number of the firm.

(ii) The nature of the tank services to be offered

(iii)A summary of the recent project history of the firm (the two year period immediately preceding the application) including the number of projects completed by the firm in each tank services category and identification of any other industry or government licenses held by the firm related to specific tank services.

(iv) Identifying the names of employees or principals responsible for on-site project supervision, and

(c) Including a signed statement that certifies that:

"I ___(name)____, am the chief executive officer of __(company)____, and do hereby certify that I have obtained a copy of the applicable laws and rules pertaining to the regulation of underground storage tanks in the State of Oregon and that I have read them and will direct the employees and principals of this company to perform the tank services rendered by this company in a manner that is consistent with their requirements."

(d) Remitting the required registration fee.

(3) After July 1, 1989, firms installing, retrofitting and/or decommissioning underground storage tanks may apply for a tank services provider license from the Department.

(4) After March 1, 1990, firms testing underground storage tanks may apply for a tank services provider license from the Department.

(5) After July 1, 1990, firms providing tank remedial action services may apply for tank remedial action services provider license from the Department.

([5]6) An application for a tank services providers license shall contain:

[(a) The information required by 340-160-025 (2) (b), (c) and (d).]

([b]a) A list of employees licensed by the Department to perform and supervise tank services, an identification of the specific tank services for which they are licensed, the date the employee received a license from the Department, and the number of the employee's license.

([c]b) Remitting the required licensing fee.

([6]7) The Department will review the application for completeness. If the application is incomplete, the Department shall notify the applicant in writing of the deficiencies.

([7]8) The Department shall deny, in writing, a license to a tank services provider who has not satisfied the license application requirements.

([8]9) The Department shall issue a license to the applicant after the application is approved.

([9]10) The Department shall grant a license for a period of twenty-four (24) months.

([10]11) Renewals:

(a) License renewals must be applied for in the same manner as is required for an initial license.

(b) The complete renewal application shall be submitted no later than 30 days prior to the expiration date.

([11]12) The Department may suspend or revoke a license if the tank services provider:

(a) Fraudulently obtains or attempts to obtain a license.

(b) Fails at any time to satisfy the requirements for a license or comply with the rules adopted by the Commission.

(c) Fails to meet any applicable state or federal standard relating to the service performed under the license.

(d) Fails to employ and designate a licensed supervisor for each project.

([12]13) A tank services provider who has a license suspended or revoked may reapply for a license after demonstrating to the Department that the cause of the revocation has been resolved.

([13]14) In the event a tank services provider no longer employs a licensed supervisor the tank services provider must stop work on any regulated underground storage tank system. Work shall not start until a licensed supervisor is again employed by the provider and written notice of the hiring of a licensed supervisor is received by the Department.

SUPERVISOR EXAMINATION AND LICENSING

340-160-035 (1) To obtain a license from the Department to supervise the installation, retrofitting, decommissioning or testing of an underground storage tank, or to supervise remedial action services for a release from an underground storage tank or a heating oil tank, an individual must take and pass a qualifying examination approved by the Department.

(2) Applications for Supervisor Licenses - General Requirements

(a) Applications must be submitted to the Department within thirty (30) days of passing the qualifying examination.

(b) Application shall be submitted on forms provided by the Department and shall be accompanied by the appropriate fee.

(3) The application to be a Licensed Supervisor shall include:

(a) Documentation that the applicant has successfully passed the Supervisor examination.

(b) Any additional information that the Department may require.

(4) A license is valid for a period of twenty-four (24) months after the date of issue.

(5) Renewals

(a) License renewals must be applied for in the same manner as the application for the original license, including re-examination.

(6) The Department may suspend or revoke a Supervisor's license for failure to comply with any state or federal rule or regulation pertaining to the management of underground storage tanks.

(7) If a Supervisor's license is revoked, an individual may not apply for another supervisor license prior to ninety (90) days after the revocation date.

(8) Upon issuance of a Supervisor's license, the Department shall issue an identification card to all successful applicants which shows the license number and license expiration date.

(9) The supervisor's license identification card shall be available for inspection at each site.

SUPERVISORS EXAMINATIONS

340-160-040 (1) At least once prior to September 1, 1989, and twice every year thereafter, the Department shall offer a qualifying examination for any person who wishes to become licensed to install or remove underground storage tanks.

(2) At least once prior to March 1, 1990, and twice every year thereafter, the Department shall offer a qualifying examination for any person who wishes to become licensed to test underground storage tanks.

(3) At least once prior to September 1, 1990, and twice every year thereafter, the Department shall offer a qualifying examination for any person who wishes to become licensed to supervise remedial action services for underground storage or heating oil tanks.

([3]4) Not less than thirty (30) days prior to offering an examination the Department shall prepare and make available to interested persons, a study which may include sample examination questions.

([4]5) The Department shall develop and administer the qualifying examinations in a manner consistent with the objectives of this section.

FEES

340-160-150 (1) Fees shall be assessed to provide revenues to operate the underground storage tank and remedial action services licensing program. Fees are assessed for the following:

(a) Tank Services Provider

(b) Tank Remedial Action Service Provider

([b]c) Supervisors Examination

([c]d) Supervisors License

([d]e) Examination Study Guides

(2) Tank service shall pay a non-refundable registration fee of $25.

(3) Tank and remedial action service providers shall pay a non-refundable license application fee of $100 for a twenty-four (24) month license.

(4) Individuals taking the supervisor licensing qualifying examination shall pay a non-refundable examination fee of $25.

(5) Individuals seeking to obtain a supervisor's license shall pay a non-refundable license application fee of $25 for a two year license.

(6) Examination study guides shall be made available to the public for $10.

(7) Replacement licenses will be provided by the Department a for fee of $10.

Attachment C
Agenda Item N
January 19, 1990

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

IN THE MATTER OF A PUBLIC HEARING FOR AMENDMENTS TO OAR Chapter 340 Division 160 and Portions of Division 150	)))))	STATEMENT OF NEED FOR RULES

Statutory Authority

ORS 466.705 through ORS 466.995, as amended, authorizes the Environmental Quality Commission to adopt rules governing licensing procedures for service providers and supervisors providing remedial action and removal services at certain tank sites having soil contaminated with oil.

Need for the Rules

The proposed rules are needed to carry out the authority given to the Commission to adopt rules for regulation of service providers and supervisors providing remedial action and removal services.

Principal Documents Relied Upon

SB 115 passed by the 1987 Oregon Legislature (ORS 466.705 through ORS 466.995)

HB 3456 amendments to ORS 466.705 - ORS 466.995 passed by the 1989 Oregon Legislature.

Subtitle I of the 1984 Hazardous and Solid Waste Amendments to the Resource Conservation and Recovery Act.

40CFR Part 280, November 1985.

40CFR Part 280, September 23, 1988.

40CFR Part 280, October 21, 1988.

40CFR Part 281, September 23, 1988.

OAR 340-160-005 through OAR 340-160-050

OAR 340-122-205 through OAR 340-122-360

Superfund Amendments and Reauthorization Act of 1986.

Attachment D
Agenda Item N
January 19, 1990

FISCAL AND ECONOMIC IMPACT

Fiscal Impact

Licensing of Service Providers and Supervisors: Program expenses will be incurred to develop information and tests, manage the testing, registration and licensing activities. The program expenses are expected to be $36,000 per biennium. This will be offset by program fees for licenses, tests and study guides.

Small Business Impact

Licensing of Service Providers and Supervisors: The Department estimates that approximately 160 businesses will become licensed as remedial action and removal service providers, 270 individuals will take the Supervisor licensing exam, and 190 will become licensed during the first year of the program. The fees and estimated program income is as follows:

The impact on the business community includes the additional fees, the time necessary to study for the exam and the exam time. If an individual fails the exam that person will be required to wait 6 months until the next scheduled supervisors exam which could impact their ability to continue or find similar employment.

In light of the potential environmental impact resulting from unqualified individuals performing remedial action or removal services, the Department feels these impacts to be reasonable.

FEES:

Service Provider License Fee (Two Years)	$100
Supervisor Examination Fee	$ 25
Supervisor License Fee (Two Years)	$ 25
Study Guide	$ 10

INCOME: (Estimated)

	First Year		Second Year	
Service Provider license	160	$16,000	20	$2,000
Supervisor Exam	270	$ 6,750	50	$1,250
Supervisor License	235	$ 5,875	37	$ 925
Study Guide	270	$ 2,700	50	$ 500
Subtotal		$31,325		$4,675
Two year Total		$36,000		

Attachment E
Agenda Item N
01-19-90 EQC Meeting

Oregon Department of Environmental Quality

A CHANCE TO COMMENT ON...

Proposed Temporary rule, Certification and licensing for Service Providers and Supervisors providing Remedial Action Services.

WHO IS AFFECTED: Persons and firms that provide soil contamination remedial action or removal services for releases from underground storage tanks and heating oil tanks.

WHAT IS BEING PROPOSED: The Department has developed a program to license firms and supervisors that provide remedial action or removal services associated with releases from underground storage tanks or heating oil tanks.

WHAT ARE THE HIGHLIGHTS:

A. Licensing requirements for firms providing remedial action or removal services.

1. Licensing of firms that provide remedial action or removal services by Sept. 1, 1990. Licensed firms are not to perform services on regulated but unpermitted tanks.

2. Certification and Licensing of supervisors of remedial action or removal services by Sept. 1, 1990. Supervisors must pass an examination over technical requirements and state and federal regulations prior to being licensed.

3. The proposed licensing examination fee is $25. The proposed license fee is $25.

HOW TO COMMENT: Public Hearing Schedule

Bend

April 2, 1990
3:00 to 5:00 P.M.
Cascade Natural Gas
334 N.E. Hawthorne
Bend, Oregon

Pendleton

April 3, 1990
3:00 to 5:00 P.M.
Blue Mountain Community College
Room P12, Pioneer Hall
2411 N.W. Garden
Pendleton, Oregon

Portland

April 5, 1990
9:00 to 11:00 A.M.
811 S.W. Sixth Ave
Fourth Floor - Rm. 4A
Portland, Oregon

Eugene

April 6, 1990
3:00 to 5:00 P.M.
Lane Community College
4000 E. 30th Ave.
Eugene, Oregon

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

FOR FURTHER INFORMATION: E-1
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.

A Department staff member will be appointed to preside over and conduct the hearings. Written comments should be sent to:

Department of Environmental Quality
811 S.W. Sixth
Portland, Oregon

The comment period will end April 30, 1990. All comments should be received at the Department by 5:00 P.M.

For more information or copies of the proposed rules, contact Dennis R. Thomason at (503) 229-5153 or toll-free at 1-800-452-4011.

WHAT IS THE NEXT STEP:

After public testimony has been received and evaluated, the proposed rules will be revised as appropriate and presented to the Environmental Quality Commission in May 1990. The Commission may adopt the Department's recommendation, or take no action.

NEIL GOLDSCHMIDT
GOVERNOR

Environmental Quality Commission

811 SW SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

REQUEST FOR EQC ACTION

Meeting Date: January 19, 1990
Agenda Item: O
Division: Water Quality
Section: Administration

SUBJECT:

To provide rules to describe general items which must be included in public notices for permit applications or permit modifications and to cover additional items to be included in public notices for NPDES permits, Air contaminant Discharge Permits, WQ General permits, Solid Waste Permits and Hazardous Waste facilities permits.

PURPOSE:

The purpose of the rules is to include sufficient information in public notices so that they are more meaningful to the public, would result in the public being able to better respond with useful testimony, and result in better permits being issued. Also, the notice should allow the public to determine whether they wish to request a public hearing on a proposed permit.

ACTION REQUESTED:

___ Work Session Discussion
___ General Program Background
___ Potential Strategy, Policy, or Rules
___ Agenda Item ___ for Current Meeting
___ Other: (specify)

_X_ Authorize Rulemaking Hearing
___ Adopt Rules

Proposed Rules	Attachment A
Rulemaking Statements	Attachment B
Fiscal and Economic Impact Statement	Attachment B
Public Notice	Attachment C

___ Issue a Contested Case Order

___ Approve a Stipulated Order
___ Enter an Order
Proposed Order Attachment ___

___ Approve Department Recommendation
___ Variance Request Attachment ___
___ Exception to Rule Attachment ___
___ Informational Report Attachment ___
___ Other: (specify) Attachment ___

DESCRIPTION OF REQUESTED ACTION:

Rule modifications are proposed which would increase the kind and amount of information provided in the agency's public notices when proposing to issue permits or renew permits with increased discharges. The proposed rules contain general rule content as well as specific additional rule content for identified permits.

New information which would be required in the general rule on public notice includes a compliance history on renewals with increased discharges, any special conditions in the permit, a listing of pollutant categories which are not limited or required to be monitored in the permit, an indication of the location of documents relied upon to draft the permit, and a list of other Department permits expected to be required for the facility.

The Commission may wish to discuss the inclusion of compliance history on permits in the proposed rules. The Commission has discussed compliance reporting generally in response to a request from the Jackson County Board of Commissions. The Department expects to receive public comment on the issue during the rulemaking process.

In addition, the Water Quality NPDES permit notice would contain a description (when available) of water quality upstream and downstream from the proposed discharge; if the waterbody is water quality limited, a description of the permit in relation to that status; a description of load increases allowed; an evaluation of compliance with special conditions in previous permit and an assessment of future control needs.

The Air Quality Air Contaminant Discharge Permit notice would include whether permits would have a significant impact on Class 1 airsheds; a description of whether a proposed emission is a criteria pollutant and whether the primary or

secondary ambient air standard for that pollutant is presently attained; and, if a major source, what impact it would have on the Prevention of Significant Deterioration Program within attainment areas.

The Solid Waste facility permit would include a description of the important natural features of the site and a description of leachate management systems or controls.

The hazardous waste facility permit notice has no specific program additions.

AUTHORITY/NEED FOR ACTION:

___	Required by Statute: _____ Enactment Date: _____	Attachment ___
_X_	Statutory Authority: ORS Chapters 183 & 468	Attachment ___
___	Pursuant to Rule: _____	Attachment ___
___	Pursuant to Federal Law/Rule: _____	Attachment ___
___	Other:	Attachment ___
___	Time Constraints: (explain)	

DEVELOPMENTAL BACKGROUND:

___	Advisory Committee Report/Recommendation	Attachment ___
___	Hearing Officer's Report/Recommendations	Attachment ___
___	Response to Testimony/Comments	Attachment F
_X_	Prior EQC Agenda Items: Informational Report to Commission, Item J, October 20, 1989, Commission Meeting, on NEDC request for rule modification.	Attachment ___
_X_	Other Related Reports/Rules/Statutes: NEDC Information	Attachment D
_X_	Supplemental Background Information Workload Estimates	Attachment E

REGULATED/AFFECTED COMMUNITY CONSTRAINTS/CONSIDERATIONS:

The proposed rules could result in additional public hearings being requested on proposed permit actions. This could result in delay on permit actions. The proposed rules could also result in more and better public information being provided to the agency, resulting in more permit limits or monitoring requirements, more permit denials, and possibly,

more permit denial appeals to the Commission. There is no way presently to predict to what extent this would occur.

PROGRAM CONSIDERATIONS:

There is some restriction on the volume of material which may be included in public notices published by the Secretary of State's office in the official bulletin. The proposed rules address this issue for permit notices which are published in that bulletin.

The proposed rules would require additional Department staff time being devoted to public notices. Depending upon the results of public hearings on the proposed rules and changes made in the proposed rules, the staff load increase would be approximately 1-1/2 FTE agencywide. One time added staff effort would be required to provide training to all staff who prepare public notices in the inclusion of new information.

The draft rules have been included in OAR 340-11-007, the Division which applies to items of general applicability in the Department. The rules could have been included in the general permit issuance section of Department rules instead.

The draft rules are written to apply to those permits which presently require public notice and in addition include solid waste facilities permits which have not had public notice requirements in the past.

Permits which do not now require public notice are not included in these rules. These include underground storage tank registration permits, waste tire facility permits, WPCF permits and area source air contaminant discharge permits. If the public notice requirements were extended to these permits, the workload evaluation would need to be revised upward. The fiscal impact statement in the attached notice would also need to be revised.

The Department met with representatives from NEDC and a representative of the Associated Oregon Industries to collect information needed by the Department to prepare draft rules. The meeting was not intended to achieve consensus, but only to gather information.

ALTERNATIVES CONSIDERED BY THE DEPARTMENT:

1. The Department considered revising only the Water Quality rules at this time, having subsequent changes to other program rules be developed separately.

2. The Department considered Environmental Quality Commission direction from the October 20, 1989 meeting to return with proposed rule changes covering all programs and request authorization for hearing on rulemaking.

3. The Department considered including NEDC suggested changes without revision.

DEPARTMENT RECOMMENDATION FOR ACTION, WITH RATIONALE:

The Department recommends alternative two and that authorization for rulemaking hearing be approved with the Department's suggested rules changes.

CONSISTENCY WITH STRATEGIC PLAN, AGENCY POLICY, LEGISLATIVE POLICY:

The proposed rules are consistent with agency policy to provide public access and comment on Department actions.

ISSUES FOR COMMISSION TO RESOLVE:

1. Should the current public notice rules be retained with supplemental information provided upon request?

2. Should the public notice rules be amended to include all NEDC recommended information, requiring related staff time.

3. Should the public notice rules be amended to include more information which will require added staff time in the development of such notices?

4. Should the proposed rules include compliance history in the public notice?

INTENDED FOLLOWUP ACTIONS:

Provide notice of public hearing on proposed rules to the Secretary of State and the public which has requested such information.

Hold public hearing on the proposed rules and accept written testimony.

Return to the Commission with revised proposed rules and recommendations for adoption at a later Commission meeting.

Approved:

Section: Lydia Taylor

Division: Lydia Taylor

Director:

Report Prepared By: Lydia R. Taylor

Phone: 229-5324

Date Prepared: 20 December 1989

Lydia R. Taylor:hs
WH3811
21 December 1989

OREGON ADMINISTRATIVE RULES
340-11-007

NOTE:

The **underlined** portions of text represent proposed additions made to the rules.

The [~~bracketed~~] portions of text represent proposed deletions made to the rules.

PUBLIC NOTICE AND INFORMATIONAL HEARINGS

340-11-007

(1) If the Department proposes to issue or renew with increased discharges, a permit under OAR 340-20-155, 340-40-030, 340-45-033, 340-61-020, or 340-106-001, a public notice containing information regarding the proposed permit will be prepared by the Department and will be forwarded to the applicant or other interested person at the discretion of the Department for comment. Each public notice shall, at a minimum, contain: name of the applicant; type and duration of permit; type of facility and kind of product if appropriate; description of substances stored, disposed of or discharged; basis of need for permit or permit modification; any special conditions imposed in permit; date of previous permit; compliance and enforcement history for a minimum of the most recent permit cycle; evaluation of compliance with special conditions in previous permits and explanation of any previous conditions not met; a listing of pollutant categories not directly limited or required to be monitored by permit; a list of other Department permits expected to be required; an indication of the location of plans, specifications, or other documents used in preparing the permit. The notice will also contain a description of public participation opportunities. These contents will be in addition to any specific permit notice requirements of individual programs. If the Department determines that the above notice will exceed two (2) double-sided pages, the Department may limit the notice to such length by summarizing. In this instance, the Department shall prepare an information package which contains all of the information required by these rules, and shall specify in the public notice what information is available and how it can be obtained.

[~~(1)~~] (2) Whenever there is required or permitted a hearing which is neither a contested case hearing nor a rule making hearing as defined in ORS Chapter 183, the Presiding Officer shall follow any applicable procedural law, including case law and rules, and take appropriate procedural steps to accomplish the purpose of

the hearing. Interested persons may, on their own motion or that of the Presiding Officer, submit written briefs or oral argument to assist the Presiding Officer in his resolution of the procedural matters set forth herein.

[~~(2)~~] (3) Prior to the submission of testimony by members of the general public, the Presiding Officer shall present and offer for the record a summary of the questions the resolution of which, in the Director's preliminary opinion, will determine the matter at issue. He shall also present so many of the facts relevant to the resolution of these questions as he then possesses and which can practicably be presented in that forum.

[~~(3)~~] (4) Following the public information hearing, or within a reasonable time after receipt of the report of the Presiding Officer, the Director or Commission shall take action upon the matter. Prior to or at the time of such action, the Commission or Director shall address separately each substantial distinct issue raised in the hearings record. This shall be in writing if taken by the Director or shall be noted in the minutes if taken by the Commission in a public forum.

OREGON ADMINISTRATIVE RULES
340-45-035

NOTE:

The **underlined** portions of text represent proposed additions made to the rules.

The [~~bracketed~~] portions of text represent proposed deletions made to the rules.

ISSUANCE OF NPDES PERMITS

340-45-035

(1) Following the determination that it is complete for processing, each application will be reviewed on its own merits. Recommendations will be developed in accordance with provisions of all applicable statutes, rules, regulations, and effluent guidelines of the State of Oregon and the U.S. Environmental Protection Agency.

(2) The Department shall formulate and prepare a tentative determination to issue or deny an NPDES permit for the discharge described in the application. If the tentative determination is to issue an NPDES permit, then a proposed NPDES permit shall be drafted which includes at least the following:

(a) Proposed effluent limitations;

(b) Proposed schedule of compliance, if necessary; established in conformance with the Federal Act and regulations issued pursuant thereto;

(c) Other special conditions.

(3) (a) In order to inform potentially interested persons of the proposed discharge and of the tentative determination to issue an NPDES permit, a public notice announcement shall be prepared and circulated in a manner approved by the Director. In addition to the information required under OAR 340-11-007(1) the public notice shall contain:

(A) A description (when available) of the water quality of the receiving water body both upstream and downstream;

(B) If the waterbody is water quality limited under Section 303(d)(1) of the Clean Water Act, a description of whether the permit relates to the parameter(s) which is water quality limited; if so, how the permit will fit

within the existing TMDLs or if no TMDL exists, how it is acceptable; and

(C) A description of any load increase proposed and action required for its approval.

(b) The notice [~~shall tell of public participation opportunities;~~] shall encourage comments by interested individuals or agencies, and shall tell of the availability of fact sheets, proposed NPDES permits, applications, and other related documents available for public inspection and copying. The Director shall provide a period of not less than 30 days following the date of the public notice during which time interested persons may submit written views and comments. All comments submitted during the 30-day comment period shall be considered in the formulation of a final determination.

(4) A fact sheet shall be prepared for each draft NPDES permit for a major industrial facility and each NPDES general permit. In addition, a fact sheet shall be prepared for every industrial NPDES permit which incorporates a variance and for every draft permit which the Director finds is the subject of widespread public interest or raises major issues. Fact sheets shall contain the following, where applicable:

(a) A brief description of the type of facility of activity;

(b) The type and quantity of wastes to be discharged;

(c) Applicable standards and guidelines used as a basis for effluent limits;

(d) An explanation of any proposed variances;

(e) A sketch, map, or detailed location of the discharge, where appropriate; [~~and~~]

(f) Information spelling out procedures for finalizing the permit and providing additional public input, including opportunity for public hearing[~~.~~]; and

(g) Where appropriate, an assessment of future control needs based on the adequacy of present controls, records of compliance, applicable rules and regulations.

(5) After the public notice has been drafted and the fact sheet and proposed NPDES permit provisions have been prepared by the Department, they will be forwarded to the applicant for review and comment. All comments must be submitted in writing within 14 days after mailing of the proposed materials if such comments are to receive consideration prior to final action on the application, unless the applicant requests additional time. The

applicant may also waive his right for the 14 day review time in the interest of accelerating the issuance procedures.

(6) After the 14-day applicant review period has elapsed, the public notice and fact sheet shall be sent to any person upon request. The Director shall add the name of any person or group upon request to a mailing list to receive copies of public notices and fact sheets. Any public notice and fact sheet under this section shall be prepared and circulated consistent with the requirements of regulations issued under the Federal Act. The fact sheet, proposed NPDES permit provisions, application, and other supporting documents will be available for public inspection and copying. The Director may, in his discretion, charge a reasonable fee for reproduction and distribution of the public notice, fact sheet, and other supporting documents.

(7) The Director shall provide an opportunity for the applicant, any affected state, or any interested agency, person, or group of persons to request or petition for a public hearing with respect to NPDES applications. If the Director determines that useful information may be produced thereby, or if there is a significant public interest in holding a hearing, a public hearing will be held prior to the Director's final determination. Instances of doubt shall be resolved in favor of holding the hearing. There shall be public notice of such a hearing.

(8) At the conclusion of the public involvement period, the Director shall make a final determination as soon as practicable and promptly notify the applicant thereof in writing. Any NPDES permit issued hereunder shall contain such pertinent and particular conditions as may be required to comply with the Federal Act or regulations issued pursuant thereto. If the Director determines that the NPDES permit should be denied, notification shall be in accordance with rule 340-45-050. If conditions of the NPDES permit issued are different from the proposed provisions forwarded to the applicant for review, notification shall include the reasons for the changes made. A copy of the NPDES permit issued shall be attached to the notification. In any case, before the Director will issue an NPDES permit which applies effluent limitations in accordance with effluent guidelines rather than water quality standards, he will make a determination that the permitted discharge will not violate applicable water quality standards and will provide some justification for that determination. Such justification will include, but not necessarily be limited to:

(a) A description of the anticipated effect on water quality at the mixing zone boundary of the chemical and/or physical parameter(s) upon which the size and shape of the mixing zone are based; and

(b) A statement of anticipated effect of the discharge on aquatic life.

(9) If the applicant is dissatisfied with the conditions or limitations of any NPDES permit issued by the Director, he may request a hearing before the Commission or its authorized representative. Such a request for hearing shall be made in writing to the Director within 20 days of the date of mailing of the notification of issuance of the NPDES permit. Any hearing held shall be conducted pursuant to the regulations of the Department.

NOTE:

The **underlined** portions of text represent proposed additions made to the rules.

The [~~bracketed~~] portions of text represent proposed deletions made to the rules.

NOTICE POLICY

340-20-150

(1) It shall be the policy of the Department and the Regional Authority to issue public notice as to the intent to issue an Air Contaminant Discharge Permit allowing at least thirty (30) days for written comment from the public, and from interested State and Federal agencies, prior to issuance of the permit.

(2) In addition to the information required under OAR 340-11-007, public notices for Air Contaminant discharge permits shall contain:

(a) If a major source permit, whether the proposed emission would have a significant impact on a Class 1 airshed;

(b) Whether each proposed emission is a criteria pollutant and whether the primary or secondary ambient air standard for that pollutant is presently attained at or near the plant location; and

(c) For each major source within an attainment areaindicate what impact each proposed emission would have on the Prevention of Significant Deterioration Program within that attainment areas.

OREGON ADMINISTRATIVE RULES
340-61-024

NOTE:

The **underlined** portions of text represent new.

PUBLIC NOTICE

340-61-024

In order to inform potentially interested persons of a proposed permit issuance, a public notice shall be prepared and circulated in a manner approved by the Director. In addition to the information required under OAR 340-11-007(1), the public notice shall contain:

(1) A description of the facility which includes important natural features of the site.

(2) A description of any leachate management systems or controls.

STATEMENT OF NEED FOR RULEMAKING

Pursuant to ORS 183.335(1), this statement provides information on Environmental Quality Commission's intended action to adopt a rule.

(1) Legal Authority:

These rules can be adopted under authority of ORS Chapter 183, 468.469.

(2) Need for Rule:

The Department reported to the Commission on October 20, 1989, the improvements needed in public notice rules. The proposed revisions are based on the Department's discussions with NEDC, Associated Oregon Industries, and Department staff.

(3) Principal Document Relied Upon:

Report to the Environmental Quality Commission, October 20, 1989, NEDC written document of December 11, 1989. These documents are available for review at the Department of Environmental Quality, Water Quality Division, 811 S.W. Sixth Avenue, Portland, OR 97204.

LAND USE CONSISTENCY STATEMENT

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

FISCAL AND ECONOMIC IMPACT STATEMENT

The newly proposed rules would have no direct fiscal or economic impact on individuals, public entities, and small and large businesses as the adoption of these rules set forth the procedure that Department is to follow. The adoption of these rules, by itself, will not require the expenditure of funds by any group within the regulated community, as these rules do not require an affirmative act in order to come into compliance. The rules do not place any additional duties on the regulated communities in order to maintain compliance. There is no fiscal or economic on small business as a result of these rules.

Lydia R. Taylor
229-5324
December 22, 1989

Oregon Department of Environmental Quality

A CHANCE TO COMMENT ON...

PROPOSED REVISION OF OREGON ADMINISTRATIVE RULES
CHAPTER 340, DIVISION 11, PUBLIC NOTICE
OAR 340-14-025, OAR 340-20-150, and OAR 340-45-035

NOTICE OF PUBLIC HEARING

Hearing Date: March 23, 1990
Comments Due: March 30, 1990

WHO IS AFFECTED: People to whom Oregon's air quality, water quality, solid waste, and hazardous waste regulations may apply.

WHAT IS PROPOSED: The DEQ is proposing to revise the Public Notice rules OAR 340-11-007, OAR 340-45-035, OAR 340-20-150, and OAR 340-14-025.

WHAT ARE THE HIGHLIGHTS:

1. Proposed State Rule Revisions:

Rule modifications are proposed which would increase the kind and amount of information provided in the agency's public notices on new and renewal permit actions. The proposed rules contain general rule content as well as specific additional rule content for identified permits.

The information which would be included in the general public notice that isn't currently provided includes a compliance history on renewals, any special conditions in the permit, a description of pollutants or categories of pollutants which are not limited or monitored in the permit, an indication of the location of documents relied upon to draft the permit, and a list of other Department permits expected to be required for the facility.

HOW TO COMMENT: Public Hearing:

TIME: 2:00 p.m.

DATE: Friday, March 23, 1990

PLACE: DEQ Offices, Fourth Floor, Room 4A
811 S.W. Sixth Avenue, Portland, Oregon

Oral and written comments will be accepted at the public hearing. Written comments may be sent to the DEQ Water Quality, 811 S.W. Sixth Avenue, Portland, OR 97204. Written comments must be received no later than 5:00 p.m., March 30, 1990.

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

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

11/1/86

OVER

WHAT IS THE NEXT STEP:

After public hearing, the Environmental Quality Commission may adopt rule amendments identical to the proposed amendments, adopt modified rule amendments on the same subject matter, or decline to act. A Statement of Need, Fiscal and Economic Impact Statement, and Land Use Consistency Statement are attached to this notice.

Northwest Environmental Defense Center
10015 S.W. Terwilliger Blvd., Portland, Oregon 97219
(503) 244-1181 ext.707

The following are draft regulations regarding the contents of DEQ public notices for permits issued by the Department. The italicized portions of the regulations indicate proposed additions to language already existing in the Oregon Administrative Rules.

"Generic" regulations - applicable to air, water, solid waste and hazardous waste permits.

OAR 340-14-007

The procedure prescribed in this division *with the exception of those requirements for public notices in 340-14-025(2),* do not apply to the issuance, denial, modification, and revocation of National.....

OAR 340-14-025(2)

If the Department proposes to issue a permit, *a public notice containing information regarding the proposed permit will be* prepared by the Department *and* will be forwarded to the applicant and other interested persons at the discretion of the Department for comment. *Each public notice shall, at minimum, contain;*

a. *For All Permits:*
    1. *Name of applicant*
    2. *Type and duration of permit*

3. *Type of facility*
4. *Location of facility and/or discharge*
5. *Description of substances received, generated, disposed of and/or discharged*
6. *Description of facilities currently in place*
7. *Basis of need for permit. For permit modifications, a brief statement explaining why a permit modification is required (e.g. change in technology, change in status of receiving environment, increase in operational capacity)*
8. *Any special conditions imposed in permit*
9. *List of and location of documents used to prepare permit proposal (including studies or reports prepared by the Department, the applicant and others)*
10. *List of all other Departmental permits or reporting requirements (e.g. Title III Public Right to Know) required for the facility*
11. *Description of public participation opportunities*

b. For Permit Renewals or Transfers:

1. *Permit history;*
   - *A. Types of substances/discharges covered by permit*
   - *B. Dates of previous permits*
   - *C. Compliance history for at least five years*
     - *i. Summary of Departmental inspections,*
     - *ii. Summary of complaints received and departmental actions,*
     - *iii. Enforcement history including; Notice of Violations, Notice of Intents, and any enforcement action taken by the Department, the Environmental Protection Agency or citizens,*
     - *iv.. Evaluations of compliance with special conditions in previous permits and explanation for any previous conditions that were not met.*
2. *Assessment of future control needs based on the adequacy of present controls, records of compliance, applicable rules and regulations.*

In addition to these minimum requirements see specific requirements for; NPDES permits in 340-45-035(3) , air contaminant discharge permits in 340-20-150(2), solid waste permits in 340-61- and hazardous waste permits 340-106- . If the Department determines that a notice will exceed 5 double-sided pages, the Department may limit a notice to the information required under 340-14-025(2)(a). In this instance the Department shall prepare an information package which contains all information required by these rules. This package shall be available at the Department and the public notice shall specify what information is available and how it can be obtained. All comments must be submitted in writing within...

Regulations specific to NPDES Permits

OAR 340-45-035(3)

A public notice announcement shall be prepared and circulated in a manner approved by the director. *In addition to the information required under OAR 340-14-025(2) the public notice shall contain;*

a. *Description (when available) of the water quality of the receiving waterbody both upstream and downstream,*
b. *If the waterbody is water quality limited, a description of how the permit will fit within existing TMDLs. If no TMDLs exist, a description of why the permit is acceptable and a discussion of the status of TMDLs for the receiving waterbody,*
c. *For permit renewals and/or modifications, compliance history shall include; (i) evaluation and summary of DMRs with explanation of previous NPDES violations, (ii) documentation of any load increases allowed, the basis for allowance, and dates of Commission approval,*
d. *List or general description of pollutants or categories of pollutants not directly limited or required to be monitored by permit and explanation for not limiting or monitoring those pollutants or categories of pollutants.*

In addition, the notice shall tell of public participation....

Regulations specific to Clean Air Act Permits

340-20-150(2)

In addition to the information required under OAR 340-14-025(2), public notices for air contaminant discharge permits shall contain;

(a) Whether each proposed emission will affect a Class I, II or II airshed,

(b) Whether each proposed emission is a criteria pollutant and whether the primary or secondary ambient air standard for that pollutant is presently attained,

(c) What impact each proposed emission would have on the Prevention of Significant Deterioration Program within attainment areas,

(d) What federal and/or state rules or guidelines the Department proposes to apply to the air quality permit process,

(e) What screening, modeling and/or risk assessment the Department plans to undertake in advance of consideration of the permit,

(f) When the risk assessment will be available for review.

Regulations specific to Solid and Hazardous Waste Permits

In addition to the information required under OAR 340-14-025(2) the public notice shall contain;

a. For permit renewals and/or modifications:

1. Compliance history shall include (i) enforcement actions regarding owner/operator of facility as applied to corporate parents, subsidiary and/or predecessor or successor in interest (ii) enforcement history particular to site,

2. Description of facility which includes description of natural features of the site (e.g. wetlands, floodplains, etc.),

3. *Description of any leachate or runoff discharged to or otherwise contaminating surface water or groundwater.*

b. *Description of additional information available at the Department including, but not limited to, staff reports, facility design, applicants plan of operation/closure and information pertaining to groundwater characterization and monitoring.*

Regulations specific to RCRA Permits

a. *Whenever a public hearing regarding a proposed permit is not automatically required by regulation the public notice shall state that a public hearing will be held on the proposed permit if the Department receives written notice of opposition to the draft permit and a request for a hearing.*

Agenda Item O

STAFF EFFORT ON ADDITIONAL PUBLIC NOTICE INFORMATION

DEQ Draft Rules (FTE):

	General	Program Specific	Transfers No-Charge Renewals	Total
AQ	.30	.23	--	.53
WQ	.34	.34	--	.68
SW	.12	.10	--	.22
HW	--	--	--	--
	.76	.67	--	1.43

NEDC Proposal (FTE):

	General	Program Specific	Transfers No-Charge Renewals	Total
AQ	.85	.23	1.50	2.58
WQ	1.89	.51	1.75	4.15
SW	.32	.76	1.08	2.16
HW	--	--	.05	.05
	3.06	1.5	4.38	8.94

Potential work increase due to additional public hearings being requested are estimated at 60 hours per hearing. No estimate is available at this time on the number of additional hearings which would be requested.

Estimates based on:

Permits Annually	New	Modify	Renew
AQ	32	47	102
WQ	130	45	120
SW	--	30	30
HSW	5	2	5

NEIL GOLDSCHMIDT
GOVERNOR

Environmental Quality Commission

811 SW SIXTH AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

ACTION ITEM

Meeting Date: October 20, 1989
Agenda Item: J
Division: Water Quality
Section: Administration

SUBJECT:

Response to the request by Northwest Environmental Defense Center (NEDC) for the Environmental Quality Commission (EQC) to initiate rulemaking to codify internal department procedures regarding the content of public notices for wastewater discharge permits. The request also indicated that equivalent requirements should be imposed for air contaminant and solid waste contaminant permit applications.

PURPOSE:

The purpose of the report is to explore: (1) whether the proposal submitted by NEDC would result in the Water Quality Program's public notice on proposed wastewater discharge permits being more meaningful to the public, would result in the public being able to better respond with useful testimony, would result in better permits being issued and thus, improve or better protect the water quality in Oregon; (2) whether including the water quality public notice provisions in the Oregon Administrative Rules is the best means to assure implementation of such public notice requirements.

ACTION REQUESTED:

___ Work Session Discussion
___ General Program Background
_X_ Potential Strategy, Policy, or Rules
___ Agenda Item ___ for Current Meeting
_X_ Other: Future Agenda item
___ Authorize Rulemaking Hearing

DEQ-46

___ Adopt Rules
- Proposed Rules — Attachment ___
- Rulemaking Statements — Attachment ___
- Fiscal and Economic Impact Statement — Attachment ___
- Public Notice — Attachment ___

___ Issue a Contested Case Order
___ Approve a Stipulated Order
___ Enter an Order
- Proposed Order — Attachment ___

___Approve Department Recommendation
- ___ Variance Request — Attachment ___
- ___ Exception to Rule — Attachment ___
- ___ Informational Report — Attachment ___
- ___ Other: (specify) — Attachment ___

DESCRIPTION OF REQUESTED ACTION:

Provide direction to the Department of Environmental Quality (Department, DEQ) whether to revise its present water quality public notice; provide direction whether to do so through the Oregon Administrative Rules; advise the Department whether to approach such revisions agency wide (include air contaminant and solid waste contaminant permit application public notices) or solely for water quality.

AUTHORITY/NEED FOR ACTION:

___ Required by Statute: _____ — Attachment ___
Enactment Date: _____
___ Statutory Authority: _____ — Attachment ___
___ Pursuant to Rule: _____ — Attachment ___
___ Pursuant to Federal Law/Rule: _____ — Attachment ___

_X_ Other: Request by NEDC that the Commission initiate rulemaking — Attachment _A_

___ Time Constraints: (explain)

DEVELOPMENTAL BACKGROUND:

___ Advisory Committee Report/Recommendation — Attachment ___
___ Hearing Officer's Report/Recommendations — Attachment ___
___ Response to Testimony/Comments — Attachment ___
___ Prior EQC Agenda Items: (list) — Attachment ___

___ Other Related Reports/Rules/Statutes: Attachment ___

___ Supplemental Background Information Attachment ___

REGULATED/AFFECTED COMMUNITY CONSTRAINTS/CONSIDERATIONS:

If existing Water Quality Program rules on public notice for permit applications is broadened to include detailed direction about the information to be included in the public notice, any error, omission or information which one may wish to dispute could be subject to litigation.

Some of the information suggested by NEDC is not presently available or not readily available. Some of the suggestions could result in the Department requiring additional monitoring and assessment information from the regulated community.

There is some restriction on the volume of material which may be included in public notices published by the Secretary of State's Office in the official bulletin.

PROGRAM CONSIDERATIONS:

Some of the information requested by NEDC is regularly developed and maintained by the Water Quality Program. The information which is not presently available is shown on attachment B. Principally among it is TMDL information where the Division has not yet completed the TMDL process on water quality limited streams and cumulative impact analysis by basin. Other information is not retained for the time periods suggested for coverage in the notice. Staffing impact to perform these activities would be fairly substantial with regard to cumulative impact analysis which would have to be done manually.

The NEDC request states that similar rules be considered for air contaminant discharges and solid waste contaminant permit application notices. If the Commission advises the Department to proceed to rulemaking, direction needs to be provided whether it is to be done in an agencywide effort.

The principal program consideration, however, is whether the increased information in the public notice would enhance the public's ability to respond to permits under consideration.

The Air Quality Program presently provides public notice on all air permits. Notice is described under OAR 340-14-025.

The Water Quality Program provides public notice on NPDES permits. The notice is described under OAR 340-45-045.

The solid waste program presently provides public notice based on the agency's internal policy used to determine when public notice is advisable. They are not codified in rule.

ALTERNATIVES CONSIDERED BY THE DEPARTMENT:

1. The Department considered continuing the present practice without modification of the information provided. The Department concludes that the notice presently provided may not always be as good as it could be to alert the public to the implications of the announced action. Therefore, the Department feels some revisions should be explored.

2. The Department considered asking the Commission to direct that it revise its present public notice without going to rulemaking to include information suggested which is available, to evaluate suggested information which is not presently accumulated for future inclusion, to devise a means to evaluate whether the modified public notice results in more meaningful notice and participation by the public, with a subsequent report to the Commission for recommended rules action.

3. The Department considered asking the Commission to authorize the Department to go to rulemaking with the suggestion made by NEDC.

4. The Department considered asking the Commission for authorization to go to rulemaking after requesting and receiving detailed suggestions from the affected public about what information should be included and which permits should require public notice for wastewater discharge, air contaminant discharge and solid waste contaminant permit applications.

DEPARTMENT RECOMMENDATION FOR ACTION, WITH RATIONALE:

The Department recommends alternative 4 which would provide a uniform approach by the Department on public notice on permits and would provide appropriate accountability by placing the requirements in rule form.

CONSISTENCY WITH STRATEGIC PLAN, AGENCY POLICY, LEGISLATIVE POLICY:

The proposed alternative is consistent with the agency policy to provide public access and comment on Department actions.

ISSUES FOR COMMISSION TO RESOLVE:

1. Should the public notice be modified to include more information?

2. Should the public notice be codified in Department rules?

3. Should any action be for Water Quality alone, with later actions taken on Air and solid Waste as appropriate?

INTENDED FOLLOWUP ACTIONS:

1. Develop proposed public notice rules with input from the public.

2. Return to the Commission for authorization to go to rulemaking.

3. Hold public hearing on the proposed rules

4. Return to the Commission for adoption of rules.

Approved:

Section: Lydia Taylor

Division: Lydia Taylor

Director: Ted Hunt

Report Prepared By: Lydia Taylor

Phone: 229-5324

Date Prepared: Oct. 3, 1989

Lydia R. Taylor:crw/hs
WC5629
(10/6/89)

Department comments are noted in *italics*. Where no comment is offered it can be assumed the Department already collects such information to some extent.

PROPOSED GUIDELINES FOR CONTENTS OF PUBLIC NOTICES

Presented before the Environmental Quality Commission on September 7, 1989 by David S. Mann on behalf of the Northwest Environmental Defense Center (NEDC).

(Please note that these model requirements are for wastewater discharges, equivalent requirements should be imposed for air contaminant and solid waste contaminant permit application notices.)

PROPOSED RULE

All public notices pertaining to proposed new, modified, or renewals of discharge permit must contain, at the minimum, the following information:

ALL PERMITS

1. General Information:

    a. Name of applicant.

    b. Type of facility.

    c. Location of facility, discharge.

    d. Wastes received/Wastes generated.

        Not all wastes received are identified for municipal facilities; for example, industrial wastes served by sewage treatment plants.

    e. Type of products/Quantity of product.

    f. Treatment and/or control facilities currently in place.

2. Basis of need for permit (i.e., problems, regulations, technology change, change in Water Quality standards).

3. Water Quality Impacts:

    a. Description of the Water Quality of the receiving stream, both upstream and downstream.

        We presently may not have upstream or downstream monitoring data. The Division is moving in this direction, but we aren't in this position yet.

b. If the stream is water quality limited, list the TMDLs that have been established and how the permit will fit within the TMDLs.

TMDLs have been established for three of the water quality limited streams (Tualatin, Yamhill, Bear Creek). We are scheduled to complete two per year. A description of where proposed permits fit into the TMDL process and the opinion of Division staff about how the proposed can fall within anticipated solutions might be more appropriate.

c. Description of how the permit will impact the water quality.

This can be done generally, but specific quantitative data may not be available.

d. Summary list, by date, of all evaluations done by the Department or the applicant concerning the water quality impacts.

The Division may or may not retain evaluations more than five years old.

4. Special Conditions:

Assessment of future control needs based on findings on water quality, and a schedule for compliance.

(No #5 listed by NEDC)

6. List and location of documents used to prepare permit proposal.

FOR PERMIT RENEWALS AND MODIFICATIONS

7. If a permit modification, why? (i.e., change in technology, change in water quality, failure to meet previous conditions).

8. Permit History.

a. Type of Discharge.

b. Dates of previous permits.

This information was not computerized in years past. A file search would be required in all cases.

c. Compliance History for at least the last two permit cycles.

Most permit cycles are five years. This would require 10 year file search.

1) Evaluation and summary of DMRs with explanation of previous NPDES violations.

2) Summary of inspections performed by DEQ on influents and effluents to verify DMRs.

If more than recent inspections were included, file seaches would be required.

3) Summary of complaints received and Department actions.

4) Enforcement History, including; Notice of Violations, Notice of Intents, and enforcement actions taken.

5) Evaluations of special conditions in previous permits and whether they were met. Explanation for any previous conditions that were not met.

6) Documentation of any load increases allowed and the basis for the allowance, including dates of EQC approval.

d. Location of DEQ cumulative impacts analysis to assure basin water quality standards or plans are not being violated.

The Division does not currently perform cumulative impact analysis outside the TMDL process.

9. An assessment of future control needs based on the adequacy of present controls, records of compliance, and applicable rules and regulations, and the proposed schedule for permittee to meet these conditions.

This is provided when appropriate, but an assessment of future control needs is not a standard application by the Division.

The above proposed rules should serve as guidelines for promulgating minimum standards for public notices of proposed discharge permits. NEDC requests that the Commission initiate rulemaking proceedings within the next 30 days in accordance with applicable procedures for Commission rulemaking.

TECHNIQUE SUMMARY LIST

A1 STATEWIDE PHOSPHORUS BAN
A2 TRI-COUNTY PHOSPHORUS BAN
A3 RECYCLING PROGRAMS
A4 IMPLEMENT WATER CONSERVATION PROGRAMS
A5 PLANNED GROWTH

B1 USE OF PRETREATMENT LOCAL LIMITS
B2 FEES FOR THE USE OR DISCHARGE OF CERTAIN POLLUTANTS
B3 BAN GARBAGE DISPOSALS
B4 HOUSEHOLD COMPOSTING
B5 SEPTIC TANK EFFLUENT PUMPING (STEP) SYSTEMS
B6 COMPOSTING TOILETS AND GRAY WATER SYSTEMS

C1 FLOW EQUALIZATION AT THE TREATMENT FACILITIES
C2 FLOW EQUALIZATION/STORAGE IN COLLECTION SYSTEM
C3 SEWER REHABILITATION TO REDUCE INFILTRATION AND INFLOW (I/I)
C4 SECONDARY TREATMENT
C5 REGIONAL TREATMENT PLANT IN WEST BASIN
C6 UPSTREAM REUSE PLANTS
C7 LAND TREATMENT (OVERLAND FLOW)
C8 ADVANCED TREATMENT - LIME
C9 ADVANCED TREATMENT - 2-STAGE ALUM ADDITION
C10 ADVANCED TREATMENT - BIOLOGICAL NUTRIENT REMOVAL (BNR)
C11 ADVANCED TREATMENT - MEMBRANE PROCESSES
C12 EFFLUENT FILTRATION
C13 DRY WEATHER EFFLUENT STORAGE
C14 EXPORT OF DURHAM EFFLUENT TO WILLAMETTE RIVER
C15 EXPORT OF DURHAM AND ROCK CREEK EFFLUENT TO WILLAMETTE RIVER
C16 EXPORT OF ALL USA EFFLUENT TO WILLAMETTE RIVER
C17 EXPORT OF EFFLUENT TO COLUMBIA RIVER
C18 EXPORT WASTEWATER TO PORTLAND FOR TREATMENT AND DISCHARGE
C19 CLASS 1 AGRICULTURAL REUSE
C20 CLASS 2 AGRICULTURAL REUSE
C21 CLASS 3 AGRICULTURAL REUSE
C22 CLASS 4 AGRICULTURAL REUSE
C23 URBAN OR NON-AGRICULTURAL REUSE OF EFFLUENT (IRRIGATION)
C24 PULP AND PAPER REUSE
C25 USE OF DEGRADED NATURAL WETLANDS FOR WASTEWATER IMPROVEMENT
C26 DEVELOPMENT OF NON-HYDRIC (NON-JURISDICTIONAL) FLOOD PLAIN SOILS AS WETLANDS FOR WASTEWATER IMPROVEMENT
C27 ASSESS USE OF TRIBUTARY REACHES FOR ASSIMILATING NUTRIENTS IN WASTEWATER DIRECTLY OR IN ASSOCIATION WITH CREATED WETLANDS
C28 ANAEROBIC DIGESTION OF SLUDGE
C29 SLUDGE LIME STABILIZATION
C30 HEAT DRYING OF SLUDGE
C31 IN-VESSEL SLUDGE COMPOSTING
C32 UNCONFINED SLUDGE COMPOSTING
C33 RAIL TRANSPORT OF SLUDGE

C34 PIPELINE TRANSPORT OF SLUDGE
C35 LIQUID SLUDGE TRANSPORT BY TRUCK
C36 DEWATERED SLUDGE TRANSPORT BY TRUCK
C37 SLUDGE INCINERATION
C38 ASH LANDFILL
C39 LAND APPLICATION OF SLUDGE
C40 DISTRIBUTION AND MARKETING

D1 OBTAIN RIVER ACCESS
D2 RIVER CLEANUP (DEBRIS)
D3 CORRIDOR MANAGEMENT
D4 IMPROVE WATER RIGHTS ENFORCEMENT
D5 IN-STREAM FLOW MANAGEMENT
D6 OBTAIN MORE WATER RIGHTS
D7 FLOW AUGMENTATION
D8 RIPARIAN ZONE ENHANCEMENT
D9 RESTRUCTURE HAGG LAKE OUTLET
D10 MODIFY LAKE OSWEGO INLET OPERATIONS

AF1 BAN ON INDUSTRIAL/COMMERCIAL USE OF PHOSPHORUS-CONTAINING CHEMICALS
AF2 BUILDING MORATORIUM
AF3 CHANGE DOMESTIC WATER SUPPLIES

CF1 GROUNDWATER RECHARGE
CF2 ASSESS USE OF INNOVATIVE AQUATIC TREATMENT SYSTEMS: SOLAR AQUATIC PLANT
CF3 LAND TREATMENT (INFILTRATION/PERCOLATION)
CF4 LANDFILL CO-DISPOSAL WITH MUNICIPAL SOLID WASTE (MSW)
CF5 MONOFILLING OF SLUDGE

DF1 MECHANICALLY AERATE A PORTION OF THE LOWER TUALATIN RIVER
DF2 CHEMICAL CLARIFICATION OF TUALATIN RIVER WATER
DF3 CHEMICAL CLARIFICATION OF WATER DIVERTED TO LAKE OSWEGO
DF4 IN-SITU ALUM TREATMENT OF HAGG LAKE
DF5 PURCHASE LAKE OSWEGO RIGHTS AND CEASE TUALATIN RIVER DIVERSION
DF6 MODIFY/IMPROVE TUALATIN RIVER CHANNEL
DF7 BIOMANIPULATION: USE OF ZOOPLANKTON TO REMOVE ALGAE FROM THE LOWER TUALATIN
DF8 HARVESTING ALGAE FROM THE LOWER TUALATIN RIVER BELOW MILE 33

A1

TITLE:	**STATEWIDE PHOSPHORUS BAN**
DESCRIPTION:	Legislative ban on the use of phosphorus-containing detergents in the State of Oregon. Certain uses of detergents (e.g., medical and food handling) would likely be excluded from such a ban.
PERFORMANCE:	Reduction of phosphorus in treatment plants' influents by as much as 35 percent. Reduction in chemical use at Durham and Rock Creek by as much as 50 percent. Reduction in chemical sludge production at Durham and Rock Creek by 50 percent.
SIZING:	Not applicable.
RELIABILITY:	Excellent for reducing phosphorus in the influent to treatment plants.
FLEXIBILITY:	A statewide phosphorus ban fits well with all other techniques for reducing phosphorus loads to the Tualatin River.
LIMITATIONS:	Ban would likely exclude detergents used in food medical applications, food handling, and certain industrial applications, and exclude products for personal hygiene such as soap and shampoo.
OPERATION AND MAINTENANCE:	Not applicable in the context of implementation. As outlined in Performance above, a ban could have significant impact on O&M after implementation.
COSTS:	A lobbyist will likely be required to get the Legislature to approve a ban, but parties including the Association of Oregon Sewerage Agencies (AOSA) and other municipalities may be interested in pursuing a ban. Consumers may incur increased costs for detergents.
IMPLEMENTATION ISSUES:	Passage of a ban will require a strong lobbying effort and a strong public awareness campaign to gain public support.
ENVIRONMENTAL/ SOCIAL ISSUES:	The removal of phosphorus from detergens will likely increase the cost of detergents to the consumer.
PUBLIC ISSUES:	Requires public support before the Legislature to offset detergent industry lobbying.
AGENCY ISSUES:	Political influence will be required for passage in the legislature.

A2

TITLE:	**TRI-COUNTY PHOSPHORUS BAN**
DESCRIPTION:	Ban on the sale and use of phosphorus-containing detergents and chemicals within Clackamas, Multnomah, and Washington Counties. Certain detergent and chemical uses (e.g., health care and food handling) would likely be excluded.
PERFORMANCE:	Reduction of phosphorus in treatment plants' influents by as much as 35 percent. Reduction in chemical use at Durham and Rock Creek by 50 percent. Reduction in chemical sludge production at Durham and Rock Creek by 50 percent.
SIZING:	Not applicable.
RELIABILITY:	Residential users could import phosphorus-containing detergents from sources outside the tri-county area.
FLEXIBILITY:	A tri-county phosphorus ban complements all other techniques for reducing phosphorus loads to the Tualatin River.
LIMITATIONS:	Certain uses would likely be excluded (e.g., health care and food handling). Such a ban requires public acceptance to minimize imports from outside the tri-county area. Detergent industry may choose not to supply phosphorus-free detergents and chemicals to area.
OPERATION AND MAINTENANCE:	Not applicable in the context of implementation.
COSTS:	A tri-county ban would require additional inspection and monitoring by USA staff; estimated at $170,000 per year. Other wastewater service districts within the tri-county area would also incur costs.
IMPLEMENTATION ISSUES:	Legal authority to implement and enforce a local ban must be determined. Does the Metropolitan Service District have the authority? A tri-county ban would require support from Multnomah and Clackamas counties.
ENVIRONMENTAL/ SOCIAL ISSUES:	If the detergent industry chooses not to supply phosphorus-free detergents to such a localized area, citizens may not be able to purchase detergents locally.
PUBLIC ISSUES:	Public acceptance is needed to overcome any perception that detergents with phosphorus are better than detergents without phosphorus.
AGENCY ISSUES:	A strong public education program would be necessary to minimize purchases from outside the tri-county area.

A3

TITLE:	**RECYCLING PROGRAMS**
DESCRIPTION:	Encourage the use of existing recycling programs and develop new recycling programs to reduce the number of pollutants being disposed of through the sewer and through storm drains. Such programs will include recycling of grease/oil from commercial establishments, household hazardous wastes, and antifreeze. The term "recycle" implies that a waste product will be reused beneficially, but in the case of some recycling programs the waste may actually be disposed of at an approved hazardous waste management facility. Recycling programs can be mandatory for industrial/commercial development and voluntary for residential users.
PERFORMANCE:	Performance is not known at this time but some reduction in metals is expected from recycling antifreeze, and reductions of other pollutants are expected from other programs.
SIZING:	Not applicable.
RELIABILITY:	Recycling programs have mixed success depending on the product to be recycled and how the program is promoted.
FLEXIBILITY:	Recycling complements all other techniques for reducing pollutants to the Tualatin River.
LIMITATIONS:	Public involvement and acceptance limits the success of voluntary recycling programs.
OPERATION AND MAINTENANCE:	Impacts on O&M will vary depending on the pollutant.
COSTS:	Mandatory recycling programs would increase the number of businesses to be inspected and monitored at an estimated cost of $50,000/year.
IMPLEMENTATION ISSUES:	Many recycling programs are currently available but underutilized. How can greater participation be achieved?
ENVIRONMENTAL/ SOCIAL ISSUES:	How will recycled products be ultimately used or disposed?
PUBLIC ISSUES:	Recycling programs must be convenient for the public.
AGENCY ISSUES:	How can existing programs be better promoted? If recycled products are disposed of, someone bears the "cradle-to-grave" liability of future environmental problems develop. The industrial pretreatment will need to be expanded.

A4

TITLE: **IMPLEMENT WATER CONSERVATION PROGRAMS**

DESCRIPTION:

Water conservation has potential to reduce pollutants by controlling the quantities of water either imported into the basin or processed within the basin in treatment facilities. The less water used, the less to be treated and disposed of as waste.

Water is not a pollution problem until it is used. In order to become a problem, it must enter the basin. Water conservation could delay the addition of municipal water facilities to create new supplies to serve the basin. While the technique would reduce the overall water supply requirements, it would have little impact in the treatment process.

Other conservation techniques would include use of dual metering systems for customers with large irrigation demands and rate adjustments for each type of use. Modifications to the building codes that deal with plumbing fixtures could require use of water conservation units.

PERFORMANCE: Varies with degree to which public adheres to conservation goals. May achieve up to 10 to 15 percent reduction in water consumption per individual dwelling unit.

SIZING: Not applicable.

RELIABILITY: Function of public's commitment. This measure has been effective in water short communities.

FLEXIBILITY: Water conservation programs could be integrated with numerous other techniques. The results that can be achieved are limited and cannot be altered significantly by changing the water conservation program.

OPERATION AND MAINTENANCE: None by public agencies.

COSTS:

- Small public costs for education/public involvement. There will be a significant cost savings related to the reduction of water resources development.
- Retrofit of water conserving fixtures would be a private (homeowner) cost.

IMPLEMENTATION ISSUES: Requires public acceptance.

ENVIRONMENTAL/ SOCIAL ISSUES: Minor social issues resulting from small changes in lifestyle.

PUBLIC ISSUES: See Social Issues.

AGENCY ISSUES: Need for public involvement/education and cooperation with the water purveyors.

A5

TITLE:	**PLANNED GROWTH**
DESCRIPTION:	Current land use system employed throughout the state requires land use designations to be established within Urban Growth Boundaries (UGB) and used to guide development. This technique would require that sewer services including treatment capacity be in place prior to occurrence of development. Once implemented, this system will allow the Agency to be ahead of development in capacity rather than having to catch up with development already in place.
PERFORMANCE:	Plant facilities will operate at less than installed capacity and thereby be somewhat more efficient.
SIZING:	Changes in facilities sizing would occur in terms of timing rather than actual size.
RELIABILITY:	Reliability of treatment and conveyance facilities will improve.
FLEXIBILITY:	
LIMITATIONS:	Will require significant front end financing to construct systems and facilities well before users are in place. May be viewed by some as placing the Agency in the land use planning field.
OPERATION AND MAINTENANCE:	Major impacts in timing of O&M needs.
COSTS:	Unknown cost impacts. Will undoubtedly increase capital costs due to accelerated timing of facilities construction.
IMPLEMENTATION ISSUES:	May require significant changes in coordination between land owners, developers, permitting agencies and USA.
ENVIRONMENTAL/ SOCIAL ISSUES:	Improvement in environment due to increased system capacity, may adversely affect development community.
PUBLIC ISSUES:	Need for accelerated financing means higher user fees.
AGENCY ISSUES:	Agency currently has little (no) control over land use issues or development timing.

B1

TITLE: **USE OF PRETREATMENT LOCAL LIMITS**

DESCRIPTION: The local limit determination process would be patterned after the current approach for industrial pretreatment which currently limits heavy metals and other pollutants. This technique will require industry and some commercial establishments to pretreat their wastes prior to discharge in order to remove/reduce pollutants such as phosphorus, nitrogen, sulfur, total dissolved solids, chemical oxygen demand, and total suspended solids.

PERFORMANCE: Performance would be variable depending on the pollutant and the plant. Phosphorus at Rock Creek may be reduced by 30 percent. Chemical oxygen demand may be reduced at Forest Grove by 35 percent. When pretreatment criteria are established an estimate of performance can be determined.

SIZING: Not applicable.

RELIABILITY: USA has demonstrated excellent success with industrial pretreatment compliance. Similar success is expected with this technique.

FLEXIBILITY: Use of pretreatment local limits complements all other techniques for reducing phosphorus loads to the Tualatin River.

LIMITATIONS: Industrial contributions of some pollutants of concern are insignificant compared to residential and commercial contributions.

OPERATION AND MAINTENANCE: Any reduction in influent loading would have a beneficial impact on O&M.

B1

COSTS:

An expanded industrial pretreatment program will be necessary at an estimated cost of $60,000 per year.

IMPLEMENTATION ISSUES:

Cost-effectiveness of treating certain wastewater pollutants on-site versus at the treatment plant must be considered. Use of an expanded program for local limits may have a negative impact on business development.

ENVIRONMENTAL/ SOCIAL ISSUES:

How will industry dispose of removed pollutants? Implementation might halt or slow growth in the basin.

PUBLIC ISSUES:

How will existing industrial/commercial development respond? How will potential industrial/commercial development respond?

AGENCY ISSUES:

Implementation will require an expanded pretreatment program.

Disposal of certain sludges from the pretreatment processes (e.g., Gray and Company) may increase competition for available land for municipal sludge disposal.

All industries and commercial enterprises will likely discharge these pollutants. What criteria will judge the need for pretreatment?

Pollutants have different impacts at each plant. Pretreatment within each basin (or sub-basin) may not be necessary.

There is some benefit to overall treatment effectiveness in relaxing some industrial discharge limits such as the upper limit (9.0) for pH.

Can USA assist in seeking or providing grants for studies on ways industries can reduce discharges of pollutants?

B2

TITLE: **FEES FOR THE USE OR DISCHARGE OF CERTAIN POLLUTANTS**

DESCRIPTION: Implementation will result in a charge or fee for the use or discharge of pollutants as a means of cost recovery, or as a disincentive for use. This technique could use several approaches:

1. A fee for a chemical sold in the basin.
2. A cost recovery system for discharge of certain pollutants.
3. A surcharge for the discharge of certain pollutants (cost recovery plus a penalty.)

PERFORMANCE: Reductions in pollutants do not necessarily occur; they are related to the magnitude of the fee that is implemented.

SIZING: Not applicable.

RELIABILITY: Depending on the approach, the technique can be effective in reducing pollutant discharges and/or recovering costs.

FLEXIBILITY: A fee approach complements all other techniques for reducing phosphorus loads to the Tualatin River.

LIMITATIONS: Implementation of a fee or charge does not necessarily reduce pollutants or improve water quality.

OPERATION AND MAINTENANCE: Impact on O&M of the treatment plants will vary with the approach taken. If the fee discourages discharge of pollutants from industry, a positive benefit will be realized.

COSTS: Expansion of the industrial inspection program would need to be expanded at an estimated cost of $60,000 per year.

IMPLEMENTATION ISSUES: Use of a fee approach might have a negative impact on business development. The legal authority to impose a fee on use would need to be determined.

ENVIRONMENTAL/ SOCIAL ISSUES: Might halt or slow commercial/industrial development within the basin.

PUBLIC ISSUES: How will existing industrial/commercial development respond? How will potential industrial/commercial development respond?

AGENCY ISSUES: A cost of treatment or fee structure will need to be developed. If a fee on use is assessed, how will use be monitored? The fee approach would require an exhaustive review of chemical compounds used. Does USA have legal authority to impose a fee on use?

B3

TITLE:	**BAN GARBAGE DISPOSALS**
DESCRIPTION:	The governing agency would not allow garbage grinders to be installed in homes. Garbage disposals or macerating pumps, located in kitchen sink drains, that grind up solids and discharge a combination of transport water and wet garbage to the public sewage collection system would be banned in new homes, and, perhaps, removed from existing homes.
PERFORMANCE:	Removal is relatively simple. The removal of such machines does not require replacement. It requires that people pick up wet garbage and place it in a container or in a simple home composting pile outdoors.
SIZING:	Not applicable.
RELIABILITY:	Very reliable in removal of BOD, TSS, and phosphorous loads.
FLEXIBILITY:	Inflexible.
OPERATION AND MAINTENANCE:	None by public agencies.
COST:	Homeowner will experience some inconvenience but will not have increased costs.
IMPLEMENTATION ISSUES:	Would likely require governmental action to prohibit sale and use of disposal units.
ENVIRONMENTAL/ SOCIAL ISSUES:	Significant changes in homeowner lifestyle.
PUBLIC ISSUES:	Requires significant public cooperation.
AGENCY ISSUES:	Political sensitivity, requires major public education program.

B4

TITLE:	**HOUSEHOLD COMPOSTING**
DESCRIPTION:	Asks residents to practice recycling wherever possible in daily routines. Especially important in recycle of organic wastes to reduce biologic loads at the wastewater treatment facility. Kitchen wastes provide primary source of organics for compost pile. Supplemental carbon source can be obtained through use of yard debris and other woody materials.
PERFORMANCE:	Estimates are that up to 0.46 lbs. per capita of organic material is produced each day in a typical home. This could reduce the BOD and SS load at a treatment facility by up to 30 percent. Additional benefits include reduction of solid wastes programmed for sanitary landfilling and creates a reusable material for soil amendment and gardening purposes.
SIZING:	Varies with individual situation.
RELIABILITY:	Very reliable at removing organic and solid materials from the waste stream.
FLEXIBILITY:	Very flexible from public treatment facility perspective. Will reduce loads regardless of process used.
LIMITATIONS:	Depends on voluntary compliance by resident. Is less applicable in multi-family settings.
OPERATION AND MAINTENANCE:	Requires daily O&M by homeowner, reduces the operations and power costs significantly at a treatment facility.
COSTS:	Very little capital costs by homeowner, none for public system.
IMPLEMENTATION ISSUES:	Requires changes in lifestyle, public education and dedication by individual homeowner.
ENVIRONMENTAL/ SOCIAL ISSUES:	Environmentally sound, provides significant secondary benefits, provides immediate beneficial reuse.
PUBLIC ISSUES:	Public education and desire to recycle.
AGENCY ISSUES:	Requires public education program and possibly some level of assistance in startup.

B5

TITLE: **SEPTIC TANK EFFLUENT PUMPING (STEP) SYSTEMS**

DESCRIPTION: This system provides a home or group of homes with septic tank facilities but makes use of the public sewer to convey and treat water generated in the home. Typically, septic systems fail because the drainfield becomes clogged, blinded, or otherwise inoperative. STEP systems provide the best of both on-site and regional treatment. Sludge and scum (septage) is trapped in the septic tank and must occasionally (4 - 10 years) be removed and treated. A pump in the system conveys clarified wastewater to a public sewer for additional treatment at a central facility.

STEP systems are relatively new but gaining in acceptance. Since the system is relatively impervious to groundwater, little infiltration and inflow is seen in the system. Largest STEP systems in the US serve upwards of 10,000 homes.

PERFORMANCE: Performance is good with components being manufactured explicitly for this application. Each home or small group of homes uses a pump with attendant power, control, alarm, and related features which requires a new level of service by the public agency. Reduction of settleable and floatable materials in the wastestream reduces the load at the treatment facility significantly.

SIZING: Systems vary in size from single family units to those serving up to six to eight homes with a single tank/pump unit.

RELIABILITY: Very reliable with continued maintenance. Probably improves sewer operations with reduced solids and I/I.

FLEXIBILITY: Flexibility is available through use of timers to pump tanks during off-peak hours.

LIMITATIONS: Public acceptance, need for access to STEP system on private property and remote service of many small pump systems.

OPERATION AND MAINTENANCE: Lowers O&M for sewers and central treatment facility, increases O&M through need for additional field crews, central dispatch, and alarm monitoring.

B5

COSTS:	Comparative costs with central treatment are not available. Usually higher that traditional systems due to need for septic tanks and pumping systems.
IMPLEMENTATION ISSUES:	Significant change from tradition. Public education.
ENVIRONMENTAL/ SOCIAL ISSUES:	Improves treatment efficiency thereby improving environmental impacts. Social acceptance of septic tanks at each home may be difficult.
PUBLIC ISSUES:	Public education, retrofitting required in developed areas means digging up yards, driveways, etc.
AGENCY ISSUES:	Costs, significant change in operations approach.

B6

TITLE: **COMPOSTING TOILETS AND GREY WATER SYSTEMS**

DESCRIPTION:

Removes the need for central sewage treatment systems and facilities by disposing of waste solids and liquids on-site. Composting toilets are used in primarily remote locations where local sewers are unavailable to the homeowner. They function by composting fecal matter with kitchen and other household organic wastes to produce a rich organic compost material which is removed periodically from the reaction chamber. Typically, no power or mechanical equipment is needed to operate these units.

Grey water systems are used in conjunction with composting toilets to dispose of the water fraction of waste materials generated in a home. These waste streams include sinks, clothes washer, dishwasher and shower/tub streams. Water is usually conveyed to either a drainfield or a public sewer.

PERFORMANCE:

Both composting toilets and grey water systems perform well when well maintained. Reports of odor with composting toilets are common unless the toilet compartment is well ventilated. Retrofitting either system to an existing structure is costly. Applies to single family dwellings only.

Grey water systems using drainfields require suitable soils and drainage to safely recycle the wastewater.

SIZING:

Single family dwellings are most suitable for composting toilets. Sizing of both composting toilets and grey water systems are dictated by local and state regulation.

RELIABILITY:

Reliability is good with occasional drainfield failure due to blinding of soils or leaching nitrogen to groundwater.

FLEXIBILITY:

Relatively inflexible once installed.

LIMITATIONS:

Local building codes, odor potential, and public acceptance are most noticeable limitations. Composting toilets have found little public acceptance.

OPERATION AND MAINTENANCE:

None by public agency, continuous by homeowner.

B6

COSTS:	No public costs. Homeowner costs can reach $10,000 per installation.
IMPLEMENTATION ISSUES:	Requires public acceptance and regulatory approval.
ENVIRONMENTAL/ SOCIAL ISSUES:	Requires changes in life style to use a composting toilet.
PUBLIC ISSUES:	Public education required; could be limited by land use issues.
AGENCY ISSUES:	Public education.

C1

TITLE: **FLOW EQUALIZATION AT THE TREATMENT FACILITIES**

DESCRIPTION: Divert peak daily flow at treatment plant to flow equalization. Flow equalization permits operating the wastewater treatment plant at a more constant flow rate thus reducing plant operation and control problems; improving treatment performance; and reducing the required hydraulic capacity of downstream facilities.

PERFORMANCE: Provides treatment of all flows within the normal operating range of the plant's treatment facilities. This stabilizes treatment performance and can significantly reduce chemical dosages and energy costs. Treatment of flows in excess of average daily flow would occur during periods when influent flows to the plant are less than average daily flows.

SIZING: Equalization based on flow variation between minimum and maximum flow. Equalize flow over 24 hours. Plant design downstream of flow equalization based on average daily flow. Flow equalization would be implemented after primary treatment (screening and primary clarification) to minimize sludge accumulation and odor in the flow equalization basin. Size of flow equalization facility is generally equal to 25 percent (±) of average daily flow. Pumping station required to transport flows between the equalization basin and the treatment process. Aeration system required in the flow equalization structure to mix and aerate the wastewater.

RELIABILITY: Very effective.

FLEXIBILITY: Easily integrated into any treatment process. Provides for more constant operation of chemical feed equipment (i.e., lime, chlorine, polymer, etc.) downstream of diversion. Provides for more constant operation of downstream process (i.e., aeration, filtration, pumping, etc.).

LIMITATIONS: Land requirements for equalization structure.

OPERATION AND MAINTENANCE: Additional operation for pumping station and aeration. Increase in maintenance for added equipment and facilities. Reduced costs of operation and maintenance of downstream processes at treatment plant due to constant operation and control.

C1

COST: Capital costs and operating costs per gallon vary with the size of the storage facilities. Uncovered, earth-lined structures are the least expensive with covered concrete storage reservoirs being the most expensive. Typical capital costs range from $0.50 per gallon to $2.00 per gallon. Typical operating costs range from $0.03 to $0.08 per gallon of storage volume per year.

IMPLEMENTATION ISSUES: Availability of land for the flow equalization facilities.

ENVIRONMENTAL/ SOCIAL ISSUES: Odor potential and mitigation alternatives.

PUBLIC ISSUES: No significant issues identified unless siting becomes difficult.

AGENCY ISSUES: Technique is compatible with Agency goals.

C2

TITLE: **FLOW EQUALIZATION/STORAGE IN COLLECTION SYSTEM**

DESCRIPTION: Divert peak daily flow in collection system to storage prior to treatment facilities. Equalization permits operating the wastewater treatment plant at a constant flow rate thus easing plant operation and control; improving treatment performance; and reducing the hydraulic capacity of treatment facilities.

PERFORMANCE: Provides treatment of all flows within the normal operating range of the plant's treatment facilities. This stabilizes treatment performance and can significantly reduce chemical dosages and energy costs. Treatment of flows in excess of average daily flow occurs during periods influent wastewater flows to the plant are less than average daily flows.

SIZING: Equalization/storage based on flow variation between minimum and maximum flow. Equalize flow over 24 hours. Plant design based on average daily flow. Flow equalization/storage could be implemented at multiple locations in collection system or at single location prior to wastewater treatment facilities. Screening facilities required prior to flow equalization/storage. Size of flow equalization generally equal to 25 percent (±) of average daily flow. Pumping station required to transport flow to or from the flow equalization/storage. Aeration system/mixing required in the flow equalization/storage structure to mix, aerate, and keep particles in suspension.

RELIABILITY: Effective at controlling flow downstream of flow equalization/storage to average daily flow conditions. Effective at red wet weather flows.

FLEXIBILITY: Easily integrated into collection system facilities. Provides for more constant operation of treatment processes, equipment and chemical additions.

LIMITATIONS: Land requirement for equalization/storage structure. Siting of remote treatment facility. Pumping station required to remove or return excess flow to the downstream facilities. Aeration/mixing of flow equalization/storage facility.

OPERATION AND MAINTENANCE: Additional operation of remotely located pumping station and flow equalization/storage facility. Increase in maintenance for added equipment and facilities. Reduced costs of operation and maintenance of downstream facilities due to constant operation and control.

C2

COST:	Capital costs and operating costs per gallon vary with the size of the storage flow equalization/storage facilities. Typical capital costs range from $0.50 per gallon to $2.00 per gallon respectively. Cost of flow equalization/storage in pipelines is based on the size and length of pipe. The cost of pipe is typically $6.00/diameter-inch/foot of length. Typical operating costs range from $0.03 to $0.08 per gallon of storage volume per year.
IMPLEMENTATION ISSUES:	Availability of land for the flow equalization/storage facility. Siting of remote facilities.
ENVIRONMENTAL/ SOCIAL ISSUES:	Odor potential and mitigation alternatives.
PUBLIC ISSUES:	No significant issues identified unless siting becomes difficult.
AGENCY ISSUES:	Technique is compatible with Agency goals.

C3

TITLE: **SEWER REHABILITATION TO REDUCE INFILTRATION AND INFLOW (I/I)**

DESCRIPTION: Comprehensive sewer rehabilitation programs can reduce I/I into the sewer systems and peak flows to the treatment facilities.

Infiltration refers to water that enters the sewerage system from the surrounding soil. Common points of entry include broken pipe and defective joints in pipe and manhole walls.

Inflow refers to storm water runoff that enters the sewerage system only during or immediately after rainfall. Points of entry may include connections with roof and area drains, storm drain connections, and holes in manhole covers in flooded streets.

A comprehensive sewer rehabilitation program would include total rehabilitation of sewer mains, manholes, and laterals in subbasins exhibiting high rates of I/I. Rehabilitation can be accomplished by several methods including pipe and manhole replacement, slip lining, grouting, and relining.

PERFORMANCE: Removal of I/I in rehabilitated basins (including laterals) ranges from 50 to 75 percent. Reduction of overall I/I to treatment facilities ranges from 0 to 30 percent. Reductions of phosphorus loads to the treatment facilities are minimal due to generally low phosphorus concentrations in groundwater will reduce the size and improve the performance of the downstream treatment processes.

SIZING: Varies according to the size and condition of the existing facilities.

RELIABILITY: Comprehensive rehabilitation of entire subbasins has been shown to have short term reliability. Long term reliability has yet to be documented.

FLEXIBILITY: Can implement according to an assessment of priorities. This technique is compatible with other techniques.

LIMITATIONS: Overall effectiveness and cost are uncertain due to undetermined long term maintenance requirements and reliability. USA needs additional jurisdictional authority

OPERATION AND MAINTENANCE: A continuing monitoring and maintenance program is required for long term I/I removal. Regrouting is required as often as every 5 years.

C3

COSTS:

Inflow removal is generally more cost effective and reliable than infiltration removal. Rehabilitation costs for infiltration removal may be as high as the cost for total replacement of the sewers, manholes, and laterals within the subbasin. Reduction of I/I will reduce the cost of downstream treatment works.

IMPLEMENTATION ISSUES:

Effective I/I removal programs require the rehabilitation of service laterals located on private property.

ENVIRONMENTAL/ SOCIAL ISSUES:

Environmental impacts associated with short-term construction activities.

PUBLIC ISSUES:

Short-term construction activities and work on private property.

AGENCY ISSUES:

Implementation of inter-governmental agreements requiring municipalities to implement effective I/I reduction programs. Implementation of an ordinance or attainment of easements to allow work on private property. Assessment of capital improvement priorities.

C4

TITLE: SECONDARY TREATMENT

DESCRIPTION:

This technique involves the use of wastewater treatment facilities to treat to a level equivalent to the EPA definition of secondary treatment. With few exceptions, all U.S. municipal wastewater treatment plants must provide this level of treatment at a minimum. Typically, this would include preliminary treatment (rag and grit removal), primary clarification, secondary treatment, and disinfection. The secondary treatment facilities may consist of a variety of alternative processes that, in most cases, include a biological treatment system followed by a solids removal process. The biological treatment processes are typified by the processes now in use at USA facilities - activated sludge and trickling filter systems. Solids removal is generally achieved by sedimentation.

There are also other ancillary facilities associated with a secondary treatment plant that may include raw sewage or treated effluent pumping; laboratory, operations, and maintenance facilities; effluent outfall structures; and miscellaneous process facilities. In addition, all secondary treatment processes generate sludge, which must be dealt with using processing facilities described in other techniques.

PERFORMANCE:

Secondary treatment performance is generally defined as an effluent containing less than 30 mg/L BOD and TSS (monthly average) and removal of at least 85% of influent concentrations of these contaminants. There are also typically standards for maximum effluent levels of coliform. Typical performance of a well-run plant is an effluent of less than 20 mg/L BOD and TSS, and greater than 90% reduction. During periods when rain dilutes influent wastewater pollutant concentrations, it can be difficult to achieve the 85% removal criterion.

Secondary treatment by itself generally does not provide significant reductions in phosphorus or in nitrogen compounds. Processes can be modified to provide nearly complete removal of ammonia nitrogen.

SIZING:

Treatment facilities are designed based on the characteristics of the influent wastewater. Sizing criteria generally must meet state guidelines, and be consistent with industry-standard parameters.

RELIABILITY: Excellent

FLEXIBILITY:

Excellent -- most secondary treatment processes can be adapted to a wide variety of effluent standards.

C4

LIMITATIONS: Requires additional treatment processes to meet many discharge standards for reuse or discharge.

OPERATION AND MAINTENANCE: All existing USA plants currently include secondary treatment. Processes are well understood and operation and maintenance is relatively simple.

COST: The cost for a new activated sludge treatment facility varies from $2 to $5 per gallon/day of capacity (based on average flow) depending on the size of the plant and the amount of special appurtenances.

IMPLEMENTATION ISSUES: Secondary treatment facilities already in place at USA plants. This is "conventional" treatment, so there are few implementation concerns.

ENVIRONMENTAL/ SOCIAL ISSUES: None identified.

PUBLIC ISSUES: Siting of new facilities may generate opposition from area residents.

AGENCY ISSUES: None.

C5

TITLE:	REGIONAL TREATMENT PLANT IN WEST BASIN
DESCRIPTION:	This technique involves elimination of the Hillsboro West and Forest Grove treatment facilities and transfer of all flows from these service areas to the Rock Creek Plant for treatment. This would increase the average annual flow to Rock Creek by 34% in 1995 (7.9 MGD increase). At ultimate buildout, average annual flow to Rock Creek would be 23% higher (15.2 MGD increase) than the flow projected for the Rock Creek service area alone.
PERFORMANCE:	Would consolidate treatment operations at a single facility. No significant change in treatment performance would be expected.
SIZING:	Conveyance facilities must be sized to handle peak flows unless collection system storage is provided. Treatment facilities are sized based on conventional flow and loading criteria.
RELIABILITY:	Assuming proper design and operation of treatment facilities, reliability of a regional treatment plant should be equal to or better than smaller, decentralized treatment plants.
FLEXIBILITY:	Flexibility issues relate more to the treatment and reuse/disposal methods chosen than to the question of single or multiple treatment facilities. Location of treatment facilities with respect to reuse opportunities may affect flexibility.
LIMITATIONS:	Availability of space at Rock Creek to accommodate a larger treatment facility.
OPERATION AND MAINTENANCE:	Consolidation of three facilities into one should reduce O & M requirements for treatment. This will be partially offset by O & M requirements for pumping stations at Forest Grove and Hillsboro West.
COSTS:	Undetermined at this time.
IMPLEMENTATION ISSUES:	Conditional use permit for Rock Creek. Obtaining easements and right of ways for conveyance systems.
ENVIRONMENTAL/ SOCIAL ISSUES:	Construction impacts.
PUBLIC ISSUES:	Typically favor elimination of treatment facilities unless costs are prohibitive.
AGENCY ISSUES:	Consolidation of treatment operations must be compatible with reuse/disposal objectives. Rock Creek must still meet nutrient waste load allocations.

C6

TITLE: **UPSTREAM REUSE PLANTS**

DESCRIPTION: This technique involves construction of treatment facilities for effluent reuse that are located upstream in the collection system. The goal of this approach is to minimize conveyance costs for reclaimed water by locating the treatment facility closer to the point of water use. It also allows the design and operation of the treatment facility to be optimized for water reclamation. The facilities would provide liquid treatment only. Sludge would be returned to the collection system for processing at the main treatment plant located downstream. This treatment approach is commonly used in Southern California and offers additional advantages: it reduces hydraulic loads on the collection system, thus extending capacity; and, if located near a receiving stream, the plant can be operated in a treat and discharge mode during the winter. The level of treatment provided could vary depending on the effluent quality needed for the specific reuse application. Must likely, the plant would be designed to produce the highest category of reclaimed water quality which would allow unrestricted use.

PERFORMANCE: Greater than 95 percent removal of BOD and SS in treatment plant and substantial removal of phosphorus, depending on chemical dosage. Soil crop system will provide further removal of BOD, SS, phosphorus, and nitrogen.

SIZING: Conventional activated sludge, coagulation, and filtration design criteria applied to volume of flow to be treated for reuse. Amount of land needed is a function of application rate and length of irrigation season. For 2-foot/year application rate and 150-day irrigation period, require about 230 irrigated acres per MGD.

RELIABILITY: Excellent.

FLEXIBILITY: Excellent – same facilities can be used as part of winter season treatment when reuse demand ceases.

LIMITATIONS: Not a major factor in regard to treatment facilities because treatment required is less than needed for summertime treatment and discharge.

OPERATION AND MAINTENANCE: Treatment is consistent with the operation of other USA facilities -- no burdensome or unusual treatment plant requirements. Must operate an effluent distribution system.

C6

COST:

The cost for a new activated sludge treatment facility followed by coagulation, filtration and disinfection varies from $4 to $6 per gallon of capacity depending on the size of the plant and the amount of special appurtenances.

IMPLEMENTATION ISSUES:

Must site new treatment facility. Must get reclaimed water use plan approved by State. Must convince users that reclaimed water is acceptable for use in their application. Must get legally enforceable contract with the users of the effluent. Must demonstrate no adverse effect on groundwater quality. Must obtain WPCF or NPDES permit which authorizes use of reclaimed water. Unless USA enters farming business, will have to negotiate water reuse agreements with several users.

ENVIRONMENTAL/ SOCIAL ISSUES:

Makes beneficial use of nutrients in wastewater. Effective public education program may be necessary to gain support of agricultural users and of the owners of property adjacent to the land where effluent is reused.

PUBLIC ISSUES:

Increased public contact with effluent.

AGENCY ISSUES:

Consistent with Agency's goals to maximize opportunities for beneficial reuse. Reduces hydraulic load on collection system.

C7

TITLE: LAND TREATMENT (OVERLAND FLOW)

DESCRIPTION:

Overland flow is essentially a biological treatment process in which wastewater is applied over the upper reaches of sloped terraces and allowed to flow across the vegetated surface to runoff collection ditches. Treatment is accomplished by physical, chemical and biological means as the wastewater flows in a thin sheet down the relatively impervious slope. Overland flow can be used as a secondary treatment process where discharge of a nitrified effluent low in BOD is acceptable. In this application, pretreatment requirements consist of screening and removal of grit and grease. It can serve as an advanced treatment process following secondary treatment. Depending on the effluent quality produced, the collected runoff can be either discharged to a stream or reused in an irrigation program.

PERFORMANCE:

The expected treatment efficiency will vary with the concentrations of constituents in the applied wastewater. If secondary effluent is applied, the effluent quality listed below would be expected.

Constituent	Concentration, mg/L
BOD:	5 - 10
Suspended Solids:	8 - 10
Ammonia-Nitrogen (as N):	0.5 - 1
Phosphorus (as P):	3 - 5

With the exception of ammonia-nitrogen, these effluent qualities would not be acceptable for discharge to the Tualatin River. Consequently, advanced treatment would be required prior to overland flow. Overland flow can achieve all but the highest category of water quality for reuse.

SIZING:

Land requirements typically vary from 25 to 110 acres per MGD. This requirement would increase if buffer zones are needed.

RELIABILITY:

Ability to meet Tualatin discharge requirements is doubtful unless wastewater receives advanced treatment (including phosphorus removal) ahead of this process.

FLEXIBILITY:

Very limited. Hard to change direction once large capital expenditure is made in overland flow system.

LIMITATIONS:

Large land requirements. Not effective in cold weather. Requires relatively flat slopes (2 to 8 percent). Requires relatively impermeable soils.

OPERATION AND MAINTENANCE:

Represents a new type of operation for USA staff. Careful attention must be paid to monitoring and control of surface runoff. Upstream treatment system required.

C7

COSTS:	Land costs would be at least $100,000 to $440,000 per MGD of capacity based on $4000/acre. Additional costs would be associated with site development and pretreatment, pumping, distribution and collection of wastewater.
IMPLEMENTATION ISSUES:	Large land requirements. May be difficult to site and permit.
ENVIRONMENTAL/ SOCIAL ISSUES:	Effect on groundwater quality; aerosols; potential for surface runoff. Insect propagation.
PUBLIC ISSUES:	May not be willing to dedicate large land area to wastewater treatment.
AGENCY ISSUES:	Represents an additional treatment facility to operate and maintain. Not a promising technique for meeting target effluent qualities.

C8

TITLE: **ADVANCED TREATMENT - LIME**

DESCRIPTION: This process consists of a conventional activated sludge system followed by lime addition, recarbonation and effluent filtration. Ammonia-nitrogen removal is achieved by operation of the activated sludge in the nitrification mode. Phosphorus removal is achieved in the lime clarification and effluent filtration stages. Supplemental alkalinity addition is probably not needed for this process. Total sludge production (on a dry weight basis) is nearly three times that produced by conventional secondary treatment. Lime sludge is relatively easy to dewater but is highly corrosive and messy.

PERFORMANCE: 98 to 100 percent removal of phosphorus, BOD and TSS; 85 to 100 percent removal of ammonia-nitrogen.

SIZING: Activated sludge system is based on an MCRT of 7 days or longer. Lime dose is based on the alkalinity concentration of the secondary effluent. Lime is added to raise the pH to 11 or higher. Recarbonation may be practiced in one stage or two. This brings the pH back to neutral conditions. Clarification and filtration facilities are conservatively sized to ensure good solids capture. Lime sludge is typically handled by gravity thickening and filter press dewatering.

RELIABILITY: Good; only one full-scale lime plant is currently in operation for wastewater treatment. That plant reports consistent performance and produces an effluent phosphorus concentration below the prescribed effluent limits.

FLEXIBILITY: Fair -- most of the facilities incorporated into a lime treatment system could be modified for use in other water quality management systems. However, the lime feed, recarbonation feed and lime sludge handling facilities may represent sunk costs for this system. The conservatively designed aeration, clarification and filtration facilities would better enable plants to treat peak flows and high loadings during the winter.

LIMITATIONS: Handling and disposal of the large volume of sludge produced.

OPERATION AND MAINTENANCE: Operation and maintenance of a lime treatment facility is more burdensome than most systems because of material handling difficulties and the large volume of sludge produced. Some recent design innovations have improved this situation, but most operational staffs dislike lime handling systems. The amount of sludge that must be processed and hauled will increase dramatically.

C8

COST:	The cost of a new lime treatment system with nitrification varies from $5 to $8 per gallon of capacity depending on the size of the plant and the amount of special appurtenances. The cost at USA's plants would be less since many required treatment facilities are in-place. Operating costs for lime treatment are high compared to other phosphorus removal systems.
IMPLEMENTATION ISSUES:	Disposal of a large volume of lime sludge. Must secure reliable supply of chemicals.
ENVIRONMENTAL/ SOCIAL ISSUES:	Process achieves nutrient limits. No significant or unusual odors are associated with process. Truck or rail traffic around plant will increase sharply due to increased chemical deliveries and sludge haul.
PUBLIC ISSUES:	Potential local concern over truck traffic.
AGENCY ISSUES:	Process is capable of meeting nutrient TMDLs by 1993.

C9

TITLE: **ADVANCED TREATMENT - 2-STAGE ALUM ADDITION**

DESCRIPTION: This process uses two-stage addition of alum and polymer combined with effluent filtration to reduce phosphorus concentrations. The locations of chemical addition would be prior to primary clarification and prior to tertiary clarification (secondary effluent). Ammonia-nitrogen concentrations are reduced through operation of conventional activated sludge systems in a nitrification mode. Because both alum addition and nitrification consume alkalinity, soda ash, lime or caustic soda must be fed to the primary effluent for pH and alkalinity control. Alum addition will increase sludge production 20% to 40% (on a dry weight basis) over typical secondary sludge treatment quantities. It will also change the sludge characteristics. Alum sludge can be processed by most solids management systems.

PERFORMANCE: 98 to 100 percent removal of phosphorus, BOD and TSS; 85 to 100 percent removal of ammonia-nitrogen.

SIZING: Chemical dosages are typically based on 90% removal of phosphorus across each alum addition stage. In the initial stage, dosage will be close to stoichiometric ratio (10 mg alum/mg phosphorus). In the second stage, excess alum must be added at an optimum pH for phosphorus removal. Supplemental alkalinity is added to maintain both a proper pH for nitrification and an effluent alkalinity of 50 mg/L or greater. Clarification and filtration facilities are conservatively sized to ensure good solids capture. Activated sludge operation is based on a MCRT of 7 days or longer.

RELIABILITY: Very good; results of full-scale tests and applications at other treatment facilities have demonstrated ability to meet effluent phosphorus and ammonia-nitrogen limits on a monthly basis; significant daily variations in effluent quality can occur.

FLEXIBILITY: Excellent – Same facilities can be used to produce highest category of water for reuse. Also, the conservatively designed clarification, aeration and filtration facilities would better enable plants to treat peak flows and high loadings during the winter.

LIMITATIONS: Treatment process results in higher total dissolved solids (TDS) concentration in effluent than that produced by secondary treatment. Tualatin River already exceeds in-stream standard for TDS. In sludge reuse programs, end users must accept product with greater portion of chemical sludge.

OPERATION AND MAINTENANCE: Operation of the chemical feed system and nitrification process is straightforward and should not present a significant increase in complexity over current operations. The most significant O & M implications will be associated with the solids process because the volume of sludge will increase and because alum sludge is more difficult to thicken and dewater.

C9

COST:

The cost of a new two-stage alum system with nitrification varies from $4 to $7 per gallon of capacity depending on the size of the plant and the amount of special appurtenances. The cost at USA's plants would be much less since many required treatment facilities are in-place. Operating costs for the two-stage alum system are moderate compared to other phosphorus removal systems.

IMPLEMENTATION ISSUES:

Must secure reliable supply of chemicals. Must get permit structure that allows daily fluctuations in effluent quality. Must get in-stream standard for TDS adjusted.

ENVIRONMENTAL/ SOCIAL ISSUES:

Process achieves nutrient limits, produces sparkling clear water. No significant or unusual odors are associated with process. Truck or rail traffic around plants will increase substantially due to increased chemical deliveries and sludge haul (unless incineration is practiced).

PUBLIC ISSUES:

Potential local concern over truck traffic.

AGENCY ISSUES:

Process is capable of meeting nutrient TMDLs by 1993 and has flexibility to be modified to other uses (such as effluent reuse) in the future.

C10

TITLE: **ADVANCED TREATMENT - BIOLOGICAL NUTRIENT REMOVAL (BNR)**

DESCRIPTION: In this process, a conventional activated sludge system is modified to provide ammonia-nitrogen removal through nitrification and phosphorus removal through luxury uptake in the biological organisms. The phosphorus is then removed when the organisms are wasted from the system. The BNR system is capable of producing an effluent phosphorus concentration of 1 to 2 mg/L. To achieve the low effluent concentrations required, the BNR process must be followed by chemical clarification and filtration. Alum and polymer would be the likely chemicals used. Two key advantages of the BNR process are low chemical consumption and low sludge production. The projected quantity of sludge produced is only slightly higher than that produced by typical secondary treatment.

PERFORMANCE: 90 to 100 percent removal of phosphorus; 85 to 100 percent removal of ammonia-nitrogen; 95 to 100 percent removal of BOD and SS.

SIZING: Sizing of the BNR process is based on attainment of design retention times in anaerobic, anoxic and aerobic zones. Proper control of recycle flows is a critical consideration. Chemical dosages are based on the phosphorus concentration and the pH in the effluent from the BNR process. Feed rates well in excess of stoichiometric ratios would be required. Clarification and filtration facilities are conservatively sized to ensure good solids capture.

RELIABILITY: Questionable; Phosphorus concentrations in the effluent from the BNR process tend to be erratic, making control of downstream processes difficult. No full-scale installations are achieving the phosphorus limits required at USA.

FLEXIBILITY: Excellent -- Same facilities can be used to produce highest category of water for reuse. Also, the conservatively designed clarification, aeration and filtration facilities would better enable plants to treat peak flows and high loading during the winter.

LIMITATIONS: No significant limitations identified.

OPERATION AND MAINTENANCE: Operation would be similar to that for current treatment plants. There would be some increase in complexity associated with control of BNR process and recycle streams. Also, tighter operational control would be needed for the chemical addition step.

C10

COST:

The cost of a new BNR process with alum polishing and effluent filtration varies from $4 to $7 per gallon of capacity depending on the size of the plant and the amount of special appurtenances. The cost at USA's plants would be much less since many required treatment facilities are in-place. Operating costs for the BNR system are low compared to other phosphorus removal systems.

IMPLEMENTATION ISSUES:

Must secure reliable supply of chemicals.

ENVIRONMENTAL/ SOCIAL ISSUES:

Less traffic impact than other treatment systems for phosphorus removal. No significant or unusual odors.

PUBLIC ISSUES:

None identified.

AGENCY ISSUES:

Ability to achieve TMDLs with this process is highly questionable.

C11

TITLE: **ADVANCED TREATMENT - MEMBRANE PROCESSES**

DESCRIPTION: This technique involves use of membrane separation processes to remove phosphorus and other constituents from the wastewater. Available processes include reverse osmosis (RO), electro dialysis (ED), ultrafiltration (UF) and exchange diffusion processes (EDX). Of these, RO has been most commonly applied to wastewater treatment. This process uses high pressure to drive the feedwater through a semipermeable membrane. A major portion of the impurity remains behind in the brine which constitutes the waste product from this technique. RO is usually preceded by tertiary treatment. It is necessary to remove most all solids prior to this process to prevent membrane fouling. Additional conditioning of the feedwater, such as acidification, is also typically practiced. Pressure requirements for RO typically range from 300 to 450 psi.

PERFORMANCE: The use of membrane processes for advanced wastewater treatment has been limited. They are typically applied for desalination purposes. Research has indicated that phosphorus removal varies significantly depending on the specific process used. RO is capable of very high levels of phosphorus removal (98% to 99+%).

SIZING: Sizing is primarily based on flow rate.

RELIABILITY: Membrane processes are fairly high-tech treatment systems with a high degree of mechanical complexity. Consequently, the mechanical system may be more subject to failure than simpler treatment approaches. The removal process itself is very reliable.

FLEXIBILITY: This represents a large investment that may be unnecessary if management approaches other than discharge to the Tualatin or groundwater recharge are implemented. However, it does produce a very high quality water that could be used for almost any application except drinking water.

LIMITATIONS: Disposal of residuals, such as brine, may pose a difficult obstacle.

OPERATION AND MAINTENANCE: This is an exotic, complex treatment system with a very high energy demand.

C11

COST:	Specific costs have not been determined, however, both capital and O & M costs will significantly exceed those required for two-stage alum or lime treatment.
IMPLEMENTATION ISSUES:	Disposal of brine. Must secure reliable supply of chemicals.
ENVIRONMENTAL/ SOCIAL ISSUES:	High energy demand. Brine disposal. Produces exceptionally high quality water.
PUBLIC ISSUES:	High cost of treatment.
AGENCY ISSUES:	Need to operate complex treatment system.

C12

TITLE:	**EFFLUENT FILTRATION**
DESCRIPTION:	This describes a granular media filtration process that is applied to secondary or tertiary effluent for the purpose of reducing particulate levels and contaminants associated with those particulates, such as BOD and phosphorus. The Durham and Rock Creek plants currently employ the most commonly applied type of filtration system, which employs a multi-media bed in an open, gravity flow configuration. There are also a number of other configurations that can be used, but they are similar in performance and cost.
PERFORMANCE:	Effluent quality depends to some extent on the quality of water being applied to the filters, but in general, when applied to secondary effluent, the filter effluent will contain less than 5 mg/L BOD and TSS. Effluent phosphorus levels depend on the extent of prior treatment, but levels below 0.1 mg/L are possible with filtration and proper pretreatment.
SIZING:	Typical design criteria for multi-media filters call for peak application rates of 7-10 gpm/square foot with one unit out of service, and average rates of 3-5 gpm/square foot.
RELIABILITY:	Excellent; widely-used system with good history at USA plants.
FLEXIBILITY:	Good - applicable to a wide variety of discharge and reuse conditions.
LIMITATIONS:	Must deal with occasional large volumes of backwash wastewater. Must provide redundant facilities to ensure performance during extended peak flow conditions. Headloss through filters is large; may necessitate repumping.
OPERATION AND MAINTENANCE:	Relatively simple. Currently being run at Durham and Rock Creek; history is very good.
COST:	Costs for filtration facilities vary depending on the size of the plant and the type of system being used. Typical costs are $0.25 to $0.50/gallon per day of capacity.
IMPLEMENTATION ISSUES:	None; simple and conventional system.
ENVIRONMENTAL/ SOCIAL ISSUES:	None identified.
PUBLIC ISSUES:	None identified.
AGENCY ISSUES:	None identified; process currently in use.

C13

TITLE: DRY WEATHER EFFLUENT STORAGE

DESCRIPTION: Storage reservoirs hold dry weather treatment plant effluent until river flow is sufficient to accept phosphorous levels in the stored wastewater without exceeding discharge allowance. No phosphorous removal or extended mechanical or chemical wastewater treatment and little O&M is required.

PERFORMANCE: No removal of dissolved constituents. Storage for metered release only.

SIZING: 500 to 10,000 acre feet.

RELIABILITY: Excellent except that storage capacity must include annual rainfall amount.

FLEXIBILITY: Can increase storage capacity as flow increases by using modular containment cells.

LIMITATIONS: Considerable land requirements.

OPERATION AND MAINTENANCE: Limited maintenance required.

COSTS: 500 acre feet reservoir = $2,323,000 (not including land).

500 acre feet = 163 million gallons.

$14,250/mg storage capacity.

IMPLEMENTATION ISSUES: Requires conversion of large agricultural or urban land to other uses. DEQ and/or state water resources permitting required.

ENVIRONMENTAL/ SOCIAL ISSUES: Land use, conversion of agricultural land.

PUBLIC ISSUES: Amount of land required and potential for secondary impacts.

AGENCY ISSUES: Land acquisition.

C14

TITLE: EXPORT OF DURHAM EFFLUENT TO WILLAMETTE RIVER

DESCRIPTION: Construct pipeline from the Durham AWWTP to the Willamette River to discharge all or part of the treated wastewater.

PERFORMANCE: All wastewater flows treated at the Durham treatment facility would discharge to the Willamette River under approved discharge criteria. This would likely include partial removal of ammonia-nitrogen and phosphorus.

SIZING: Effluent conveyance facilities would be sized based on flow to be exported from the Durham Basin and head losses in the pipeline. May impact treatment process requirements at the Durham treatment facility. Nutrient removal requirements would likely be less stringent.

RELIABILITY: Provides long-term reliability in meeting discharge requirements if effluent criteria do not change significantly in the future. Reliability in meeting permit requirements may be improved since limits would be less stringent.

FLEXIBILITY: Significant commitment of capital resources for exporting of flows from the Durham Basin. Treatment options at Durham plant are increased due to less stringent nutrient limits.

LIMITATIONS: Discharge permit requirements to Willamette River.

OPERATION AND MAINTENANCE: Low operation and maintenance costs for pipeline. May lower cost of treatment at Durham facility.

COST: Capital costs vary per volume of effluent to be exported. Route selection will impact costs. Estimated cost of conveyance may range from $20 to $60 million. Future treatment costs may be reduced.

IMPLEMENTATION ISSUES: Obtaining a discharge permit for the Willamette may be difficult. Other discharging agencies may object to a transfer of USA effluent to the Willamette. Water rights issues on Tualatin River. Easements and rights-of-way.

ENVIRONMENTAL ISSUES: Water quality impacts on Willamette River. Flow and water quality impacts on Tualatin River. Construction impacts.

PUBLIC ISSUES: Public may object to export of water and pollutants out of Basin.

AGENCY ISSUES:

C15

TITLE:	**EXPORT OF DURHAM AND ROCK CREEK EFFLUENT TO WILLAMETTE RIVER**
DESCRIPTION:	Construct pipeline from the Rock Creek and Durham treatment facilities to the Willamette River to discharge all or part of the treated wastewater.
PERFORMANCE:	All wastewater flows treated at Rock Creek and Durham treatment facilities would discharge to the Willamette River under approved discharge criteria. This would likely include partial removal of ammonia-nitrogen and phosphorus.
SIZING:	Effluent conveyance facilities would be sized based on flow to be exported from the Rock Creek and Durham Basins and head losses in the pipeline. May impact treatment process requirements at the Rock Creek and Durham plants. Nutrient removal would likely be less stringent.
RELIABILITY:	Provides long-term reliability in meeting discharge requirements if effluent criteria do not change significantly in the future. Reliability in meeting permit requirements may be improved since limits would be less stringent.
FLEXIBILITY:	Significant commitment of capital resources for exporting of flows from the Rock Creek and Durham Basin. Treatment options at WWTPs are increased due to less stringent nutrient limits.
LIMITATIONS:	Discharge permit requirements to Willamette River.
OPERATION AND MAINTENANCE:	Low operation and maintenance costs for pipeline. May lower cost of treatment.
COST:	Capital costs vary per volume of effluent to be exported. Route selection will impact costs. Future treatment costs may be reduced.
IMPLEMENTATION ISSUES:	Obtaining a discharge permit to the Willamette may be difficult. Other discharging agencies may object to a transfer of USA effluent to the Willamette. Water rights issues on Tualatin River. Easements and rights-of-way.
ENVIRONMENTAL ISSUES:	Water quality impacts on Willamette River. Flow and water quality impacts on Tualatin River. Construction impacts
PUBLIC ISSUES:	Public may object to export of water and pollutants out of Basin.
AGENCY ISSUES:	

C16

TITLE:	**EXPORT OF ALL USA EFFLUENT TO WILLAMETTE RIVER**
DESCRIPTION:	Construct pipeline from the Hillsboro West, Forrest Grove, Rock Creek and Durham Treatment Plants to the Willamette River to discharge all or part of the treated wastewater.
PERFORMANCE:	All wastewater flows treated at each treatment plant would discharge to the Willamette River under approved discharge criteria. This would likely include partial removal of ammonia-nitrogen and phosphorus.
SIZING:	Effluent conveyance facilities would be sized based on flow to be exported from each treatment plant and head losses in the pipelines. May impact treatment process requirements at each treatment plant. Nutrient removal requirements would likely be less stringent.
RELIABILITY:	Provides long-term reliability in meeting discharge requirements if effluent criteria do not change significantly in the future. Reliability in meeting permit requirements may be improved since limits would be less stringent.
FLEXIBILITY:	Significant commitment of capital resources for exporting of flows from each treatment plant. Treatment options at each WWTP are increased due to less stringent nutrient limits.
LIMITATIONS:	Discharge permit requirements to Willamette River.
OPERATION AND MAINTENANCE:	Low operation and maintenance costs for pipeline. May lower cost of treatment.
COST:	Capital costs vary per volume of effluent to be exported. Route selection will impact costs. Future treatment costs may be reduced.
IMPLEMENTATION ISSUES:	Obtaining a discharge permit to the Willamette may be difficult. Other discharging agencies may object to a transfer of USA effluent to the Willamette. Water rights issues on Tualatin River. Easements and rights-of-way.
ENVIRONMENTAL ISSUES:	Water quality impacts on Willamette River. Flow and water quality impacts on Tualatin River. Construction impacts.
PUBLIC ISSUES:	Public may object to export of water and pollutants out of Basin.
AGENCY ISSUES:	

C17

TITLE: EXPORT OF EFFLUENT TO COLUMBIA RIVER

DESCRIPTION: Pumping treatment plant effluent out of the Tualatin Basin to the Columbia River would reduce or eliminate discharge of wastewater until Tualatin River flow is sufficient to accept phosphorous level in wastewater. Transport quantities may range from dry weather to peak wet weather flows.

PERFORMANCE: No removal of dissolved constituents. Transport as required to meet discharge allowances in Tualatin River.

SIZING: Pipeline sizing should be selected for maximum projected transport flow rate at ultimate buildout. Could exceed 100-inch diameter. Pump station can be staged to increase capacity by changing or adding pumps.

RELIABILITY: A large generator or two separate power supply sources would be required for pump station standby power. Redundancy in pumping capacity may be required. Pipeline reliability should not be a concern.

FLEXIBILITY: Excellent. Transport flow can be varied to conform with seasonal or annual discharge allowances in the Tualatin River.

OPERATION AND MAINTENANCE: Continuous maintenance of pump station required. Regularly scheduled maintenance of pipeline appurtenances and standby power generator required.

COSTS: $750,000-$1,500,000/mgd transported.

IMPLEMENTATION ISSUES: NPDES required whether discharge is to Tualatin, Willamette, or Columbia Rivers.

ENVIRONMENTAL/ SOCIAL ISSUES: Impact of reduction in flow to Tualatin River during summer.

PUBLIC ISSUES: Low flow in Tualatin River during summer, high capital and O&M cost.

AGENCY ISSUES: Potential water rights issue, high cost.

C18

TITLE:

EER TO PORTLAND FOR
TRCHARGE

DESCRIPTION:

Wnear the eastern and northeastern boundaries of
ia would be conveyed to the City of Portland co
reatment and discharge from either the Cor the Tryon Creek treatment plants. This regexisting Durham service area, is near the Postem and provides the most feasible location fror flows. It is a variation of the effluent export tecit it includes treatment as well. In that regard, it coulve to transfer the raw wastewater rather than to corer to USA facilities and export treated effluent. Savilized by use of existing pipelines, by the ecotreating at a larger facility (i.e., Columbia Blvd.), andility may have less stringent discharge standards thanility.

Onelt include transfer of flows only during dry weattreatment standards are highest and when the Portle and treatment systems are best able to handle the fl

This ctually already being practiced to a limited extent. Therall pumping station that transfers less than 1 mgd from ek interceptor to the Portland collection system.

PERFORMANCE:

In terg loadings on USA facilities, the technique provicnation.

SIZING:

Sizingce facilities is primarily based on flow rate. Would affect ham treatment facilities due to lower flows.

RELIABILITY:

The syprovide total reliability, as long as the agreements for flowre permanent.

FLEXIBILITY:

Very flexque in terms of the ability to transfer various quantiti Once in place, there is little flexibility to effect further

LIMITATIONS:

Costs oconveyance facilities and for adding treatment capacityd treatment plants. Time constraints - Portland collectionow has problems with combined sewer overflows since thesystem cannot always handle peak flows; they are in the ea of a long-range program to identify and correct these prnclusion of USA flows in their system will complicaanalyses. They may not be able to accept additionantil substantial improvements are in place, which likely will years away. There could also be political or jurisdictioiderations that could delay or limit this alternative.

OPERATION AND MAINTENANCE:	Limited only to O&M of conveyance facilities (pumping and new pipelines).
COST:	Identification of costs will involve an exhaustive study of alternative configurations. Costs to USA would include the in-basin conveyance facilities in addition to fees imposed by Portland for conveyance and treatment. Treatment costs are not likely to be significantly different than current USA costs. Conveyance costs could be very high, depending on the direction of the Portland CSO control program.
IMPLEMENTATION ISSUES:	Reaching agreement on technical and legal issues with the City of Portland. Identifying cost-effective means of carrying out transfer that fits into Portland CSO control program. Easements and rights-of-way.
ENVIRONMENTAL/ SOCIAL ISSUES:	Removes pollutants from basin, but adds them to Willamette River (Tryon Creek WWTP) or Columbia River (Columbia Boulevard WWTP). Lower flows to Tualatin River.
PUBLIC ISSUES:	Minor issues involving construction of new conveyance facilities. Portland residents may object to export of pollutants into their basin.
AGENCY ISSUES:	Reaching agreements with City of Portland.

C19

TITLE: **CLASS 1 AGRICULTURAL REUSE**

DESCRIPTION: Class 1 agricultural reuse per draft State reuse regulations includes surface irrigation of orchards, vineyards, trees, vines, and surface or spray irrigation fodder, fiber, seed crops or non-customer cut firewood. The level of treatment required in the draft regulations is "Less than biological treatment or biological treatment without disinfection." No effluent quality limits are specified. To minimize nuisance potential and maintenance of irrigation systems, secondary treatment is preferred. No disinfection, no phosphorus removal, and no nitrification is needed. Conventional activated sludge treatment of the portion of effluent used for Class 1 reuse is adequate.

PERFORMANCE: 85 to 90 percent removal of BOD and SS in treatment plant. Soil-crop system will provide 95 percent or more removal of BOD, SS, phosphorus and nitrogen if water is applied at agronomic rates.

SIZING: Conventional activated sludge criteria applied to volume of flow to be treated for reuse. Amount of land needed is a function of application rate and length of irrigation season. For 2-foot application and 150-day irrigation period, require about 230 irrigated acres per mgd.

RELIABILITY: Excellent.

FLEXIBILITY: Excellent--same facilities could be used as part of winter season treatment when reuse flows are not needed.

LIMITATIONS: Not a major factor in regard to treatment facilities because treatment required is less than needed for treatment and discharge. The amount of land available with suitable crops and consistent with economical distribution of the treated effluent is a limitation. Also, acceptance of reclaimed water by end users and the food processing industry is essential.

OPERATION AND MAINTENANCE: Treatment is consistent with the operation of other USA secondary facilities--no burdensome or unusual treatment plant requirements. Must operate an effluent distribution system. Agricultural system operation should be by existing farmers or, if USA owns agricultural sites, by contract with agricultural operator.

COST:

The cost for a new activated sludge treatment facility varies from $3 to $5 per gallon of capacity depending on the size of the plant and the amount of special appurtenances. The cost at USA's plants would be much less since most required treatment facilities are in-place. Conveyance costs depend on the length of pipeline, the volume of water conveyed and pressure requirements. Typical pipeline costs are

$6/diameter-inch/foot of length. Cost to develop land for irrigation and to install irrigation is very site specific and could vary from $1,000 to $3,000/acre for irrigation systems. Costs could be as high as $10,000/acre if new site development is required. It is anticipated that most on-site irrigation system costs would be borne by users of water.

IMPLEMENTATION ISSUES:

Must get reclaimed water use plan approved by State. Must convince users that reclaimed water is acceptable for use in their application. Must get legally enforceable contract with the users of the effluent. Must demonstrate no adverse effect on groundwater quality. Must obtain WPCF or NPDES permit which authorizes use of reclaimed water. Unless USA enters farming business, will have to negotiate water reuse agreements with several users.

ENVIRONMENTAL/ SOCIAL ISSUES:

Makes beneficial use of nutrients in wastewater. Reduces demand for irrigation water and fertilizer. Effective public education program may be necessary to gain support of agricultural users and of the owners of property adjacent to the land where effluent is reused.

PUBLIC ISSUES:

Increased opportunity for public contact with effluent.

AGENCY ISSUES:

Consistent with Agency's goals to maximize opportunities for beneficial reuse.

C20

TITLE: **CLASS 2 AGRICULTURAL REUSE**

DESCRIPTION: Class 2 agricultural reuse per draft State reuse regulations includes surface irrigation of orchards and vineyards and surface or spray irrigation of processed food crops; fodder, fiber, seed crops; pasture for milking animals; sugar beets; trees and vines; Christmas trees; and firewood. Quality limits are 23 total coliform/100 ml for 7-day median values and 240 total coliform/100 ml maximum in two consecutive samples. The level of treatment specified is "biological treatment plus disinfection." Conventional secondary treatment followed by disinfection is adequate. No phosphorus removal or nitrification is required.

PERFORMANCE: 85 to 90 percent removal of BOD and SS in treatment plant. Soil crop system will provide 95 percent or more removal of BOD, SS, phosphorus, and nitrogen if water is applied at agronomic rates.

SIZING: Conventional activated sludge design criteria applied to volume of flow to be treated for reuse. Amount of land needed is a function of application rate and length of irrigation season. For 2-foot application rate and 150-day irrigation period, require about 230 irrigated acres per mgd.

RELIABILITY: Excellent.

FLEXIBILITY: Excellent--same facilities can be used as part of winter season treatment when reuse demand ceases.

LIMITATIONS: Not a major factor in regard to treatment facilities because treatment required is less than needed for treatment and discharge. The amount of land available with suitable crops and consistent with economical distribution of the treated effluent is a limitation. Also, acceptance of reclaimed water by end users and the food processing industry is essential.

OPERATION AND MAINTENANCE: Treatment is consistent with the operation of other USA secondary facilities--no burdensome or unusual treatment plant requirements. Must operate an effluent distribution system. Agricultural system operation should be by existing farmers or, if USA owns agricultural site, by contract with agricultural operator.

COST:

The cost for a new activated sludge treatment facility varies from $3 to $5 per gallon of capacity depending on the size of the plant and the amount of special appurtenances. The cost at USA's plants would be much less since most required treatment facilities are in-place. Conveyance costs depend on the length of pipeline, the volume of water conveyed and pressure requirements. Typical pipeline costs are $6/diameter-inch/feet of length. Costs to develop land for irrigation and to install irrigation system is very site specific and could vary from $1,000 to $3,000 for irrigation systems. Costs could be as high as 10,000/acre if new site development is required. It is anticipated that most on-site irrigation system costs would be borne by users of water.

IMPLEMENTATION ISSUES:

Must get reclaimed water use plan approved by State. Must convince users that reclaimed water is acceptable for use in their application. Must get legally enforceable contract with the users of the effluent. Must demonstrate no adverse effect on groundwater quality. Must obtain WPCF or NPDES permit which authorizes use of reclaimed water. Unless USA enters farming business, will have to negotiate water reuse agreements with several users.

ENVIRONMENTAL/ SOCIAL ISSUES:

Makes beneficial use of nutrients in wastewater. Reduces demand for irrigation water and fertilizer. Effective public education program may be necessary to gain support of agricultural users and of the owners of property adjacent to the land where effluent is reused.

PUBLIC ISSUES:

Increased opportunity for public contact with effluent.

AGENCY ISSUES:

Consistent with Agency's goals to maximize opportunities for beneficial reuse.

C21

TITLE:	**CLASS 3 AGRICULTURAL REUSE**
DESCRIPTION:	Class 3 agricultural reuse per draft State reuse regulations includes surface irrigation of food crops, orchards and vineyards, tomatoes (unprocessed), grain (human consumption), and surface or spray irrigation of processed food crops; fodder, fiber, seed crops; pasture for milking animals; sugar beets; trees and vines; sod, ornamental nursery stock, Christmas trees; and firewood. Quality limits are 2.2 total coliform/100 ml for 7 day median values. The level of treatment specified is "biological treatment plus disinfection." Conventional secondary treatment followed by disinfection is adequate. No phosphorus removal or nitrification is required.
PERFORMANCE:	85 to 90 percent removal of BOD and SS in treatment plant. Soil crop system will provide 95 percent or more removal of BOD, SS, phosphorus, and nitrogen if water is applied at agronomic rates.
SIZING:	Conventional activated sludge design criteria applied to volume of flow to be treated for reuse. Amount of land needed is a function of application rate and length of irrigation season. For 2-foot application rate and 150-day irrigation period, require about 230 irrigated acres per mgd.
RELIABILITY:	Excellent.
FLEXIBILITY:	Excellent--same facilities can be used as part of winter season treatment when reuse demand ceases.
LIMITATIONS:	Not a major factor in regard to treatment facilities because treatment required is less than needed for treatment and discharge. The amount of land available with suitable crops and consistent with economical distribution of the treated effluent is a limitation. Also, acceptance of reclaimed water by end users and the food processing industry is essential.
OPERATION AND MAINTENANCE:	Treatment is consistent with the operation of other USA secondary facilities--no burdensome or unusual treatment plant requirements. Must operate an effluent distribution system. Agricultural system operation should be by existing farmers or, if USA owns agricultural site, by contract with agricultural operator.

C21

COST:

The cost for a new activated sludge treatment facility varies from $3 to $5 per gallon of capacity depending on the size of the plant and the amount of special appurtenances. The cost at USA's plants would be much less since most required treatment facilities are in-place. Conveyance costs depend on the length of pipeline, the volume of water conveyed and pressure requirements. Typical pipeline costs are $6/diameter-inch/feet of length. Costs to develop land for irrigation and to install irrigation system is very site specific and could vary from $1,000 to $3,000 for irrigation systems. Costs could be as high as $10,000/acre if new site development is required. It is anticipated that most on-site irrigation system costs would be borne by users of water.

IMPLEMENTATION ISSUES:

Must get reclaimed water use plan approved by State. Must convince users that reclaimed water is acceptable for use in their application. Must get legally enforceable contract with the users of the effluent. Must demonstrate no adverse effect on groundwater quality. Must obtain WPCF or NPDES permit which authorizes use of reclaimed water. Unless USA enters farming business, will have to negotiate water reuse agreements with several users.

ENVIRONMENTAL/ SOCIAL ISSUES:

Makes beneficial use of nutrients in wastewater. Reduces demand for irrigation water and fertilizer. Effective public education program may be necessary to gain support of agricultural users and of the owners of property adjacent to the land where effluent is reused.

PUBLIC ISSUES:

Increased opportunity for public contact with effluent.

AGENCY ISSUES:

Consistent with Agency's goals to maximize opportunities for beneficial reuse.

C22

TITLE:	**CLASS 4 AGRICULTURAL REUSE**
DESCRIPTION:	Class 4 agricultural reuse per draft State reuse regulations includes surface or spray irrigation of food crops, produce, strawberries, walnut, almond, orchards and vineyards, processed food crops; fodder, fiber, seed crops; pasture for milking animals; sugar beets; trees and vines; Christmas trees; and firewood. Quality limits are 2.2 total coliform/100 ml for 7 day median values and 23 total coliform/100 ml maximum. Turbidity limits of 2 (24-hour mean) and 5 (5 percent of time during any 24-hour period) are also specified. The level of treatment specified is "biological treatment plus clarification, coagulation, filtration and disinfection." No phosphorus removal or nitrification is required, although phosphorus will be removed to some degree by the coagulation and filtration steps.
PERFORMANCE:	Greater than 95 percent removal of BOD and SS in treatment plant and substantial removal of phosphorus, depending on chemical dosage. Soil crop system will provide further removal of BOD, SS, phosphorus, and nitrogen.
SIZING:	Conventional activated sludge, coagulation, and filtration design criteria applied to volume of flow to be treated for reuse. Amount of land needed is a function of application rate and length of irrigation season. For 2-foot application rate and 150-day irrigation period, require about 230 irrigated acres per mgd.
RELIABILITY:	Excellent.
FLEXIBILITY:	Excellent--same facilities can be used as part of winter season treatment when reuse demand ceases.
LIMITATIONS:	Not a major factor in regard to treatment facilities because treatment required is less than needed for treatment and discharge. The amount of land available with suitable crops and consistent with economical distribution of the treated effluent is a limitation. Also, acceptance of reclaimed water by end users and the food processing industry is essential.
OPERATIONS AND MAINTENANCE:	Treatment is consistent with the operation of other USA facilities--no burdensome or unusual treatment plant requirements. Must operate an effluent distribution system. Agricultural system operation should be by existing farmers or, if USA owns agricultural site, by contract with agricultural operator.

COST:

The cost for a new activated sludge treatment facility followed by coagulation, filtration and disinfection varies from $4 to $6 per gallon of capacity depending on the size of the plant and the amount of special appurtenances. The cost at USA's plants would be much less since most required treatment facilities area in-place. Conveyance costs depend on the length of pipeline, the volume of water conveyed and pressure requirements. Typical pipeline costs are $6/diameter-inch/foot of length. Costs to develop land for irrigation and to install irrigation system is very site specific and could vary from $1,000 to $3,000 for irrigation systems. Costs could be as high as $10,000/acre if new site development is required. It is anticipated that most on-site irrigation system costs would be borne by users of water.

IMPLEMENTATION ISSUES:

Must get reclaimed water use plan approved by State. Must convince users that reclaimed water is acceptable for use in their application. Must get legally enforceable contract with the users of the effluent. Must demonstrate no adverse effect on groundwater quality. Must obtain WPCF or NPDES permit which authorizes use of reclaimed water. Unless USA enters farming business, will have to negotiate water reuse agreements with several users.

ENVIRONMENTAL/ SOCIAL ISSUES:

Makes beneficial use of nutrients in wastewater. Reduces demand for irrigation water and fertilizer. Effective public education program may be necessary to gain support of agricultural users and of the owners of property adjacent to the land where effluent is reused.

PUBLIC ISSUES:

Increased public contact with effluent.

AGENCY ISSUES:

Consistent with Agency's goals to maximize opportunities for beneficial reuse.

C23

TITLE: URBAN OR NON-AGRICULTURAL REUSE OF EFFLUENT (IRRIGATION)

DESCRIPTION: Based on draft State reuse rules, non-agricultural irrigation of effluent is permitted on parks, playgrounds, schoolyards, golf courses and other areas with similar access. The highest level of bacteriological treatment required is based on 2.2 total coliform/100 mls for a 7-day median with a maximum of 23 total coliform in any sample. With this quality water, the only restriction is that signs be posted indicating use of reclaimed water that is unsafe for drinking. A lesser treatment level (7-day median not to exceed 23 total coliform/100 mls) is acceptable for other landscape areas where direct public contact during irrigation cycles can be prevented. The proposed rules are subject to modification but are based on a successful program that has been implemented in California.

PERFORMANCE: Greater than 95 percent removal of BOD and SS in treatment plant and substantial removal of phosphorus, depending on chemical dosage. Soil crop system will provide further removal of BOD, SS, phosphorus, and nitrogen.

SIZING: Conventional activated sludge, coagulation, and filtration design criteria applied to volume of flow to be treated for reuse. Amount of land needed is a function of application rate and length of irrigation season. For 2-foot/year application rate and 150-day irrigation period, requires about 230 irrigated acres per mgd.

RELIABILITY: Excellent.

FLEXIBILITY: Excellent -- same facilities can be used as part of winter season treatment when reuse demand ceases.

LIMITATIONS: Not a major factor in regard to treatment facilities because treatment required is less than needed for treatment and discharge. The amount of land available that is consistent with economical distribution of the treated effluent is a limitation. Also, acceptance of reclaimed water by end users is essential.

OPERATION AND MAINTENANCE: Treatment is consistent with the operation of other USA facilities -- no burdensome or unusual treatment plant requirements. Must operate an effluent distribution system. System operation should be by existing landowners unless USA owns the site.

COST:

The cost for a new activated sludge treatment facility followed by coagulation, filtration and disinfection varies from $4 to $6 per gallon of capacity depending on the size of the plant and the amount of special appurtenances. The cost at USA's facilities would be much less since most required treatment facilities are in-place. Conveyance costs depend on the length of pipeline, the volume of water conveyed and pressure requirements. Typical pipeline costs are $6/diameter-inch/foot of length. Costs to develop land for irrigation and to install irrigation system are very specific and could vary from $1,000 to $10,000/acre. There is potential for minimizing cost by utilizing existing irrigation systems.

IMPLEMENTATION ISSUES:

Must get reclaimed water use plan approved by State. Must convince users that reclaimed water is acceptable for their application. Must get legally enforceable contract with the users of the effluent. Must demonstrate no adverse effect on ground water quality. Must obtain WPCF or NPDES permit which authorizes use of reclaimed water. Will have to negotiate water reuse agreements with several users.

ENVIRONMENTAL/ SOCIAL ISSUES:

Makes beneficial use of nutrients in wastewater. Effective public education program may be necessary to gain support of the owners of the property adjacent to the land where effluent is reused.

PUBLIC ISSUES:

Increased public contact with effluent.

AGENCY ISSUES:

Consistent with Agency's goals to maximize opportunities for beneficial reuse.

C24

TITLE: **PULP AND PAPER REUSE**

DESCRIPTION: Reuse of treated effluent in pulp and paper mills. A mill in South Africa has successfully used alum coagulation and flotation of secondary effluent to produce a treated effluent (8.3 mgd) used in the manufacture of fully bleached kraft pulp and fine paper. Two mills in California are successfully using tertiary effluent in a similar application. Tacoma and Simpson Paper are currently evaluating reuse of Tacoma municipal effluent for this purpose. For purposes of preliminary screening, alum coagulation settling, filtration and disinfection of unnitrified secondary effluent will be used as the treatment processes (same treatment as Class 4 reuse). Treatment requirements would have to be tailored to specific mill processes.

PERFORMANCE: Greater than 95 percent removal of BOD, SS, and phosphorus in treatment system prior to reuse.

SIZING: Conventional activated sludge (no nitrification), alum coagulation, and filtration criteria applied to the volume of flow to be treated for reuse.

RELIABILITY: Excellent.

FLEXIBILITY: Excellent--same facilities could be incorporated into treatment for other reuse purposes or for discharge if volume needed for paper mill reuse should decrease in the future.

LIMITATIONS: Not a major factor in regard to treatment facilities because treatment required is less than needed for treatment and discharge. Volume of water needed by mills and relative economics of reclaimed and fresh water are limitations.

OPERATION AND MAINTENANCE: Treatment is consistent with the operation of other USA facilities--no burdensome or unusual treatment plant requirements.

COST:

The cost for a new activated sludge treatment facility followed by coagulation, filtration and disinfection varies from $4 to $6 per gallon of capacity depending on the size of the plant and the amount of special appurtenances. The cost at USA's plants would be much less since most required treatment facilities area in-place. Conveyance costs depend on the length of pipeline, the volume of water conveyed and pressure requirements. Typical pipeline costs are $6/diameter-inch/foot of length.

IMPLEMENTATION ISSUES:

Must get reclaimed water use plan approved by State. Must get legally enforceable contract with the users of the effluent. Must demonstrate no adverse effect on groundwater quality. Must obtain WPCF or NPDES permit which authorizes use of reclaimed water. Must negotiate long-term agreements with mills for quantity and quality of reclaimed water. Must obtain rights-of-way and easements for pipeline. May require testing program in conjunction with paper mills to gain their acceptance.

ENVIRONMENTAL/ SOCIAL ISSUES:

There may be claims that this is effluent export in disguise (i.e., transfer of nutrients--small as they may be in quantity--to the Willamette via pulp and paper mill discharges). May be questions about health risks to mill workers or associated with contaminant carryover into finished paper products. Reduces demand for river water.

PUBLIC ISSUES:

None identified.

AGENCY ISSUES:

Consistent with Agency's goals to maximize opportunities for beneficial reuse.

C25

TITLE: **USE OF DEGRADED NATURAL WETLANDS FOR WASTEWATER IMPROVEMENT**

DESCRIPTION: This technique makes use of existing (natural) wetlands to polish secondary effluent. Effluent from a treatment plant is discharged into the wetland in a fashion that creates sheet flow. The natural biogeochemical processes of the wetland are used to reduce suspended matter, nutrient concentrations, and bacteria in the effluent. This technology has been used in Europe for many years. Use of natural wetlands has increased in this country in recent years. The only local example of natural wetland use is in the city of Canon Beach.

PERFORMANCE: The processes involved in improving water quality through the use of wetlands are extremely complex. As a result the performance of natural wetlands in removing pollutants and nutrients varies over a wide range. However within this wide range there are some consistencies. For example, removal rates of nutrients is positively correlated with loading rate. Reductions in suspended matter, metals and nitrogen are generally high while the removal rates of phosphorus are quite variable and lower than for nitrogen. The following table provides ranges of removal rates for selected constituents.

BOD5: 70-96% (percent reduction)
TSS: 60-90%
TOC: 50-90%
COD: 50-80%
Total Nitrogen: 40-90%
Total Phosphorus: 10-50%

SIZING: The complexity of using natural systems for wastewater treatment is also reflected in sizing. The range of wetland sizes (normalized to unit flow) is high.

RELIABILITY: The reliability of wetlands is site specific and also depends on the age of the wetland (in terms of length of time of treating wastewater). However, once a wetland ecosystem has stabilized its behavior becomes predictable, which is a characteristic of most ecosystems. The longevity of any given wetland is problematic. Some wetlands have functioned effectively for years whereas others may exhibit break through of nutrients, metals, or bacteria after only a few years. Very little data exists on use of natural wetlands.

FLEXIBILITY: Wetlands can be interfaced with existing technology with the constraint that opportunities of appropriate sites near plants are restricted. Wetlands can also be used to treat storm runoff so they might perform a dual service.

LIMITATIONS: Wetlands previously used for this purpose have varied widely in terms of size of wetland (i.e. capacity), or composition (e.g. plants, soils). Use of a wetland may require a permit to discharge wastewater into it. The type of natural wetland selected for evaluation would most likely be a low grade monoculture (reed canary grass) wetland.

OPERATION AND MAINTENANCE: Once one line wastewater treatment using wetlands is relatively inexpensive compared to traditional methods, i.e. $10 - 50,000 per year.

COSTS: The costs associated with using a natural wetland depend upon location (distance from plant), land values. In addition water control structures have to be constructed to control flow and water depth.

IMPLEMENTATION ISSUES: Requires permit to use (build) in wetland and discharge from the wetland into surface water.

ENVIRONMENTAL/ SOCIAL ISSUES: Resistance is increasing from both the public and regulatory agencies to using existing wetlands for wastewater treatment purposes. Selected wetland types may be acceptable for wastewater discharge.

AGENCY ISSUES: Public relations with regard to discharging into natural wetland, potential for enhancing natural wetlands.

C26

TITLE: **DEVELOPMENT OF NON-HYDRIC(NONJURISTICTIONAL) FLOOD PLAIN SOILS AS WETLANDS FOR WASTEWATER IMPROVEMENT**

DESCRIPTION: This technique makes use of created (constructed) wetlands to polish secondary effluent. The wetland can be created on either hydric or non-hydric soils. Created wetlands can be designed to meet site specific requirements. Effluent from a treatment plant is discharged into the wetland in a fashion that creates sheet flow. The natural biogeochemical processes of the wetland are used to reduce suspended matter, nutrient concentrations, and bacteria in the effluent. Use of natural wetlands has increased in this country in recent years. A local example of created wetland use is USA's experimental wetland in Jackson Bottom.

PERFORMANCE: The processes involved in improving water quality through the use of constructed wetlands are extremely complex. As a result the performance of these wetlands in removing pollutants and nutrients varies over a wide range. However within this wide range there are some consistencies. For example, removal rates of nutrients are positively correlated with loading rate. Reductions in suspended matter, metals and nitrogen are generally high while the removal rates of phosphorus are quite variable and usually lower than for nitroten. The following table provides ranges of removal rates for selected constituents.

BOD5: 80-96% (percent removal)
TSS: 50-98%
Total Nitrogen: 30-98%
Total Phosphorus: 20-90%

SIZING: The complexity of using constructed wetlands for wastewater treatment is reflected in sizing. The range of wetland is high. The size of constructed treatment wetlands in this country ranges from 5.5 to 23.1 acres/million gallons per day (or 5.4 - 24.7 m2/m3-da).

RELIABILITY: Although the reliability of a wetland is site specific and also depends on the age of the wetland (in terms of length of time of treating wastewater), once a wetland ecosystem has stabilized its behavior becomes predictable. The longevity of any given wetland is problematic. Some wetlands have functioned effectively for years whereas others may exhibit break through of nutrients, metals, or bacteria after only a few years.

C26

FLEXIBILITY:	Much greater than for natural wetlands in most respects. Control maintained over siting, flow, vegetation etc. Possible to use engineering design criteria. These wetlands can also be used to treat stormwater.
LIMITATIONS:	Land requirements, proximity to treatment plants, finite life time.
OPERATION AND MAINTENANCE:	Dependent upon flow, distance to wetland from plant, pumping requirements, harvesting, etc. Between $10,000 - 50,000 per year brackets most currently operating wetlands.
COSTS:	Capital costs are relatively low. Dependent on cost of land, construction, pumps, etc. Between $41,000 - $495,000 /ha.
IMPLEMENTATION ISSUES:	Requires permit to discharge into surface waters. Would require initial monitoring program. May encounter local resistance, but to date constructed wetlands have been favorably received.
ENVIRONMENTAL/ SOCIAL ISSUES:	Politically advantageous. Use of natural wetlands avoided, new wildlife habitat created, viewing areas, etc. Good public relations, e.g., recycling ethic.
AGENCY ISSUES:	Compatible with existing technology, areas potentially suitable as construction sites are available in proximity to plants, but phosphorus removal rates at present not well characterized for Pacific Northwest.

C27

TITLE:	**ASSESS USE OF TRIBUTARY REACHES FOR ASSIMILATING NUTRIENTS IN WASTEWATER DIRECTLY OR IN ASSOCIATION WITH CREATED WETLANDS**
DESCRIPTION:	The technique uses natural streams and associated (natural or created) wetlands and riparian areas to polish secondary effluent. The natural assimilative capacity of the stream is used to reduce suspended matter, absorb nutrients and metals, and reduce bacterial populations. The effluent would have to transported up into the watershed from the treatment plants.
PERFORMANCE:	The capacity of this technology to improve water quality depends upon 1) assimilative capacity of the stream, 2) nature of riparian corridor, and 3) presence of wetlands. Studies indicate a wide range of assimilative capacity for nutrients and metals.
SIZING:	The area required to treat a given volume of effluent is probably in a range similar that described for constructed wetlands (i.e., 5.4 - 27.7 m2/m3-da).
RELIABILITY:	The same issues regarding the use of stream corridors to treat effluent are similar to those seen with natural/constructed wetlands. In addition, stream use has much larger seasonal component, e.g., low flows in upper tributaries.
FLEXIBILITY:	Some drainages have significant acreages of stream and wetlands, e.g., Dairy Creek has 2800 acres of wetlands. However, selection of suitable locations will be constrained in some drainages by land use issues.
LIMITATIONS:	It may be possible to use stream corridors only during wet season (if no adjacent wetland), particularly high up in the watershed. TMDL's for the basin may prevent use of streams for polishing treated effluent.
OPERATION AND MAINTENANCE:	Equal to or greater than constructed wetlands, i.e., $10 - $20,000 per year.
COSTS:	Depends on the distance from the treatment plant that effluent is piped.
IMPLEMENTATION ISSUES:	Will require a permit for discharge into wetlands and/or streams as well as land use issues.
ENVIRONMENTAL/ SOCIAL ISSUES:	Use of stream/wetland higher up in watershed may encounter public resistance, e.g., discharging effluent close to residences, public use area, etc. However, stream corridor use will improve stream flow during summer.
AGENCY ISSUES:	Uncertainty about effectiveness of this technology, cost-benefit issues, long term benefit.

C28

TITLE: ANAEROBIC DIGESTION OF SLUDGE

DESCRIPTION: A sludge stabilization process in which organic material is converted to organic acids and then to water, methane, and carbon dioxide as the final products.

PERFORMANCE:

Total Solids Removed	33-60%
Volatile Solids Removed	35-50%
Pathogen Reduction	85 to <100%
Gas Production	
Quantity	16-18 ft^3/lb VSS
Quality	65-70% methane
	25-35% CO_2
	550-600 Btu/ft^3

SIZING: Solids retention time (SRT) dependent upon temperature; solids loading between 0.04-0.20 lb VSS/ft^3/d

RELIABILITY: Good; widely used and understood process.

FLEXIBILITY: Good, however because it is a biological process, it must run continuously.

LIMITATIONS: Requires significant operator attention. Produces ammonia and phosphorous recycle to plant.

OPERATION AND MAINTENANCE: Mechanically intensive facilities with corresponding O&M requirements. Digester requires periodic cleanout due to buildup of grit and other debris on digester bottom. Successful operation subject to pH, alkalinity, temperature, and concentrations of toxic substances in digester. Requires careful monitoring of pH, gas production, and volatile acids.

COSTS: $10-$30 per dry ton of sludge processed.

IMPLEMENTATION ISSUES: Compatibility with other aspects of overall treatment plant liquid and solids unit process.

ENVIRONMENTAL/ SOCIAL ISSUES: Achieves sludge stabilization which makes sludge acceptable to a wide variety of beneficial reuse and other disposal options.

PUBLIC ISSUES: Consideration in conjunction with overall processing and disposal options.

AGENCY ISSUES: Long and successful history at USA facilities. Compatible with sludge reuse programs.

C29

TITLE: **SLUDGE LIME STABILIZATION**

DESCRIPTION: A process by which wastewater sludge is stabilized through chemical action by the addition of lime to thickened or dewatered raw sludge. The mixture must be held at a pH of 12 after two hours of contact in order to meet pathogen reduction requirements. The stabilized material can then be applied to land in the same manner as digested sludge. Similarly, cement kiln dust or lime kiln dust have been shown to provide equivalent treatment when the same pH levels are achieved.

PERFORMANCE: Classified bu EPA as equivalent to anaerobic digestion in terms of pathogen reduction. Generally provides high reductions of bacteria and virus, but higher life forms, such as helmith ova are not substantially affected. Process results in additional volume of material since lime is added and no actual destruction of organic material takes place.

SIZING: Provide minimum of two hours contact time at pH of at least 12. Lime dosage is site-specific, but is generally in the range of 0.3-1.0 lb $Ca(OH_2)$/lb dry solids. The presence of alum sludge has been found to increase lime requirements.

RELIABILITY: Good; widely used in other parts of country; simple equipment makes mechanical reliability high.

FLEXIBILITY: Good; since process is chemical in nature, it can be started and stopped immediately when necessary. Since capital costs are relatively low, it is sometime used for interim or backup applications in case of failure of other processes (e.g., incineration or anaerobic digestion).

LIMITATIONS: Lime requirements; acceptability of product (little previous use in this area). Does not provide permanent stabilization of organic material; when pH drops below 11, regrowth and putrefaction can resume. Handling of raw sludge required before lime addition. Special considerations may be necessary for long term storage. High odor potential requiring containment and treatment.

OPERATION AND MAINTENANCE: Relatively simple process; intermittent operator attention required; relatively simple machinery involved; handling of lime can be intensive. Lime is a very corrosive material that is difficult to transport and handle.

C29

COSTS:

IMPLEMENTATION ISSUES: Poor history in state. Limited applicability and acceptability of product by local growers may be an issue (however, in some cases, it may be more desirable to many people due to the benefits of lime on acid soils).

ENVIRONMENTAL/ SOCIAL ISSUES: Increased sludge volume; improved fixation of metals in soils due to higher pH level. Odor potential. Contamination potential dependent on lime source.

PUBLIC ISSUES: Increase truck traffic for lime delivery and for additional sludge volume.

AGENCY ISSUES: Compatibility with existing facilities (digestion and incineration); long-term acceptability of lime stabilized product versus digested material. May be alternative for backup stabilization process.

C30

TITLE:	**HEAT DRYING OF SLUDGE**
DESCRIPTION:	In this process, the moisture in the sludge is reduced by evaporation to 1 to 10 percent by the application of hot air without combusting the solid materials. Predominant drying processes include rotary kilns, flash dryers, indirect rotary dryers, and steam dryers.
PERFORMANCE:	Heat drying destroys most of the bacteria in the sludge, but does not remove nutrients or heavy metals.
SIZING:	Approximately 1,200-1,600 Btu are needed to vaporize one pound of water based on a thermal efficiency of 72 percent.
RELIABILITY:	Standby heat drying equipment is needed for continuous operation. Most overall drying/product sizing facilities are mechanically intensive.
FLEXIBILITY:	Function of redundancy provided in equipment and number of dryers. Marketable product with variety of uses and inherent flexibility.
LIMITATIONS:	High costs and high operator skill required. Air pollution control also necessary.
OPERATION AND MAINTENANCE:	Energy, labor, and mechanical maintenance intensive
COSTS:	Very dependent on size of facility and are therefore traditionally limited to large facilities. Approximately $250/ton.
IMPLEMENTATION ISSUES:	Air pollution, market development, initial capital cost
ENVIRONMENTAL/ SOCIAL ISSUES:	Potential for explosion and air pollution if the system is not properly operated and maintained. High energy consumption.
PUBLIC ISSUES:	Marketable by-product.
AGENCY ISSUES:	No Agency experience.

C31

TITLE:	**IN-VESSEL SLUDGE COMPOSTING**
DESCRIPTION:	Sludge composting is the aerobic decomposition and stabilization of organic constituents to a relatively safe, useful, aesthetic product by thermophilic organisms. In-vessel systems accomplish composting inside a reactor. Aeration is provided either by agitation, forced aeration, or natural convection to meet the demand for biological degradation and to remove moisture and excessive heat. Amendment conditioning adds porosity and organic matter. Wood chips and saw dust are the most common form of amendment available in the USA area.
PERFORMANCE:	Sludge is generally stabilized after 28 days with temperatures reaching 55° C during the composting period. Significant pathogen and nuisance weed seed destruction achieved.
SIZING:	Design based on sludge production, dewatered sludge cake dryness, and amendment type and dryness.
RELIABILITY:	Biological process reliable under favorable conditions. Mechanical reliability questionable.
FLEXIBILITY:	Function of redundancy provided in equipment and number of reactors. Marketable product with variety of uses and inherent flexibility.
LIMITATIONS:	Demand for product and cost effectiveness. There is currently a large supply of compost material in the Portland area.
OERATION AND MAINTENANCE:	Reliable source of amendment required of consistent quality. Equipment maintenance.
COSTS:	$100-$200 per dry ton of sludge processed.
IMPLEMENTATION ISSUES:	Vendor selection; equipment procurement. Marketing and distribution of product.
ENVIRONMENTAL/ SOCIAL ISSUES:	Heavy metals entering the process remain in the final product. The degree of removal of toxic organic material is not defined.
PUBLIC ISSUES:	Marketable product.
AGENCY ISSUES:	Competitive with other compost products in the Portland metropolitan area.

C32

TITLE:	**UNCONFINED SLUDGE COMPOSTING**
DESCRIPTION:	Sludge composting is the aerobic decomposition and stabilization of organic constituents to a relatively safe, useful, aesthetic product by thermophilic organisms. Unconfined systems accomplish composting on a surfaced, and sometimes covered, area. Composting mixture is piled and either frequently turned (Windrow Method) or forced draft (Static Pile Method) to provide aeration to meet the demand for biological degradation and to remove moisture and excessive heat. Amendment conditioning adds porosity and organic matter. Wood chips and saw dust are the most common form of amendment available in the USA area.
PERFORMANCE:	Sludge is generally stabilized after 28 days with temperatures reaching 55° C during the composting period. Significant pathogen and nuisance weed seed destruction achieved.
SIZING:	Design based on sludge production, dewatered sludge cake dryness, and amendment type and dryness. Requires large storage area/facility.
RELIABILITY:	Moderately reliable. Weather conditions, cake solids, and amendment solids affect process results.
FLEXIBILITY:	Function of redundancy provided in equipment and number of reactors. Marketable product with variety of uses and inherent flexibility.
LIMITATIONS:	Land requirements. Siting a compost facility. Demand for product and cost effectiveness. There is already a large supply of compost material in the Portland area.
OPERATION AND MAINTENANCE:	Reliable source of amendment required of consistent quality. Significant amount of amendment required. Labor intensive. Equipment maintenance. Storage yard maintenance.
COSTS:	$100-$200 per dry ton of sludge processed.
IMPLEMENTATION ISSUES:	Public perception. Siting a compost facility. Land requirements. Marketing and distribution of product.
ENVIRONMENTAL/ SOCIAL ISSUES:	Is a relatively land intensive process. Heavy metals entering the process remain in the final product. The degree of removal of toxic organic material is not defined. Odor problems are a significant concern and require mitigation.
PUBLIC ISSUES:	Marketable by-product, competition with other compost products in area. Odor. Siting the facility.
AGENCY ISSUES:	Have experience with process through recent large scale testing.

C33

TITLE:	**RAIL TRANSPORT OF SLUDGE**
DESCRIPTION:	Dewatered sludge is hauled to processing or disposal sites by rail. Railroad spurs would be constructed off of existing rail lines at both ends.
PERFORMANCE:	Good, but subject to scheduling/destination limitations.
SIZING:	Provide adequate storage at both terminal points to operate around unpredictable railroad schedules.
RELIABILITY:	Subject to unpredictable scheduling, and vulnerable to delays caused by rail workers strikes.
FLEXIBILITY:	Poor; limited to fixed terminal points.
LIMITATIONS:	Fixed terminal points; must provide storage on both ends to accommodate pickup and delivery schedules. Only practical where existing rail lines run near facilities; cost of construction of new lines is high. Only cost effective in long-haul situations. Restrictions may exist on use of rail cars for sludge haul.
OPERATION AND MAINTENANCE:	Minimal; O&M of rail machinery by others.
COSTS:	
IMPLEMENTATION ISSUES:	Only practical where existing rail lines serve plants; large capital costs for spurs and loading facilities.
ENVIRONMENTAL/ SOCIAL ISSUES:	Minimal energy cost for transporting sludge.
PUBLIC ISSUES:	Eliminates sludge truck traffic and associated noise. Increase railroad activity near both terminal points.
AGENCY ISSUES:	Long-term flexibility.

C34

TITLE:	**PIPELINE TRANSPORT OF SLUDGE**
DESCRIPTION:	The movement of liquid sludge having a maximum total solids content of 5 percent, by centrifugal pumps through a pipeline from the treatment facility to a site selected for the particular sludge. Intermediate booster pump stations may be needed.
PERFORMANCE:	Transfer method amenable when there is a fixed terminus.
SIZING:	Size to minimize combined cost of pumping O&M and pipeline and pump station capital installation.
RELIABILITY:	Reliable if properly installed and cleaning provisions provided.
FLEXIBILITY:	Once built, no flexibility.
LIMITATIONS:	Fixed pipeline routing. Must reuse liquid sludge or provide dewatering facility at terminus.
OPERATION AND MAINTENANCE:	Low unless intermediate pump stations are needed. Flushing of entire line may become necessary requiring shut-down of line.
COSTS:	Capital intensive in acquiring land access, building pumps stations, trenching for pipeline, and purchasing the pipe itself.
IMPLEMENTATION ISSUES:	Obtaining easements for pipeline route.
ENVIRONMENTAL/ SOCIAL ISSUES:	Impact on land during installation. Potential for groundwater pollution if leak occurs. Reduces truck traffic in vicinity of treatment facilities.
PUBLIC ISSUES:	Long construction periods can cause disruption in heavily used traffic areas.
AGENCY ISSUES:	Obtaining easements. Compatibility with sludge reuse program.

C35

TITLE:	**LIQUID SLUDGE TRANSPORT BY TRUCK**
DESCRIPTION:	The movement over highways and roads by tank trucks, of liquid sludge having a maximum of 6 percent solids, from a treatment facility to a distant site selected for the particular sludge.
PERFORMANCE:	Most widely used liquid sludge transportation method.
SIZING:	Volume to be hauled, hauling distance, loading/unloading time, road weight limits, hours of operation.
RELIABILITY:	Reliable, but dependent upon weather/road conditions and labor considerations.
FLEXIBILITY:	Destination flexibility.
LIMITATIONS:	State road laws which limit load of vehicle; cost effectiveness is a function of distance and destination flexibility required.
OPERATION AND MAINTENANCE:	Major components: truck maintenance and operation, fuel costs, labor costs.
COSTS:	Dependent upon trucking mileage and sludge volumes.
IMPLEMENTATION ISSUES:	Consideration in conjunction with overall sludge processing/disposal program.
ENVIRONMENTAL/ SOCIAL ISSUES:	None unless a leak develops in the tank.
PUBLIC ISSUES:	Noise and general disruption due to truck traffic may constitute a nuisance.
AGENCY ISSUES:	Agency has long term successful hauling experience. Compatibility with sludge reuse program.

C36

TITLE:	**DEWATERED SLUDGE TRANSPORT BY TRUCK**
DESCRIPTION:	The movement over highways and roads by typically covered trucks, of dewatered sludge having a minimum of 14-percent solids, from a treatment facility to a remote site.
PERFORMANCE:	Most widely used dewatered sludge transportation method.
SIZING:	Volume to be hauled, hauling distance, loading/unloading time, road weight limits, hours of operation.
RELIABILITY:	Reliable, but dependent upon weather/road conditions and labor considerations.
FLEXIBILITY:	Destination flexibility.
LIMITATIONS:	State road laws which limit load of vehicle; cost effectiveness is a function of distance and destination flexibility required.
OPERATION AND MAINTENANCE:	Major components: truck maintenance and operation, fuel costs, labor costs.
COSTS:	Dependent upon trucking mileage and sludge volumes.
IMPLEMENTATION ISSUES:	Consideration in conjunction with overall sludge processing/disposal program.
ENVIRONMENTAL/ SOCIAL ISSUES:	Potential odor problems from sludge being hauled.
PUBLIC ISSUES:	Noise and general disruption due to truck traffic may constitute a nuisance.
AGENCY ISSUES:	Agency has had long term successful hauling experience. Compatibility with Agency's sludge reuse program.

C37

TITLE:	**SLUDGE INCINERATION**
DESCRIPTION:	A process by which wastewater sludge is converted to a sterile ash through combustion in a controlled environment. It provides the maximum volume reduction and achieves virtually total destruction of organic material and pathogens. Technologies used for large-scale municipal sludge combustion include multiple hearth furnaces (currently in use at Durham) and fluidized bed furnaces.
PERFORMANCE:	Significant volume reduction achieved but incurs corresponding ash disposal and process environmental concerns.
SIZING:	Function of amount of material, cake solids, and volatility.
RELIABILITY:	In terms of process performance, reliability is very good. Widely used in other parts of country. Not affected by climatic conditions, so can be used year-round. Because of mechanical complexity, mechanical reliability is dependent on proper maintenance and sufficient redundancy in key components.
FLEXIBILITY:	Good with proper design. Process is applicable to wide range of sludge materials. Limited (raw sludge) backup disposal options in case of failure.
LIMITATIONS:	Sludge must be well dewatered to minimize fuel costs; pending new regulations may require expensive new scrubbing systems; process operation is complex and requires specially trained personnel.
OPERATION AND MAINTENANCE:	Continuous operator attention required; complex machinery involved; specialized personnel required for operation and maintenance. Energy intensive.
COSTS:	Costs for implementation are site-specific, depending on utility of existing process equipment. Approximate range $200-$250 per ton of solids.
IMPLEMENTATION ISSUES:	Costs; may not be possible or feasible to obtain permits for new facilities; new regulation may render impracticable:
ENVIRONMENTAL/ SOCIAL ISSUES:	Maximum stabilization/reduction of sludge; emissions are a concern; does not make beneficial use of nutrients in sludge; energy intensive; ash disposal required.
PUBLIC ISSUES:	Likely opposition to siting new facilities; minimum truck traffic.
AGENCY ISSUES:	Compatibility with existing facilities; potentially feasible only at Durham due to existing equipment; uncertain regulations. Durham is only sludge incinerator installation in the state. Not compatible with agency's goal to maximize beneficial reuse of sludge.

C38

TITLE:	**ASH LANDFILL**
DESCRIPTION:	Ash resulting from sludge incineration is disposed of in a MSW landfill.
PERFORMANCE:	Permanent, secure repository for solids.
SIZING:	Not applicable.
RELIABILITY:	Excellent if not classified as a hazardous waste.
FLEXIBILITY:	Not applicable.
LIMITATIONS:	Applicable only to incinerator ash; ash must meet hazard/toxicity standards (subject to change), which currently are typically met by sludge ash.
OPERATION AND MAINTENANCE:	Only consideration is hauling material to landfill; simple system. Currently done at Durham by Agency vehicles and personnel; could be handled by private firm.
COSTS:	
IMPLEMENTATION ISSUES:	None; already practiced at Durham; material readily accepted at landfill.
ENVIRONMENTAL/ SOCIAL ISSUES:	Ash may have beneficial uses such as soil conditioning, where the high pH and trace metals may be useful.
PUBLIC ISSUES:	Only issues would be minor truck traffic associated with hauling ash to landfill and use of MSW landfill space.
AGENCY ISSUES:	None; continuation of present practice.

C39

TITLE: LAND APPLICATION OF SLUDGE

DESCRIPTION: Application of either liquid or dewatered sludge to agricultural, non-agricultural, or forest land. Techniques for application include tank truck surface spreading, subsurface injection, spray irrigation, and manure spreading application.

PERFORMANCE: Land application typically involves the ultimate disposal of sludge through its beneficial reuse in some form of agricultural or silvicultural program. The nutrient and soil conditioning properties of sludge offset the need for commercial fertilizers and soil conditioners.

SIZING: Acreage requirements are determined by agronomic crop nutrient requirements and annual and cumulative loading of sludge metal and organic constituents.

RELIABILITY: Good. Land application is a widely accepted and used method of sludge disposal through beneficial reuse.

FLEXIBILITY: Good. Different agricultural, non-agricultural, and silvicultural use options provide flexibility.

LIMITATIONS: Weather impacts field access and, thus, program timing. User acceptance is necessary in developing cooperative programs. Constraints include: land use, land ownership, public perception, and physical constraints such as topography, soil types, and ground water. Need for winter storage site for land application programs in northwest.

OPERATION AND MAINTENANCE: Mechanical maintenance includes predominately vehicular and equipment maintenance. Application monitoring, environmental monitoring, and public relations are significant program aspects.

COSTS: $40 to $100 per dry ton of sludge solids.

IMPLEMENTATION ISSUES: Public education and perception associated with establishing program and/or new sites. Changing regulations regarding land application of sludge. Programs require a significant amount of monitoring and record keeping.

ENVIRONMENTAL/ SOCIAL ISSUES: Endorsed by the EPA as a preferred method of sludge disposal because of the environmental benefits of sludge reuse.

PUBLIC ISSUES: Public perception can be a significant obstacle if dealing with hostile and/or uninformed people.

AGENCY ISSUES: Long successful history of use for USA facilities in West Basin. Compatible with Agency's goal to maximize beneficial reuse of sludge.

C40

TITLE:	**DISTRIBUTION AND MARKETING**
DESCRIPTION:	Ultimate disposal of sludge solids through the distribution of a sludge derived product such as compost, a heat dried fertilizer, or a solidified/chemically fixed material.
PERFORMANCE:	D&M products have fewer restrictions on distribution and application than does digested sludge because the sludge is further processed to higher levels of pathogen and vector reduction.
SIZING:	Application restrictions based on agronomic requirements and metals and organic limitation similar to land application.
RELIABILITY:	Highly market dependent.
FLEXIBILITY:	Nature of product applicable to a wide range of potential uses providing flexibility.
LIMITATIONS:	Overall cost effectiveness when considered in conjunction with costly upstream processing requirements. Proposed EPA regulations may severly limit use.
OPERATION AND MAINTENANCE:	Transportation and marketing considerations.
COSTS:	Products typically are marketable with a corresponding revenue up to as high as $125 per dry ton for a dried fertilizer product. Revenue, however, only partially offsets upstream processing costs.
IMPLEMENTATION ISSUES:	Intensive market development and maintenance required.
ENVIRONMENTAL/ SOCIAL ISSUES:	Positive environmental benefit through reuse; Potential for toxicity due to metals content.
PUBLIC ISSUES:	Competition with other products serving the same function.
AGENCY ISSUES:	Untried disposal method requiring intensive marketing program. Compatible with agency's goal to maximize beneficial reuse of sludge. Proposed EPA regulations may severly limit use of this approach.

D1

TITLE:	**OBTAIN RIVER ACCESS**
DESCRIPTION:	Identify locations along the river where public access is feasible. Contact land owners (primarily public agencies) and attempt to obtain permission to develop river access facilities (parking, boat access, fishing access).
PERFORMANCE:	Will substantially increase public use of the river for fishing, canoeing, viewing, wildlife observation, environmental education, etc.
SIZING:	Can vary from small parking for two cars with a foot trail to the river edge) to larger (access through a public park with a boat launch ramp, transient moorage, and parking for cars and vehicles with trailers).
RELIABILITY:	Permanent facilities, may require some repair after major flooding.
FLEXIBILITY:	Very flexible. Each access point can be developed independently of others in the system. Each can be tailored to site specific conditions.
LIMITATIONS:	Requires concurrence of landowners. Abutting land owners may have objections to increasing public access to the river.
OPERATION AND MAINTENANCE:	Requires periodic litter removal and plant materials maintenance. Requires seasonal repair and clean up of river access routes (foot trails, boat launches). Requires maintenance of parking areas (sweeping, pavement markings, signage, and occasional repaving).
COSTS:	Varies from $2,000 to $5,000 each for minimal facilities to $50,000 or more for a major boat launch facility.
IMPLEMENTATION ISSUES:	Requires concurrence of property owner (or acquisition of sites), may require approval of local jurisdictions, requires ongoing maintenance.
ENVIRONMENTAL/ SOCIAL ISSUES:	Some additional disturbance of wildlife can be expected. Abutting property owners may object to increased public use.
PUBLIC ISSUES:	Will lead to a substantial increase in public use of the river. This will be viewed by some as a positive change (i.e., more people will have access to a public amenity) and by others as a negative change (e.g., riverfront property owners will lose a certain degree of privacy, there will be more boats on the river, wildlife will be disturbed).
AGENCY ISSUES:	Development of additional access points may not be within the Mission of the Agency. Significant coordination will be required with Washington County, the various cities, and with Park & Recreation agencies.

D2

TITLE:	**RIVER CLEANUP (DEBRIS)**
DESCRIPTION:	Remove man-caused debris from the river (e.g., car bodies, tires, abandoned pilings). Remove a sufficient number of downed trees to allow boaters to navigate the river.
PERFORMANCE:	Will substantially improve the public's perception of the river. Will encourage additional boating activities.
SIZING:	Not applicable.
RELIABILITY:	Not applicable.
FLEXIBILITY:	The scale and timing of river cleanup work can be flexible. The work can be divided into short stretches of the river, assigned to volunteer groups, or accomplished by a large contractor.
LIMITATIONS:	Must be scheduled to insure that fish are not disturbed during critical time periods. Requires streamside collection points where debris can be separated and loaded on trucks for hauling to disposal sites.
OPERATION AND MAINTENANCE:	This is not a one time activity. Annual inspections of the river will be required. It is likely that some work will be required each spring after river levels drop.
COSTS:	Not known at this time. Could be in the $100,00 + range for initial cleanup.
IMPLEMENTATION ISSUES:	Requires approvals from the Corps of Engineers and the Division of State Lands. Requires access to the river for construction equipment. Requires identification and security of debris collection points.
ENVIRONMENTAL/ SOCIAL ISSUES:	Protection of fish (spawning, migration) will be required, some bank regrading and revegetation may be required, abutting land owners may have concerns about noise and debris piles during cleanup activities.
PUBLIC ISSUES:	Will lead to an increase in boating use. This will be viewed as positive by boat owners/users and may be viewed as negative by riverfront property owners.
AGENCY ISSUES:	The Agency will need to file for permits and will need to secure sites for debris collection.

D3

TITLE:	**CORRIDOR MANAGEMENT**
DESCRIPTION:	Develop a system of trails along one or both sides of the river for walking, jogging, bicycling and possibly equestrian use. Viewpoints, resting areas, and nature study sites should be provided. Access points to the trail system for pedestrians and parking for recreationists arriving by car will be needed.
PERFORMANCE:	Will substantially increase the use of the "river corridor" and will help broaden user's perception of the river. Will expand perception of the "river" from the water surface only to include trails, wildlife areas, scenic viewpoints, and general landscape character.
SIZING:	Can be phased over time as easements/land becomes available. Segments should be long enough to connect to access locations at each end (long dead end segments should not be developed).
RELIABILITY:	Permanent facilities, may require some repair after major flooding.
FLEXIBILITY:	Very flexible. Segment of the system can be independently developed and linked together later.
LIMITATIONS:	Requires concurrence of local jurisdictions and abutting land owners. Non-connected segments must include at least one public access point, and preferably a public access point at each end of the segment.
OPERATION AND MAINTENANCE:	Requires periodic litter removal and plant material maintenance. Policing may be required along some segments. May require seasonal repair and debris cleanup.

D3

COSTS:

Estimated to be about $75,000 per mile of paved trail and $10,000 per mile of earth trail. The cost to develop 100 miles up trails (25% paved, 75% earth) is estimated to be about $2.6 million dollars.

IMPLEMENTATION ISSUES:

Must be phased and developed over a long period of time. Local government units will need to obtain easements from property owners at the time of subdivision or development. The question of funding will have to be resolved.

ENVIRONMENTAL/ SOCIAL ISSUES:

Will disturb wildlife habitat during construction. The additional use of the trail system may disturb wildlife. Abutting property owners may object to increased public use along the river.

PUBLIC ISSUES:

Requires Washington County and the local jurisdictions to foster development of a greenway trail system. Public opposition from riverfront land owners can be expected. The questions of who funds construction and who maintains the system must be answered before the system can be developed.

AGENCY ISSUES:

Development of a trail system may not be within the Mission of the Agency. The Agency may be asked to assist in the funding of the system.

D4

TITLE:	**IMPROVE WATER RIGHTS ENFORCEMENT**
DESCRIPTION:	This technique proposes increased monitoring and control of water rights use along the Tualatin River. Additional enforcement of water rights may increase the flow rate in the Tualatin River, particularly during dry seasons when water demand is highest and river flows are lowest.
PERFORMANCE:	Requires cooperation of other agencies.
SIZING:	Not applicable.
RELIABILITY:	Uncertain; low flow conditions may not improve significantly with increased enforcement.
FLEXIBILITY:	Can be implemented in conjunction with nearly all other water quality management techniques.
LIMITATIONS:	Priorities and budgets of other agencies. Laws and regulations regarding water release.
OPERATION AND MAINTENANCE:	There will be some staff committment to monitoring river flows and water releases.
COSTS:	USA may be asked to contribute to staffing or otherwise funding monitoring positions.
IMPLEMENTATION ISSUES:	Requires commitment from other agencies.
ENVIRONMENTAL/ SOCIAL ISSUES:	Improves river flow conditions.
PUBLIC ISSUES:	None.
AGENCY ISSUES:	None.

D5

TITLE:	**IN-STREAM FLOW MANAGEMENT**
DESCRIPTION:	This technique incorporates several water management issues dealing with increased attention to in-stream tactics. These include more management of existing and future water agreements, optimization of water releases from Hagg Lake and enforcement of in-stream flow.
PERFORMANCE:	Positive in terms of river viability but unquantifiable at this time.
SIZING:	Not applicable.
RELIABILITY:	Depends on availability of water in Hagg Lake, water demands, and climate.
FLEXIBILITY:	Very flexible in the ability to reduce or augment flows. Compatible with most other management techniques.
LIMITATIONS:	Requires increased enforcement of existing regulations by public agencies other than USA. Rules and regulations affecting release of water.
OPERATION AND MAINTENANCE:	Increased staff time required to monitor actions and results.
COSTS:	No direct capital costs to USA, could involve additional staff.
IMPLEMENTATION ISSUES:	Requires coordination with and cooperation by other public agencies and private users of Tualatin River waters.
ENVIRONMENTAL/ SOCIAL ISSUES:	Positive environment impact for the river, no specific social issues.
PUBLIC ISSUES:	None.
AGENCY ISSUES:	Increasing river flows during critical dry weather periods may significantly improve reliability in meeting nutirent TMDLs.

D6

TITLE:	**OBTAIN MORE WATER RIGHTS**
DESCRIPTION:	This technique provides for acquisition of additional dilution water to be released during periods of low flow in the Tualatin River when concentrations of phosphorus and other nutrients are most critical. USA currently has water rights for a portion of the Hagg Lake water which is used for this purpose. Additional water rights in the upper drainage could supplement this dilution water. Purchase of additional water rights would involve negotiation with individuals currently holding such rights.
PERFORMANCE:	This non-structural technique could provide inceased dilution water if rights are available.
SIZING:	Not applicable.
RELIABILITY:	Reliability depends on the available water held at Hagg Lake in a given year.
FLEXIBILITY:	Additional water rights could be used whenever Tualatin River flows are below a critical point, could remain in storage for other uses or sold to other users. This technique could be coupled with nearly all other management techniques.
LIMITATIONS:	As set forth by Water Rights Law. Regulations and rules affecting water release.
OPERATION AND MAINTENANCE:	Limited to stream flow monitoring and coordination with Hagg Lake managers.
COSTS:	Dependent on availability of water rights and negotiation. Any ball park cost for acre-ft?
IMPLEMENTATION ISSUES:	Determination of quantities needed and negotiation with possible sellers.
ENVIRONMENTAL/ SOCIAL ISSUES:	Would improve river flow during critical dry weather periods.
PUBLIC ISSUES:	None.
AGENCY ISSUES:	Increasing river flows during critical dry weather periods may significantly improve reliability in meeting nutrient TMDLs.

D7

TITLE:	**FLOW AUGMENTATION**
DESCRIPTION:	Provides additional flow resources to increase total flows in the Tualatin River during periods of low critical flow. Possible options for flow augmentation include: construction of a second dam in the upper Tualatin drainage, increasing storage capacity in Hagg Lake, developing groundwater sources (wells) in the basin or importing water from either the Columbia or Willamette Rivers.
PERFORMANCE:	Water quality goals for nutrients are related directly to concentration of such nutrients in the Tualatin River. Increasing dilution water reduces their concentration, increases the average flow velocity in the river and decreases the travel time with the effect of limiting the environment conducive to algae production. Any of the systems listed above could provide suitable water for this purpose.
SIZING:	Augmentation facilities should be sized based on river modeling guidance.
RELIABILITY:	Unusually dry year precipitation could cause shortages in stored water supply or leave ground water supplies inadequate to serve this purpose. If water rights could be obtained, Columbia or Willamette River water supplies may be very reliable.
FLEXIBILITY:	This technique will supplement any treatment, reuse, or prevention techniques. Very flexible in itself. Augmentation water could be brought on-line quickly, when required.
LIMITATIONS:	Any of these options would require extensive environmental impact statement preparation, extensive permitting and state/federal approval.
OPERATION AND MAINTENANCE:	Each option will require significant O&M. Since Hagg Lake exists, the incremental increase in O&M would likely be less than that realized for the others.
COST:	Capital costs are unknown at this time. A new dam on the Tualatin has an estimated cost of $200 million.
IMPLEMENTATION ISSUES:	Permitting for a new reservoir, extensive use of groundwater supplies or removing water from either the Columbia or Willamette Rivers may meet with resistance from other municipal agencies and the general public.
ENVIRONMENTAL/ SOCIAL ISSUES:	Likely significant environmental issues involving a new reservoir or use of groundwater. Tualatin River beneficial uses would improve.
PUBLIC ISSUES:	Hearings on siting a new reservoir or importing Columbia or Willamette River.
AGENCY ISSUES:	Probably not adequate time to implement any of these options and meet EQC deadlines.

D8

TITLE: **RIPARIAN ZONE ENHANCEMENT**

DESCRIPTION: Plant trees in a riparian zone buffer strip along all water courses in the Tualatin Basin. The trees would remove phosphorus, nitrogen, and organic chemicals from nonpoint sources of surface water and surficial groundwater before the water enters the waterway. The trees would also provide wildlife habitat and shade to reduce water temperature.

PERFORMANCE: Iowa has proposed a state law requiring a 16.5-foot-wide riparian zone buffer strip along water ways. Research of poplar tree riparian zones, at University of Iowa indicates that nitrate-nitrogen concentrations in nonpoint sources can be reduced by over 20 milligram per liter (mg/l). The riparian zone trees also remove most of the available phosphorus in the root zone soils. The addition of total organic carbon to the soil caused by root growth also sorbs many organic pesticides and herbicides. Tree species such as poplars, which can develop root mass in flooded soils below the water table, show the best performance. Occasional harvesting for firewood removes nutrients from the basin.

SIZING: A 16.5-foot-wide riparian zone buffer on each side of a waterway will occupy 4 acres per mile of stream. In many areas, development or farming already leaves a riparian buffer zone approximately 15 to 20 feet wide. Existing riparian zones could be enhanced through proper management.

RELIABILITY: Excellent reliability in existing riparian zones that consist of stable ecosystems. Constructed riparian zones could be planned to be sustainable.

FLEXIBILITY: A basinwide riparian zone program could complement all other techniques for reducing nutrient loads to the Tualatin River. The additional shade would reduce water temperature during hot summer months.

LIMITATIONS: Conflicts may exist where present development is now less than 16.5 feet from a waterway.

OPERATION AND MAINTENANCE: Harvesting would require replanting or use of trees with coppiced regrowth, such as poplars.

D8

COST:

If a state law mandated riparian zones, existing landowners would pay the costs. If USA purchased land to develop riparian zones, 4 acres per mile might cost $10,000 per mile of waterway. Operation and maintenance costs should be minimal, with the sale of trees for pelletized firewood generating capital for replanting. Funds may be available from existing conservation or watershed improvement programs.

IMPLEMENTATION ISSUES:

Passing a state law to require riparian zones may be difficult; however, several states are now considering laws similar to the Iowa law. Purchasing property to establish riparian zones in critical areas may be cost-effective.

ENVIRONMENTAL/ SOCIAL ISSUES:

Planting riparian zone buffer strips should receive support from an environmentally conscious public. Converting nutrients to carbon through root growth will sorb organic chemicals before they enter the river system. Increased shade will reduce water temperatures. Additional habitat will enhance wildlife use of the waterways and increase recreational value.

PUBLIC ISSUES:

Laws mandating use of private property for riparian zones may not be widely accepted by landowners. Agency ownership of large tracts of riparian zones may be more acceptable.

AGENCY ISSUES:

Purchasing riparian zones will be expensive. A good public education program to win support of legislation requiring riparian zones may be more cost-effective. Riparian zone buffer strips may someday be required in Oregon as a best management practice to reduce nonpoint source pollution even without agency involvement.

D9

TITLE: **RESTRUCTURE HAGG LAKE OUTLET**

DESCRIPTION: This technique would remodel the outlet structure at Scoggans Dam to allow release of Hagg Lake waters from various strata in the water column. This would provide lower temperature waters for release to the Tualatin River thereby modifying the algae producing environment while improving oxygen holding capability. Modification to the outlet structure may require reconstruction of the entire structure.

PERFORMANCE: Positive results are to be expected from this technique, however, modification of the river model based on field data relative to temperature in Hagg Lake will be needed to reflect this change.

SIZING: Sizing is now applicable since no change in water release is anticipated in this technique.

RELIABILITY: Mechanically, very reliable. Environmental reliability will be unknown until modeling is complete.

FLEXIBILITY: Technique is very flexible; will assist all other techniques.

OPERATION AND MAINTENANCE: Would require little additional O&M resulting from additional gates and valving.

COSTS: Unknown at this time.

IMPLEMENTATION ISSUES: Would require approval of Scoggans Dam managers.

PUBLIC ISSUES: Likely none.

AGENCY ISSUES: None.

D10

TITLE:	**MODIFY LAKE OSWEGO INLET OPERATIONS**
DESCRIPTION:	This technique proposes redesign of the diversion dam used by Lake Oswego to supply Tualatin River water to the canal. Modification would replace the dam with a pumping station which would lift river water for the Lake from the vicinity of the dam.
PERFORMANCE:	Improvement of the river gradient would result in improved flows during low flow periods and decrease resident time in the river. Modeling is required to predict the environmental changes.
SIZING:	The pump (lift) station would be sized to match the water right used by Lake Oswego with appropriate redundancy in mechanical and electrical systems.
RELIABILITY:	Very reliable.
FLEXIBILITY:	Very flexible, integrates with all other techniques.
OPERATION AND MAINTENANCE:	Requires normal O&M during the summer season when the pump station would see most of its usage, minimal O&M during the remainder of the year.
COSTS:	Capital costs for a 2.0 mgd low head lift station with a short discharge line to the canal will range from $150,000 to $250,000. Annual O&M is undetermined at this time.
IMPLEMENTATION ISSUES:	Will require agreement from the Lake Corporation, Water Master and perhaps other state agencies.
ENVIRONMENTAL/ SOCIAL ISSUES:	Positive environmental impacts, minimal social issues.
PUBLIC ISSUES:	Without use of the dam, some riverfront land owners will notice a lower river level during the summer months.
AGENCY ISSUES:	Costs and public relations.

AF1

TITLE:	**BAN ON INDUSTRIAL/COMMERCIAL USE OF PHOSPHORUS-CONTAINING CHEMICALS**
DESCRIPTION:	Implementation of a basin-wide ban on the use of chemicals containing phosphorus by commercial/industrial concerns (e.g. metal finishing, laundries, and car washes.
PERFORMANCE:	The impact would vary from plant-to-plant. Rock Creek may realize a 30 percent reduction in influent loading of phosphorus, whereas at other plants the impact may be negligible. Reduced chemical consumption and chemical sludge production would occur at Durham and Rock Creek.
SIZING:	Not applicable.
RELIABILITY:	USA's industrial pretreatment program has demonstrated an excellent record for industrial compliance. Similar success is expected with this technique.
FLEXIBILITY:	A ban on industrial/commercial uses of phosphorus-containing chemicals complements all other techniques for reducing phosphorus loads to the Tualatin River.
LIMITATIONS:	Substitute chemicals may not be available to commercial/industrial users. The detergent/chemical industry may choose not to supply users.
OPERATION AND MAINTENANCE:	Not applicable in the context of implementation.
COSTS:	An increase in industrial pretreatment monitoring and analysis would be required at an estimated cost of $70,000 per year.
IMPLEMENTATION ISSUES:	Implementation might be perceived by community as a hindrance to business development.
ENVIRONMENTAL/ SOCIAL ISSUES:	Implementation might halt or slow growth within the basin. Substitute chemicals may not be available to replace those being banned.
PUBLIC ISSUES:	How will existing industrial/commercial development respond? How will potential industrial/commercial development respond?
AGENCY ISSUES:	An exhaustive review of chemical compounds will have to performed and maintained. The industrial pretreatment inspection program will need to be expanded.

AF2

TITLE:	**BUILDING MORATORIUM**
DESCRIPTION:	Restrict population growth by curtailment of building permits/sewer connections or water connections. A partial or full moratorium on utilities is an effective and relatively simple technique. It is also a highly controversial method.
PERFORMANCE:	The governing agency for either utilities or building permit curtailment would receive pressures from developers of homes and industry. The governing agency, in this case, probably the Washington County Commission, would be the target for efforts to either ease or eliminate additional restrictions on development. However, population growth restrictions are one of the most effective, if unpopular, nonstructural techniques to keep pollutants out of the basin.
SIZING:	Not applicable.
RELIABILITY:	Reliable for curbing increased wastewater loads.
FLEXIBILITY:	Political impacts would be significant. Growth control more restrictive than the existing comprehensive plan could involve input from other local and state agencies.
OPERATIONS AND MAINTENANCE:	Reduced O&M likely results from reduced flow.
COSTS:	Staff costs for documenting/enforcing restrictions. The secondary cost impacts would be significant.
IMPLEMENTATION ISSUES:	Requires broad support from elected officials and public.
ENVIRONMENTAL/ SOCIAL ISSUES:	Significant in both cases. Reduced flows and loads would likely improve water quality. Social change in demographics, land use, and economic growth would be highly restrictive.
PUBLIC ISSUES:	A volatile issue throughout the public, homeowners, businesses, and industry.
AGENCY ISSUES:	Public image will suffer.

AF3

TITLE: **CHANGE DOMESTIC WATER SUPPLIES**

DESCRIPTION: This technique is implemented by replacing present domestic water supply from the Trask River with Bull Run water sources. This action would replace water with relatively high phosphorous content with a water source with significantly lower phosphorous. In order to attain the stated goal of keeping the phosphorous (pollutant) from affecting the total basin, it would require that Trask River sources be either abandoned or transferred to another basin.

PERFORMANCE: The WAMCO Water Resources Management plan identifies Trask River water as a significant resource for future water requirements within the Tualatin Basin. The Trask River source (JWC) has on-line capacity of about 30 mgd with about 10 mgd more in the expansion process. The JWC treats 3.4 mgd at the present time. Annual water use in 1988 was maximum at 1 mgd. The JWC (Trask River source) capacity is second only to the Portland Bull Run source at 30 mgd. Portland water capacity that is deliverable to the Tualatin Basin is presently about 50 mgd.

Water analysis data (Hillsboro and Portland, April 1989) shows that total phosphorous from Trask River and Bull Run is <0.02 mg/l and <0.003 mg/l, respectively. From these concentrations, the total phosphorous imported into the Tualatin Basin from Trask River and Bull Run is <0.17 and <0.03 lb phosphorous per MG imported water. Phosphorous data were not available for the Clackamas River water source.

SIZING: Need to provide replacement of about 25 percent of potential water supply to JWC from other sources.

RELIABILITY: Once implemented, very reliable.

FLEXIBILITY: This technique can be integrated with other techniques but only benefits the program with the reduction of phosphorus.

LIMITATIONS: Legal challenges.

OPERATIONS AND MAINTENANCE: Unchanged on water supply side, possible reduction of treatment O&M resulting from reduced phosphorous load.

COSTS: Unknown at this time.

IMPLEMENTATION ISSUES: Requires JWC approval/cooperation.

ENVIRONMENTAL/ SOCIAL ISSUES: No significant issues.

PUBLIC ISSUES: None.

AGENCY ISSUES: Legal challenges.

CF1

TITLE: **GROUNDWATER RECHARGE**

DESCRIPTION:

Groundwater recharge with reclaimed water is an approach to water reuse that results in the planned augmentation of groundwater supplies. The purpose of this approach is to supplement groundwater supplies; to reduce or reverse declines of groundwater levels; and to store surface water for future use. Groundwater recharge is typically achieved through direct injection or by surface spreading and percolation. Treatment requirements vary considerably depending on the sources of wastewater, location, and methods of recharge. Because recharged groundwater may be an eventual source of potable water, treatment requirements may extend well beyond secondary treatment. The unit processes that follow secondary treatment may include chemical oxidation, disinfection, coagulation, filtration, air stripping, ion exchange, granular activated carbon adsorption, land treatment and reverse osmosis.

PERFORMANCE:

A number of large-scale groundwater recharge programs are successfully operating. Most of these are in California and the Southwest. Available information on existing projects has not shown any evidence of impaired water quality or health.

SIZING:

Sizing criteria for the recharge system are specific to the aquifer affected. Sizing criteria for treatment processes are specific to the unit processes required.

RELIABILITY:

Good; contingency plans are necessary if it is determined that groundwater containing reclaimed water is unsafe for human consumption.

FLEXIBILITY:

Fair; treatment requirements for groundwater recharge may greatly exceed those needed for other management approaches; some facilities may represent a sunk investment.

LIMITATIONS:

Concerns over public health issues. Lack of demand or perceived need for groundwater recharge. Land requirements for percolation field.

OPERATION AND MAINTENANCE:

Treatment O & M requirements could be high if multiple advanced treatment processes are required. Requires hydrologic management of an aquifer. Requires extensive sampling and analyses.

CF1

COST:	Depending on the level of treatment required, the cost of a new facility could range from $4 to $12 per gallon of capacity. The cost of the recharge system could also be substantial. Percolation systems have large land requirements. Injection systems require construction of well fields.
IMPLEMENTATION ISSUES:	Requires approval by DEQ and water resource agencies. May have large land requirements.
ENVIRONMENTAL/ SOCIAL ISSUES:	Potential health and water quality issues associated with pathogens, viruses, total minerals, heavy metals and organic substances.
PUBLIC ISSUES:	Potential concern over health effects.
AGENCY ISSUES:	Technique is consistent with Agency's goals to maximize opportunities for beneficial reuse.

CF2

TITLE: **ASSESS USE OF INNOVATIVE AQUATIC TREATMENT SYSTEMS: SOLAR AQUATIC PLANT**

DESCRIPTION: Use of a selected assemblage of aquatic plants and animals to transform and retain compounds in wastewater. Wastewater is retained sufficiently long in the system to achieve target water quality conditions. The process depends on solar energy or adequate lighting. These solar aquatic plants have been developed indoors in climates where prolonged freezing occurs or outdoors in mild climates. Typical plants and animals in these systems are shown in Fig. 1.

PERFORMANCE: Reported discharges of treated primary sewage from these plants note the following nutrient concentrations:

Nitrate: 1.5 mg/l
Total Phosphorus: <1.0 mg/l
Ammonia Nitrogen: <0.5 mg/l

SIZING: 150,000 g/ac/d for sewage.
50,000 g/ac/d for septage.

RELIABILITY: Experimental systems have functioned effectively over 1-2 yr periods.

FLEXIBILITY: Moderate. The process is organism-intensive requiring a carefully planned sequencing of selected organisms. Introduction of toxins can upset the balance of populations and impair treatment capability. It can be used in association with existing treatment plants.

LIMITATIONS: System requires biological expertise to operate.

OPERATION AND MAINTENANCE: Requires close inspection and maintenance by trained biologists to optimize functioning of various biological components.

COSTS: Two-thirds the cost of a secondary treatment plant on about the same area of land. Annual operating costs $25,000 for a 50,000 gal/da module.

IMPLEMENTATION ISSUES: There apparently is no proven full-scale system operating anywhere. J. Todd's demonstration projects on the East Coast, and a 300,000 gal/da outdoor biological treatment plant in San Diego indicate the approach does work.

ENVIRONMENTAL/ SOCIAL ISSUES: There may be opposition to siting these modules close to residential areas due to potential odor production.

AGENCY ISSUES: Before ODEQ would approve this treatment process it would have to meet statuatory standards reliably, yearly. Agency acceptance of the process as a polishing treatment would be less problematic.

CF3

TITLE: **LAND TREATMENT (INFILTRATION/PERCOLATION)**

DESCRIPTION: In infiltration-percolation (IP) systems, effluent is applied to the soil by spreading in basins or by sprinkling. System objectives can include: groundwater recharge; natural treatment followed by pumped withdrawal or underdrains for recovery; or natural treatment with renovated water moving vertically and laterally in the soil and recharging a surface water course. Typically, IP systems are preceded by secondary treatment. Depending on the water quality requirements for the final effluent, more advanced treatment (particularly nutrient removal) may be needed.

PERFORMANCE: The expected treatment efficiency will vary with the concentrations of constituents in the applied wastewater. If secondary effluent is applied, the effluent quality listed below would be expected,

Constituent	Concentration, mg/L
BOD:	2 - 5
Suspended Solids:	1 - 2
Ammonia-Nitrogen (as N):	0.5 - 1
Phosphorus (as P):	1 - 3

Except for phosphorus, this water quality would be suitable for discharge to the Tualatin River. In addition, the water quality would probably meet requirements for the highest category of water reuse. Acceptability of this water quality for groundwater recharge is not known.

SIZING: High-rate systems may require as little as 3 to 6 acres per MGD, while low-rate systems may require 20 to 60 acres per MGD. Wastewater application rates can vary from 4 to 120 inches per week. Loading cycles generally vary from 9 hours to 2 weeks of wetting followed by 1 day to 3 weeks of drying. Multiple basins are required.

RELIABILITY: If properly operated, treatment performance is reliable. To meet discharge criteria for Tualatin, supplemental phosphorus removal is required.

FLEXIBILITY: Flexibility is improved if treated water can be withdrawn and used for purposes other than groundwater recharge, i.e., agricultural reuse, discharge to surface water, wetland enhancement. If feasible and permitted, system could be used to store reuse water underground during the wet season.

LIMITATIONS: Large land requirements. System requires well-drained soils such as sands, sandy loams, loamy sands and gravel. Requires reasonably flat site to minimize lateral movement of water. A depth to groundwater of 10 to 15 feet is preferred.

OPERATION AND MAINTENANCE: Represents new type of operation for USA staff. Upstream treatment system required. Basin surfaces require maintenance and tilling.

CF3

COSTS:	Land costs would be at least $24,000 to $240,000 per MGD of capacity based on $4000/acre. Additional costs would be associated with site development and pretreatment, pumping, application to IP basins and (possibly) withdrawal of treated effluent.
IMPLEMENTATION ISSUES:	Large land requirements. May not be able to find sufficient acreage of suitable soils. May be difficult to site and permit. Groundwater recharge may not be allowed.
ENVIRONMENTAL/ SOCIAL ISSUES:	Effect on groundwater quality. Insect propagation. Potential odor.
PUBLIC ISSUES:	May not be willing to dedicate large land area to wastewater treatment.
AGENCY ISSUES:	May be suitable technique for reuse alternatives. Represents an additional treatment facility to operate and maintain.

CF4

TITLE:	**LANDFILL CO-DISPOSAL WITH MUNICIPAL SOLID WASTE (MSW)**
DESCRIPTION:	A sludge disposal operation in which sludged is place within a MSW landfill.
PERFORMANCE:	Seldom used disposal method for sizable facilities.
SIZING:	Dependent upon method of sludge generation rate, desired life of landfill, and cake solids.
RELIABILITY:	Very reliable sludge disposal method once (if) established.
FLEXIBILITY:	Limited to sludge. Function of size.
LIMITATIONS:	Public perception, environmental concerns, lengthy (if not impossible) implementation period, land requirements.
OPERATION AND MAINTENANCE:	Equipment maintenance; fuel cost; intensive monitoring and record keeping required.

CF4

COSTS:	Capital intensive in acquiring land and purchasing equipment.
IMPLEMENTATION ISSUES:	Regulation falls under RCRA instead of EPA 257 or 503 rules. Obtaining conditional use permit may be difficult. Land requirements.
ENVIRONMENTAL/ SOCIAL ISSUES:	Potential for soil erosion and odor problems. Leachate and gas production continue long after fill is completed. Potential for groundwater and surface water contamination. Using up space in MSW landfill.
PUBLIC ISSUES:	Bad public perception, precludes beneficial reuse of sludge.
AGENCY ISSUES:	Probably have little interest in getting into landfill business. Not compatible with Agency's goals to maximize beneficial reuse of sludge.

CF5

TITLE: **MONOFILLING OF SLUDGE**

DESCRIPTION: A sludge disposal operation in which sludge is placed within a subsurface excavation and covered with soil (trench fill) or is place on the original earth cover and subsequently covered with soil (area fill). Design considerations should include provisions to control leachate and gas migration.

PERFORMANCE: Seldom used disposal method for sizable facilities.

SIZING: Dependent upon method of trench operation, sludge generation rate, and desired life of landfill. Cake solids, nature of excavated material (mixed with sludge to obtain structural strength).

RELIABILITY: Very reliable sludge disposal method once (if) established.

FLEXIBILITY: Limited to sludge. Function of size.

LIMITATIONS: Public perception, environmental concerns, lengthy (if not impossible) implementation period. Land requirements.

OPERATION AND MAINTENANCE: Equipment maintenance; fuel cost; intensive monitoring and record keeping required.

CF5

COSTS:	Capital intensive in acquiring land and purchasing equipment
IMPLEMENTATION ISSUES:	Extremely difficult to site and permit. Land requirements.
ENVIRONMENTAL/ SOCIAL ISSUES:	Potential for soil erosion and odor problems. Leachate and gas production continue long after fill is completed. Potential for groundwater and surface water contamination.
PUBLIC ISSUES:	Bad public perception, precludes beneficial reuse of sludge.
AGENCY ISSUES:	Probably have little interest in getting into landfill business. Not compatible with Agency's goals to maximize beneficial reuse of sludge.

DF1

TITLE: **MECHANICALLY AERATE A PORTION OF THE LOWER TUALATIN RIVER.**

DESCRIPTION: This technique involves increasing the dissolved oxygen concentration in the lower river through use of mechanical processes. This provides a mechanical equivalent to a white water stretch in the river. Several mechanical devices may be used for this purpose such as pumps, jets, floating aerators or diffused aeration. The last approach is probably most appropriate due to cost, low visual impact and ease of operation.

PERFORMANCE: Increasing the dissolved oxygen level benefits fish and other aquatic species. Aeration systems perform reliably and, if properly designed, produce predictable results. Mechanical aeration has been used frequently to benefit water quality in lakes, but has seldom been applied to rivers. In lake applications, aeration has worked best in waters that were not nutrient limited and where oxygen depletion has threatened warm-water fish.

SIZING: Aeration systems are sized based on oxygen transfer efficiency, desired amount of dissolved oxygen increase and river flow. Based on a dissolved oxygen increase of 4 mg/L and a river flow of 100 MGD (150 cfs), an energy input of approximately 300 to 500 horsepower would be needed. The air diffusers should be placed above the river bottom to minimize turbidity increase due to sediment entrainment.

RELIABILITY: Aeration systems are very reliable. The air diffusers must be protected from debris in the river, particularly during high flows.

FLEXIBILITY: This technique can be coupled with most other techniques to improve water quality in the Tualatin. It does not exclude other management approaches.

LIMITATIONS: This technique is not a substitute for meeting the TMDLs. The technique has had limited application in rivers. Aeration could reduce water clarity by stirring up sediment.

OPERATIONS AND MAINTENANCE: Diffused aeration systems are relatively simple mechanical systems to operate. Access to the diffusers for maintenance will be difficult. A potential exists for diffuser damage by debris carried by river flow.

DF1

COST:

IMPLEMENTATION ISSUES: This will require construction of facilities within the river which would require approval by a variety of agencies. A site must be obtained for the air supply facilities.

ENVIRONMENTAL/ SOCIAL ISSUES: Increased turbidity may occur due to aeration. Dissolved oxygenlevels will increase which will benefit aquatic life. Construction activities would have short-term impacts.

PUBLIC ISSUES: There is a possibility that the public would perceive this approach as treating the symptoms of pollution, not the cause. Also, the public may object to installing mechanical systems in the river.

AGENCY ISSUES: This technique goes beyond the Agency's responsibilities associated with the TMDLs; however, it is compatible with its goal to improve water quality.

DF2

TITLE: **CHEMICAL CLARIFICATION OF TUALATIN RIVER WATER**

DESCRIPTION: Water is diverted from the Tualatin River into a chemical clarification treatment facility to remove phosphorus and turbidity. The technique involves a diversion structure in the river, a treatment facility which includes chemical dosing, flocculation, clarification, disinfection (as an option), and pumping to return the water to the river. In essence, the treatment process would be similar to drinking water treatment.

PERFORMANCE: The purpose of the technique is to improve water clarity, reduce phosphorus concentrations and remove fecal coliform beyond the levels achieved by treatment of point sources and non-point sources. Chemical treatment using lime, metal salts, or polymers have been used extensively in water and wastewater treatment and will effectively remove colloidal particles and turbidity. Metal salts such as alum form a chemical precipitant with phosphorus which settles out under quiescent conditions. This process can reduce phosphorus levels by 70% to 90% with stoichiometric dosing, or lower with higher doses. Turbidity levels around 1-5 NTU are achievable which results in a sparkling clear water.

SIZING: Most unit processes in chemical clarification depend directly or indirectly on the flow. In this analysis, it was assumed that 100 MGD (150 cfs) of river flow would be treated. The required chemical dose is determined by laboratory jar tests. For alum addition, the dose is typically 10 mg alum/mg phosphorus. Clarification units were sized based on an overflow rate of 500.

RELIABILITY: Very reliable. The process has been used for years and extensive data are available for applications in water and wastewater treatment.

FLEXIBILITY: This technique can be coupled with essentially all other techniques to improve water quality in the Tualatin. Also, some of the treatment facilities could be incorporated into a treatment system for peak wastewater flows during the winter.

LIMITATIONS: This technique is not a substitute for meeting the TMDLs. It is an additional measure to improve water quality. Removal performance is limited by the chemical dose and the selected chemical. Overdoses may restabilize colloids and negate turbidity reductions. Process requires large chemical doses. Land requirements in excess of 7.5 acres for a 100 MGD facility.

OPERATION AND MAINTENANCE: Operation is fairly straight forward. Chemical handling is cumbersome. Large chemical doses will require automation.

DF2

COST:	Estimated construction cost is $30 million for a 100 MGD facility. Operating and maintenance costs are $12/million gallons treated.
IMPLEMENTATION:	Requires additional land and possibly a new treatment site.
ISSUES:	Requires fish passage around diversion structure. High chemical doses. Road or rail access is required for chemical delivery. Chemical sludge treatment and disposal required.
ENVIRONMENTAL/ SOCIAL ISSUES:	Noise and odor are of little concern. Traffic flow around the facility for chemical delivery must be evaluated. The diversion structure in the river must include a screen and intake to prevent fish and other large objects from entering the treatment facility. It must also include a fish passage. Decreased turbidity and phosphorus in river will benefit environment.
PUBLIC ISSUES:	The desirability of this technique depends on the public's desire for a high quality, clear water in the Tualatin.
AGENCY ISSUES:	This technique goes beyond the Agency's responsibilities associated with the TMDLs, but is consistent with its goal to enhance water quality.

DF3

TITLE: **CHEMICAL CLARIFICATION OF WATER DIVERTED TO LAKE OSWEGO**

DESCRIPTION: Water currently flows from the Tualatin River to Lake Oswego. Water rights provide for a 57 cfs (cubic feet per second) allocation, with 100 cfs during the period when the lake is refilled. In addition 3.4 and 3 cfs are allocated during the summer for maintaining the water level in the lake and for irrigation. This flow can be processed in a chemical clarification treatment facility to remove phosphorus and turbidity. The technique involves an intake structure from the diversion, a treatment facility which include chemical dosing, flocculation/clarification, and disinfection (as an option). Pumping may or may not be required to return the water to the river.

PERFORMANCE: The purpose of the technique is to improve water quality in Lake Oswego beyond that achieved through treatment of point sources and non-point sources. Chemical treatment using lime, metal salts, or polymers have been used extensively in water and wastewater treatment and will effectively remove colloidal particles and turbidity. Metal salts such as alum form a chemical precipitant with phosphorus which settles out under quiescent conditions. Chemical addition can reduce phosphorus levels by 70% to 80% with stoichiometric dosing,or lower with higher doses. Turbidity levels around 1-5 NTU are achievable which results in a sparkling clear water.

SIZING: Most unit processes in chemical clarification depend directly or indirectly on the flow. In this application, a flow rate of 40 MGD (60 cfs) was used. Required chemical dose is determined by laboratory jar tests. For alum addition, the dose is typically 10 mg alum/mg phosphorus. Clarification units were sized based on an overflow rate of 500 GPD/SF.

RELIABILITY: Very reliable. The process has been used for years and extensive data are available for applications in water and wastewater treatment.

FLEXIBILITY: This technique can be coupled with most other techniques to improve water quality in Lake Oswego.

LIMITATIONS: This technique is not a substitute for meeting the TMDLs. It is an additional measure to improve water quality. Removal is limited by the chemical dose and the selected chemical. Overdoses may restabilize colloids and negate turbidity reductions. Land requirements are in excess of 3 acres for a 60 cfs facility.

OPERATION AND MAINTENANCE: Operation is fairly straight forward. Chemical handling is cumbersome. Large chemical doses will require automation.

DF3

COST:	Estimated construction cost is $12/million for a 60 cfs (40 MGD) facility. Operating and maintenance costs are $12 million gallon treated.
IMPLEMENTATION ISSUES:	Requires a new treatment facility site. High chemical doses. Road or rail access is required for chemical delivery. Chemical sludge treatment and disposal required.
ENVIRONMENTAL/SOCIAL ISSUES:	Noise and odor are of little concern. Traffic flow around the facility for chemical delivery must be evaluated. The diversion structure in the river must include a screen and intake to prevent fish and other large objects from entering the treatment facility. The water quality of Lake Oswego would be improved.
PUBLIC ISSUES:	The desirability of this technique depends on the public's desire for a high quality, clear water in Lake Oswego.
AGENCY ISSUES:	This technique goes beyond the Agency's responsibilities associated with the TMDLs, but is consistent with its goal to enhance water quality.

DF4

TITLE: **IN-SITU ALUM TREATMENT OF HAGG LAKE**

DESCRIPTION: Hagg Lake is reported to have elevated concentrations of phosphorus during the spring due to heavy runoff. The phosphorus concentration apparently decreases during the summer due to precipitation of phosphorus compounds. The elevated springtime concentrations are of particular concern because they coincide with the filling of Lake Oswego. To address this issue, this technique would use an in-situ process in which alum is added to the Hagg Lake water. As the alum floc settles, it enmeshes particulate phosphorus which is subsequently removed from the water column. The settled floc covers the lake's bottom sediments and prevents release of phosphorus from the sediments. This technique has been commonly applied in Scandinavia, but has had limited application in this country.

PERFORMANCE: Results from alum applied to lakes have shown 35-50 ug phosphorus/L removal, maintained over a 4-6 year period. Successful performance of alum treatment is based on phosphorus loading being predominantly internal versus external. Internal phosphorus loading comes from iron releases in sediment, organism excretions, and plant and animal decomposition. For a closed system where phosphorus sources predominantly remain in the lake, alum addition breaks the chain of the phosphorus cycle. By covering the sediment, the alum precipitate prevents phosphorus from entering the water column. Successful performance is based on applying sufficient alum to not only precipitate phosphorus but also to fully cover the sediments. If external sources significantly contribute to phosphorus loading in the lake, then covering the sediments will not greatly affect the level of phosphorus present. The continued supply of phosphorus allows for the growth of algae and microorganisms and water quality conditions that were present prior to treatment may reappear after a short period of time.

SIZING: Typical alum dosages have ranged from 5.5 to 26 mg/L (as aluminum). Maximum dosages are based on alkalinity and the maintenance of the lake pH above 6. Application is a one-time procedure which may take several days to accomplish.

RELIABILITY: Questionable; Because Hagg Lake receives substantial external loadings of phosphorus, this technique may only have a short-term impact on the overall concentration of phosphorus in the lake. Nonetheless, a short-term impact, if properly timed, may have a significant impact on the phosphorus loading entering Lake Oswego during the filling operation.

FLEXIBILITY: Excellent; This technique could be coupled with nearly any other technique as part of an overall management approach.

LIMITATIONS: None identified.

OPERATION AND MAINTENANCE: Once the alum is applied, there is no further O & M. Water sampling should be practiced to determine effectiveness.

DF4

COST:	The cost of alum to treat Hagg Lake would be $1.2 million per application based on a 10 mg/L dosage (as aluminum).
IMPLEMENTATION ISSUES:	Need for coordination with a variety of water resource and environmental resource agencies.
ENVIRONMENTAL/ SOCIAL ISSUES:	Full impact on water quality and biota needs to be evaluated. Potential for toxic conditions if pH drops too low.
PUBLIC ISSUES:	Public may view this as treating the symptoms, not the cause. Public may object to dumping large quantities of chemicals into the lake.
AGENCY ISSUES:	This technique goes beyond the Agency's obligations in meeting the TMDLs.

DF5

TITLE: **PURCHASE LAKE OSWEGO RIGHTS AND CEASE TUALATIN RIVER DIVERSION**

DESCRIPTION: Proposes discontinuing use of Tualatin River water for Lake Oswego and use another source of water as a substitute. This increases the available water for downstream use and flow augmentation and has the opportunity to improve the water quality for supply water to Lake Oswego. Possible other sources of water include ground water wells or Willamette River water.

PERFORMANCE: Additional dilution water in the Tualatin River may assist in improving water quality.

SIZING: Source must match current Lake Oswego water rights.

RELIABILITY: Based on equipment reliability rather than gravity flow to Lake Oswego.

FLEXIBILITY: None.

LIMITATIONS: Legal position regarding ability to acquire Lake Oswego's water rights. May not be able to obtain rights to either groundwater or Willamette River Water.

OPERATIONS AND MAINTENANCE: Increased over present system--amount unknown.

DF5

COSTS:

IMPLEMENTATION ISSUES: Ease/difficulty of obtaining other water rights.

ENVIRONMENTAL/ SOCIAL ISSUES: Could improve Tualatin River water quality.

PUBLIC ISSUES: Limited.

AGENCY ISSUES: Spending customer funds to provide later for a private lake outside the agency boundary.

DF6

TITLE: **MODIFY/IMPROVE TUALATIN RIVER CHANNEL**

DESCRIPTION: This technique would enhance the hydraulic characteristics of the river by rechanneling segments of the route. Rechanneling the river will provide increased flow velocity as a result of improved gradient. Increased flow velocities will bring fresh water into the river more quickly and allow less time for algae to develop.

Best opportunities for rechanneling appear to exist downstream from Forest Grove where gradients are least and major river loops exist.

PERFORMANCE: Rechanneling could eliminate up to 14 river miles of length between the confluence with the Willamette River and Forest Grove. Rechanneling will decrease the travel time.

SIZING: Not applicable.

RELIABILITY: Once incorporated the change would be lasting.

FLEXIBILITY: Inflexible once modifications are completed.

LIMITATIONS: Significant limitations in terms of private lands ownership and USA's limited authority to dictate changes of this magnitude.

OPERATIONS AND MAINTENANCE: Not applicable.

DF6

COSTS:	Unknown.
IMPLEMENTATION ISSUES:	Legal challenges likely. Need approvals from many agencies including the US Corp of Engineers.
ENVIRONMENTAL/ SOCIAL ISSUES:	Major negative impacts on wetlands, wildlife habitats, recreation, and aesthetics.
PUBLIC ISSUES:	Public would need to accept condemnation for lands acquisition; river frontage and access to river would change significantly in several cases.
AGENCY ISSUES:	After implementation, none.

DF7

TITLE: **BIOMANIPULATION: USE OF ZOOPLANKTON TO REMOVE ALGAE FROM THE LOWER TUALATIN**

DESCRIPTION:

The excessive growth of algae in the lower Tualatin is not only due to excess nutrients but also to low algal death rates. By manipulating the ecosystem to increase the natural death rate of the algae, the standing crop of algae can be reduced, leading to increased water transparency.

The mechanism to increase algal death rates is through increases in zooplankton grazing rates. These organisms are capable of removing essentially all the phytoplankton from the water column, e.g., 10 organisms per liter can exert significant grazing pressure on algae. To achieve this, the lower river (pool) would be seeded with zooplankton (primarily Daphnia) during the low flow periods. Another method to increase zooplankton grazing is to selectively reduce the number of planktivorous fish (e.g., perch) in the system. Even in eutrophic lakes the "clear water phase," where water transparency increases dramatically, occurs as a result of zooplankton grazing. Much of the nutrient content of the algae are deposited in zooplankton fecal pellets into the sediments.

PERFORMANCE:

This approach takes advantage of the natural grazing pressure that zooplankton in the system exert on the algae. The lower pool would be seeded with zooplankton either from eggs or with cultured individuals. The type of zooplankton used would depend on the type of algae present. In the case of small regularly shaped algal cells, filter feeders such as Daphnia and Bosmina could be used. Large or angular algal cells are better consumed by copepods, e.g., Cyclops. In this manner the algal populations can be reduced by selectively encouraging the growth of certain zooplankton species.

SIZING:

Seeding of zooplankton directly into the river would require culture facilities to raise and maintain the zooplankton. A culture lab about the size of USA's water quality lab would be required for culture purposes. Management of fish species in the river would require a team of field biologists to manage the fish community during the year (roteneon, trapping), particularly during spawning periods.

RELIABILITY:

The reliability of biomanipulation depends on how well the ecosystem under consideration is understood. These techniques have been used successfully in different areas of the country to manage the symptoms of over-fertilization.

FLEXIBILITY:

The use of biomanipulation technology is compatible and can be used in concert with other techniques. There is a wide degree of flexibility in determining the optimum species of zooplankton to use to address over abundance of algae.

DF7

LIMITATIONS:

Successful manipulation of the ecosystem requires a good understanding of the major forces shaping the dynamics of that system. This in turn requires a data-intensive approach, both prior to and during implementation of the technology.

OPERATION AND MAINTENANCE:

The cost of operating a biomanipulation laboratory would be on the order of $250,000 per year. This could also include costs for implementing fish management programs.

COSTS:

The cost of constructing a laboratory for biomanipulation are moderate. However, USA may be constructing additional laboratory space in the future. The biomanipulation lab could be accommodated with old lab space.

IMPLEMENTATION ISSUES:

The implementation issues center on timing. At least one year of detailed ecological information on the lower river would be needed before bio-management techniques could be reasonable applied.

ENVIRONMENTAL/ SOCIAL ISSUES:

Biomanipulation has been used for years in pest and wildlife management. It has the distinct advantage over other technologies in that it uses only natural components of the ecosystem to treat symptoms of over-fertilization. Therefore, it has a high social value and is environmentally sound.

AGENCY ISSUES:

Uncertainty about effectiveness of this technology in the short term (2 to 4 years), as well as ultimate ability of the technique to improve water quality. Technique treats symptoms but may provide food that would increase fish production. However, it is a relatively low cost alternative.

DF8

TITLE: HARVESTING ALGAE

DESCRIPTION: Harvesting freshwater microalgae is done to capture the protein and minerals in these plants for use by humans and animals. Various mechanical harvesting techniques have been developed for different kinds of algae. Surface accumulations of blue-green algae have been harvested using mechanical skimmers that with the use of fine mesh screens dewater and concentrate algae cells to a slurry that is then further processed for intended uses. Other microalgae that are generally dispersed in the water column as in the Tualatin River, require centrifugation for separation of algae from the water. Water would then be returned to the river. Harvesting of the algae would be done during the period May through October.

PERFORMANCE: This approach to water quality improvement would entail removing microscopic algae from the lower reach of the river thereby reducing the algae pigment chlorophyll and increasing transparency of the water and removing particulate phosphorus. The amount of algae that must be removed to have a noticeable effect depends on conditions in the river. During periods of low flow (e.g., 120 cfs) ambient total phosphorus transport in the lower pool ranges from 30 to 120 kg-P/da. Phosphorus in phytoplankton biomass ranges from 8 to 55 kg-P/da. Removal of half of the algae would provide a significant reduction in standing crop and would also remove a substantial proportion of the particulate phosphorus.

SIZING: For removal of filamentous algae floating on the surface, a single harvester would be required for the pool. Centrifugation to remove phytoplankton would require a capacity of 10 to 22,000 gpm with 50% removal efficiencies to have any affect.

RELIABILITY: The reliability of equipment to harvest algae would be similar to that of other such equipment with proper care an maintenance.

FLEXIBILITY: The use of harvesters or centrifuges would be compatible with present technologies.

LIMITATIONS: The ability of these mechanical devices to afford significant increases in water quality is limited by their capacity. During periods of extremely high algal density, the systems may not be able to function effectively.

OPERATION AND MAINTENANCE: The costs of operating a surface skimmer would be on the same order of magnitude as any piece of equipment of similar complexity. The O & M costs for a centrifuge are difficult to estimate at this time.

DF8

COSTS: The cost of skimming equipment is on the order of $75,000 and the cost of a large centrifuge is about $450,000.

IMPLEMENTATION ISSUES: Water withdrawal permit would be required for centrifugation. Intake structures may require screening.

ENVIRONMENTAL/ SOCIAL ISSUES: Disposal of the skimmed or centrifuged algae might be of some concern to local residents. Preferred disposal of algae would be as dried feed supplement to cattle.

AGENCY ISSUES: Uncertainty about effectiveness of this technology, cost-benefit issues, long term benefit. Method treats symptoms.

TESTIMONY SUBMITTED FOR THE RECORD

OF

HARRY SMISKIN

YAKIMA INDIAN NATION TRIBAL COUNCIL

BEFORE THE

OREGON ENVIRONMENTAL QUALITY COMMISSION

January 19, 1990

Mr. Chairman, and members of the Commission, my name is Harry Smiskin. I am a member of the Tribal Council of the Confederated Tribes of the Yakima Indian Nation, and a member of the Tribal Council's Fish and Wildlife-Law and Order Committee. I thank you for the opportunity to testify today.

The policy option that you are considering today concerns pollution of streams where beneficial uses may be harmed. You know as well as I that the main impetus for changing the policy stems from your decision last year to deny a pollution discharge permit for a new pulp mill on the Columbia River. Your agency is also considering three pulp mills' individual control strategies that will allow continued pollution from chlorine bleaching well into the future. I am here today to tell you that changing the rules to open the regulatory door for a new chlorine bleach process pulp mill, and approving individual control strategies that provide for continued chlorine bleaching, are not only bad policy, but also run counter to the policy the Yakima Indian Nation recently established.

I am pleased to inform you that the Yakima Indian Nation is the first government in North America to go on record calling for an end to the use of the chlorine bleaching process by the pulp and paper industry. Just this week the Yakima Indian Nation enacted a resolution which calls on the pulp and paper industry to stop using the chlorine bleaching process within five years, and to begin supplying the Yakima Indian Nation and others with unbleached paper products. We also called on state and federal governments to use their existing powers to establish similar policies, and to place the burden of proof for continued bleaching on the industry. Last, we called on the citizens of the Northwest to heed and understand the dangers caused by chlorine bleaching and to act to put an end to it and demand unbleached paper products.

In a moment I will read you the Yakima Indian Nation's resolution. But first, I want to make sure you understand the context for the action taken by our government.

In 1855, the Yakima Indian Nation signed a treaty with the U.S. Government that reserved our sovereign right of "taking fish at all usual and accustomed places, in common with the citizens of the Territory." Through hard fought court battles we have preserved that right and established that it includes the right to co-manage the fish resource in a government-to-government relationship with other states, including the State of Oregon, and the federal and Canadian governments. The principle case, United States v. Oregon, is still within the continuing jurisdiction of the Federal District Court.

As co-managers of the fish resource, the Yakima Indian Nation is not interested in discussing with you (or anyone) how much TCDD or any of the hundreds of other toxic chemicals can be dumped into the Columbia River by the pulp and paper industry. The Yakima Indian Nation does not want to debate mixing zones for toxic pollution, nor do we want to debate whether a mile, two miles, or the entire Columbia River is water quality limited, and what that means for beneficial uses. Those topics wrongly assume that it is okay to dump pollution into the river that can impact the health of our fish and the health of our people.

When the Yakima Indian Nation reserved the right to half the fish in the Columbia, we reserved the right to fish free from toxic pollution. You may be willing to let your fish be polluted and harmed by toxic pollution, but in the process you cannot abridge our treaty right to fish free from harmful chemicals. We do not want to debate a policy on how much pollution of the Columbia River is reasonable to allow. The Yakima Indian Nation believes no toxic pollution can or should be allowed. The Columbia River is too important to our treaty right and too sacred to become a cesspool for the pulp and paper industry and others. The policy change you are discussing and the individual control strategy decisions may create legal fictions that show beneficial uses will not be harmed. The Yakima Indian Nation, however, will not be fooled by your actions, and we will diligently work to preserve our treaty right to clean, healthy fish that are free from pollutants and the effects of pollutants.

I am pleased to say that, after twenty years of litigation in U.S. v. Oregon, the State of Oregon's Department of Fish and Wildlife today recognizes the sovereign rights and powers of the Yakima Indian Nation. As a true co-manager, ODFW knows that it must work with the Yakima Indian Nation's policies. The time has come for the Oregon Department of Environmental Quality to also acknowledge and work with, not against, the policies established by the Yakima Indian Nation as required by U.S. v. Oregon.

As I read you our resolution, think hard about whether you

can in good conscience change your rules to allow more pollution of the Columbia River by the pulp and paper industry and still be consistent with our sovereign policy. Think hard about whether individual control strategies that allow continued pollution of the Columbia River with hundreds of tons of toxic chemicals is consistent with the policies of the Yakima Indian Nation. Think hard about whether you want to upset the co-management relationship we've established through U.S. v. Oregon. Last, think about your legal responsibilities to not abridge our treaty rights. I believe that if you truly consider our policy and your responsibilities under U.S. v. Oregon, you will stop the Department's efforts to change the rules to allow a new pulp mill to be built, and will adopt individual control strategies that phase out chlorine use. If you ignore our policy and you do change the rules or proceed with the proposed individual control strategies, you will be threatening the treaty rights of the Yakima Indian Nation.

I will now read you our resolution.

R E S O L U T I O N T-40-90

WHEREAS, the Yakima Indian Nation is a federally recognized tribe pursuant to the Treaty of 1855 (12 Stat. 951), and that the Yakima Indian Nation Tribal Council is the governing body of the Confederated Tribes and Bands of the Yakima Indian Nation of the Yakima Reservation, Washington, by the authority delegated by Resolution T-38-56, and

WHEREAS, the Yakima Indian Nation, by the Treaty of 1855, reserved certain rights, including the right to take fish at all usual and accustomed fishing areas and to hunt and gather roots and berries for food and medicine and said rights were to be secured by the United States, and

WHEREAS, these traditional and cultural resources reserved rights have been interpreted by the federal courts to include the right to a suitable habitat for the fish resources, and

WHEREAS, the fish and all other natural resources of the Columbia Basin have great cultural, religious and social significance to the people of the Yakima Indian Nation, and

WHEREAS, the quality of the Columbia River water must be maintained in a manner that protects the fish resources and the tribal members who depend on the River to provide them with health and sustenance, and

WHEREAS, studies by the United States Environmental Protection Agency and the Northwest Pulp and Paper Association make it clear that the Columbia River and its fish are polluted with dioxin and other toxic chemicals from pulp and paper mills operating on the Columbia River, and

WHEREAS, the pulp and paper industry in Oregon, Washington and Idaho dumps into the Columbia River system tons of organochlorines, including dioxin and furans, many of which are highly toxic, persistent in the environment, and bioaccumulate through the food chain to humans, and

WHEREAS, the chlorine bleached paper products such as milk and beverage cartons, coffee filters, baby diapers, personal hygiene products, and office paper contain dioxin residues that pose a threat to the health of people who use them, and

WHEREAS, the pollution from the pulp and paper industry could be prevented by not utilizing the chlorine bleaching process, and

WHEREAS, an unbleached paper industry would provide healthier employment and projects, and would reduce waste by utilizing a significantly great percentage of the wood resources, and

WHEREAS, no reason is apparent for not following the lead of Sweden and the Science Advisory Board of the U.S. Canada

International Joint Commission and setting as a goal the total elimination of the use of chlorine and the production of chlorinated organic pollutants by the pulp and paper industry.

NOW, THEREFORE BE IT RESOLVED, by the Yakima Tribal Council meeting in regular session, at the Governmental Offices of the Confederated Tribes and Bands of the Yakima Indian Nation, Toppenish, Washington, with a quorum being present, that:

1. The Yakima Indian Nation mandate the pulp and paper industry within five years to phase out the use of the chlorine bleaching process and stop the production of all dioxin and other organochlorines, and immediately begin providing the Yakima Indian Nation and others with the environmentally safe, healthy, unbleached paper products;

2. The Yakima Indian Nation mandates upon all branches of the federal government to exercise its trust responsibility for the protection of tribal natural resources and peoples and utilize its current legal powers (such as the Clean Water Act to establish and implement a policy for total elimination of organochlorine pollution from the pulp and paper industry within five years, and to give preference to purchasing unbleached paper products by the government;

3. The Yakima Indian Nation mandates upon the State of Washington, Oregon and Idaho to utilize their current legal powers and exercise their current legal responsibilities under state and federal law to establish and implement policies for the total elimination of organochlorine pollution from the pulp and paper industry within five years, and to give preference to purchasing unbleached paper products;

4. The Yakima Indian Nation mandates upon all state and federal regulatory agencies to place the burden of proof for demonstrating the environmental consequences of continued pollution from the chlorine bleaching process on the industry that is creating the problems, and not those who must live with the problems for generations to come;

5. The Yakima Indian Nation requests the member tribes of the Affiliated Tribes of Northwest Indians to study the serious pollution problem caused by the northwest's pulp and paper industry, and to consider establishing coordinated tribal policies that call for the elimination of the chlorine bleaching process and that favor the purchasing of unbleached paper products by the tribal governments;

6. The Yakima Indian Nation mandates upon the citizens of the Pacific Northwest to address and to understand the danger posed by the release of organocholorine compounds

into the waters of the Pacific Northwest and to act both individually and jointly to accomplish the purpose of this resolution.

DONE AND DATED on this 18th day of January, 1990, by the Yakima Tribal Council by a vote of 7 for and none against.

Levi George, Chairman
Yakima Tribal Council

ATTEST:

Jeanette Lee, Secretary
Yakima Tribal Council

COLUMBIA RIVER INTER-TRIBAL FISH COMMISSION
975 S.E. Sandy Boulevard, Suite 202, Portland, Oregon 97214
Telephone (503) 238-0667
Fax (503) 235-4228

January 18, 1990

Fred Hansen, Director
Oregon Department of Environmental Quality
811 S.W. Sixth
Portland, Oregon 97201

HAND DELIVERED

Re: Comment Period on Individual Control Strategy (ICS) Permits for Pulp and Paper Mills

Dear Mr. Hansen:

The Columbia River Inter-Tribal Fish Commission (CRITFC) requests that you extend the comment period on the three pulp and paper mill NPDES permits from January 19th to March 15, 1990.

The reason for this request is that the Yakima Indian Nation this week enacted a resolution calling for an end to the use of the chlorine bleaching process, and requesting that all the member tribes of the Affiliated Tribes of Northwest Indians (ATNI) study the serious pollution problem caused by the Northwest's pulp and paper industry, and consider establishing coordinated tribal policies that call for the elimination of the chlorine bleaching process and that favor the purchasing of unbleached paper products by tribal governments. It is our understanding that the Yakima Indian Nation will be presenting a resolution at ATNI's Winter Conference on February 13-15, 1990, for consideration by the 40 or so member tribes. The Yakima Indian Nation is hosting that conference.

Your agency's decision-making process would be best served if it had the results of the ATNI conference before you make your decision on the permits. Moreover, if ATNI takes action on the pulp and paper pollution issue as expected, then the individual member tribes may wish to directly communicate with your agency about the proposed ICS permits. The tribal governments probably need thirty days from the date of the conference to review the ATNI action and to provide comments to your agency. The Confederated Tribes of the Warm Springs Reservation of Oregon and the Confederated Tribes of the Umatilla Indian Reservation are both active in ATNI.

In light of this significant action by the Yakima Indian Nation, and to further the government-to-government relationship between the State of Oregon and the Columbia River tribes who are co-managers of the Columbia River fishery resource, I trust this request will receive thoughtful consideration. I understand the environmental community has also asked for the comment period to be extended, and that the pulp and paper industry is on record asking that your decision on the permits not be made by early February as you originally planned. Thus, this request is consistent with the position of other interested parties.

I look forward to hearing from you.

Sincerely,

Ted Strong
Executive Director

cc: Environmental Quality Commission Members
Water Quality Division, DEQ

Item 6

RECYCLING ADVOCATES

2420 S.W. Boundary Street, Portland, Oregon 97201 (503)244-0026

January 19, 1989

Environmental Quality Commission
811 SW Sixth Ave.
Portland, Oregon 97204

Subject: Principal Recyclable Material Lists

Dear Commission Members:

Recycling Advocates agrees with the staff recommendation that no changes be made in the Principal Recyclable Material lists at this time.

We do not agree, however, with the suggestion that the economic test be disregarded in the future. As long as the curbside collection program is funded by the garbage rates, an economic test needs to be applied. Otherwise expensive additions of materials could break the system.

For example, collection costs of plastics appear to be at least ten times the cost of collecting other recyclables:

*Seattle hauler bids to collect plastics were $700-$900/ton compared to $50/ton for other materials, including mixed waste paper. (1989)

*Cloudburst, a Portland hauler, figured mixed plastics collection costs to be $700/ton compared to $70 for the materials now collected. (1989)

*Data from a pilot project in Milwaukee, Wisconsin show net costs of collecting plastics to be $901 compared to $151 for metals, $83 for paper, and $52 for glass. (1989)

*In Grand Rapids, Michigan the costs of collecting plastic milk jugs was $270/ton compared to $37/ton for glass. (1988)

*In Ontario, an economic study showed that curbside collection of PET bottles cost $1000-$2000/ton compared to $60/ton for other materials. (1988)

Recycling Advocates would like to have plastic milk jugs and mixed waste paper collected curbside. However, we believe a new funding source must be found for that purpose. We suggest that the State consider an advanced disposal fee to cover the costs of collecting such materials.

Yours truly,

Jeanne Roy

Jeanne Roy, Chairman
Recycling Advocates

There's no such place as "away"

UNIFIED SEWERAGE AGENCY

FACILITIES PLAN 1990 STATUS

PRESENTATION
TO
ENVIRONMENTAL QUALITY COMMISSION

January 19, 1990

GOALS

* MEET JUNE 1993 TMDL COMPLIANCE

* COMPREHENSIVE FACILITIES PLAN
  * REGIONAL APPROACH
  * ENHANCE NATURAL SYSTEMS
  * ENHANCE TUALATIN RIVER USES

* RECYCLE AND REUSE

* HOLISTIC APPROACH

GOALS continued

* INCLUDE PUBLIC IN PLANNING PROCESS
* COMPLY WITH REGULATIONS
* IDENTIFY AND INTEGRATE PUBLIC VALUES
* INCORPORATE EXISTING KNOWLEDGE BASE

TECHNIQUES

- KEEP POLLUTANTS OUT OF BASIN
  - PHOSPHORUS BAN
  - RECYCLE
- KEEP POLLUTANTS OUT OF WASTEWATER
  - INDUSTRIAL PRETREATMENT
  - PUBLIC EDUCATION
- TREATMENT AND REUSE
  - AGRICULTURAL REUSE
  - WETLANDS TREATMENT
- IN-STREAM MANAGEMENT
  - FLOW AUGMENTATION
  - OPTIMIZE WINTER RELEASES

PUBLIC INVOLVEMENT AND EDUCATION

- INTERVIEWS
- SPEAKING ENGAGEMENTS
- INTERGOVERNMENTAL COMMITTEES
- CITIZEN COMMITTEES
- ISSUE GROUPS
  - WETLANDS
  - RECREATION
  - FINANCING
  - REUSE
- OPEN HOUSE

BOISE CASCADE HAS FAILED TO COMPLY WITH DEQ REGULATIONS GOVERNING ITS TAX CREDIT APPLICATIONS

Submitted by John Paul Williams
on behalf of Plumbers and Pipefitters #290

1. MISSED DEADLINE FOR START OF CONSTRUCTION; PROJECT ELIGIBLE FOR REDUCED CREDITS ONLY

On May 22, 1989, Boise Cascade Papers (Boise) in St. Helens submitted an intent to construct and request for preliminary certification for tax credit (T-2913, NC-2427) to the Oregon Department of Environmental Quality (DEQ), covering the replacement of the electrostatic precipitator (ESP) for the No. 2 recovery furnace.

The application claimed that construction would begin 6/89 and would be completed 7/90. The equipment cost was $6.7 million.

Boise, by Michael Vossen, Technical/Environmental Director, said in the May 22 cover letter, "It is our intent to begin struction (sic) as soon as possible. I request that you waive the 30-day notification requirement and please expedite the processing of this application."

On May 23, the next day, Terri Sylvester of DEQ acknowledged receipt and assigned the application to a reviewer. In the memo of assignment, Sylvester noted that construction was to begin 6/1/89.

On May 24, James A. Broad, Regional Engineer of the DEQ Northwest Region, in a memo to the file, recommended approval of the construction and the preliminary tax credit certification. Broad wrote a letter to Boise that same day stating that the preliminary certification for Tax Credit was found to be complete, and the construction could proceed without waiting 30 days.

The letter noted in condition 8 that "For facilities begun after June 30, 1989 and completed before December 31, 1990, the maximum allowable tax credit is reduced from 50 to 20 percent of the certified cost."

On May 31, Wendy Sims, Acting Manager of DEQ Program Operations, Air Quality Division, repeated the statements on the completeness of the certification application and the approval for construction to begin without waiting 30 days, in another letter to Boise.

CONSTRUCTION DID NOT BEGIN BY JUNE 30, 1989

The application said that construction was estimated to begin on or before 6/89. However, there are four indications that the work did not begin by the end of June, 1989.

First of all, a September, 1989 review of City of St. Helens building permit records showed that no permits had been taken out

for any work to be performed involving the removal of the old ESP and the installation of the new unit. The state electrical inspector said on January 17 that he received plans for this project "just two or three days ago."

Second, The project was not even put out for bid until November 6, 1989, according to the date on the bidding specification document by CRS Sirrine, Inc.

Third, it is our information from in-plant workers that actual continuous construction on this unit was begun after January 1, 1990.

Fourth, Boise has not given DEQ notice that the ESP is being taken out of commission, which would precede its replacement. Commencement of construction is defined as "the beginning of a continuous program of on-site construction ... which is completed in a reasonable time." (OAR 340-16-010)

THE TAX CREDIT SHOULD BE REDUCED

It does not appear that a continuous program of on-site construction began before June 30, 1989. Condition No. 8 in the construction approval by DEQ states that for facilities begun after June 30, 1989...the maximum tax credit is reduced from 50 to 25 percent of the certified cost.

It appears that the tax credit for the ESP should be reduced to 25%, because of these four indications that construction did not begin before June 30, 1989.

BOISE'S PAST TAX CREDIT APPLICATIONS HAVE CONTAINED MISLEADING INFORMATION, MISSED DEQ DEADLINES, AND FAILED TO COMPLY WITH REGULATIONS

Boise has filed at least three other tax credit applications; two for its clarifier solids landfill, located about 5 miles west of its St. Helens mill, a third application for a non-condensible gas incinerator at the mill, and a fourth application for particulate control on its lime handling system.

MISSED DEADLINE

The first application to be discussed (WQ-878, TC-2310) was for construction of a "liner and groundwater monitoring wells for landfill expansion." Despite DEQ rules requiring a notice of completion of construction to be filed with the Department by the applicant within 30 days of completion, Boise did not file this notice until 5-30-89, even though construction was completed on 12-1-87.

MISLEADING INFORMATION

The second application (WQ-949, NWR-301-WQ, T-2576) was for a $445,000 credit for a "leachate transfer pipe and associated equipment," to divert runoff from this landfill and pipe it to the City of St. Helens sewage treatment plant. This application claimed

the landfill would contain "clarifier solid waste (mostly fiber, lime, clay, and sand)." Furthermore, The landfill permit limits Boise to dispose of clarifer solids and lime kiln wastes only at the site.

Nonetheless, Boise filed a toxics release form on June 29, 1988 which stated the company disposed of hazardous wastes, including methanol, acetone, and chromium, a heavy metal, at the site. Apparently the final tax credit certification has not been issued yet for either of these landfill tax credits.

RECOMMENDATION

OAR rule 340-16-035 (a) provides for the revocation of a final tax certification if it was obtained by fraud or misrepresentation. It appears as if the materials disposed in this landfill were misrepresented. Thus both certifications should be revoked, or denied if the certification is still pending.

A "Gas fume incineration control system" was built in 1988 with a $200,000 tax credit (T-2175), to burn up offensive, odorous gasses such as hydrogen sulfide and mercaptans that otherwise would escape into the air. The mill had been channelling these gasses to the lime kiln, but when that equipment was out of service, the gasses were vented for extended periods. Boise's permit prohibits venting these non-condensible gasses (NCGs) continuously for more than 60 minutes.

NON-COMPLIANCE WITH REGULATIONS

The tax-credit financed NGC incinerator, however, operated intermittently. On December 29, 1988, the DEQ issued a notice of noncompliance to the mill for venting NCGs for longer than 60 minutes. Although Boise promised to correct the problem, the violations continued. Boise vented NCGs for illegal amounts of time (longer than 60 minutes continuously) on 33 occasions during September-December 1988, before the violation notice was issued, and after the notice eight more violations were logged from January-July, 1989.

The Oregon Environmental Quality Commission considered approval of this tax credit application at its September 8, 1989 meeting.

RECOMMENDATION

DEQ tax credit rules provide for the revocation of credits if the "holder of the certificate has failed substantially ... to operate the facility in compliance with Department ... permit conditions." (OAR 340-16-035 (b)

In the union's opinion, 41 violations of permit conditions constitutes a substantial failure to comply, and revocation of this certification is recommended.

SUBMIT COPY OF APPLICATION AND EXHIBITS TO
DEPARTMENT OF ENVIRONMENTAL QUALITY
MANAGEMENT SERVICES DIVISION
PO BOX 1760
PORTLAND, OREGON 97207

For DEQ Use Only

Date Rec'd 5-2-84 Staff BRAND
Date MSD cc'd " SIC Code 2621
Tax Cr. No. T-2913 Request No. 24
10-65844 File No. 05-1819

NOTICE OF INTENT TO CONSTRUCT NWR 502-A
AND
REQUEST FOR PRELIMINARY CERTIFICATION FOR TAX CREDIT

ALL APPLICANTS COMPLETE

(1) OFFICIAL NAME OF APPLICANT

Boise Cascade Papers

OFFICIAL NAME

1300 Kaster Road, St. Helens, Oregon 97051

MAILING ADDRESS, CITY, STATE, ZIP CODE

(2) LOCATION OF FACILITY

Boise Cascade Papers

BUSINESS NAME OR DIVISION

1300 Kaster Road, St.Helens

STREET ADDRESS

St. Helens Columbia

CITY COUNTY

(3) PERSON TO CONTACT FOR ADDITIONAL DETAILS

Michael Vossen, Technical/Environmental Director

NAME TITLE

1300 Kaster Road

ADDRESS

St. Helens 97051 397-9401

CITY ZIP CODE PHONE NO

(4) TYPE OF REQUEST (CHECK ONE OR BOTH)

[X] CONSTRUCTION APPROVAL [X] PRELIMINARY CERTIFICATION FOR TAX CREDIT

(5) IF NOTICE OF INTENT TO CONSTRUCT AND REQUEST FOR CONSTRUCTION APPROVAL, INDICATE TYPE OF FACILITY BY CHECKING APPROPRIATE BOX.

[X] AIR CONTAMINANT SOURCE [ ] CONFINED ANIMAL FEEDING OR HOLDING OPERATION

(6) IF REQUEST FOR PRELIMINARY CERTIFICATION, INDICATE TYPE OF POLLUTION CONTROL OR WASTE UTILIZATION FACIL PROPOSED BY CHECKING APPROPRIATE BOX(ES).

[X] AIR [ ] NOISE [ ] WATER [ ] SOLID WASTE [ ] HAZARDOUS WASTE [ ] USED OIL

(7) BRIEFLY DESCRIBE NATURE OF BUSINESS WHERE FACILITY WILL BE LOCATED, AND WHETHER BUSINESS IS NEW OR NEW THIS LOCATION.

Established Kraft Pulp and Paper Mill

(8) PROVIDE A BRIEF TECHNICAL DESCRIPTION OF THE PROPOSED FACILITY AND ITS FUNCTION. ATTACH PLANS AND SPECIFICATIONS. ATTACH PROCESS FLOW DIAGRAM AND PLOT PLAN, AS APPROPRIATE.

Attached

(9) BRIEFLY DESCRIBE PROPOSED POLLUTION CONTROL OR WASTE UTILIZATION EQUIPMENT.

Replacement electrostatic precipitator for No. 2 Recovery Furnace. New unit will be designed to meet NSPS particulate standards.

(10) LIST TYPES AND AMOUNTS OF POLLUTANTS DISCHARGED OR WASTES UTILIZED BEFORE INSTALLATION OF FACILITY. INDICATE HOW WASTES ARE DISPOSED.

Emissions average 1260 lb./day.

ATTACH ADDITIONAL SHEETS IF NECESSARY

ALL APPL .TS COMPLETE

(11) LIST TYPES AND AMOUNTS POLLUTANTS DISCHARGED OR WASTES UTILI[Z] AFTER INSTALLATION OF FACILITY. INDICATE HOW WASTES ARE DISPOSED.

900 lbs. particulate/day or less will be emitted to the air.

(12) ESTIMATED TOTAL COST OF PROPOSED FACILITY INCLUDING POLLUTION CONTROL EQUIPMENT $ 6.7 million.
ESTIMATED COST OF POLLUTION CONTROL OR WASTE UTILIZATION EQUIPMENT $ 6.7 million.

(13) DATE CONSTRUCTION ESTIMATED TO BEGIN 6/ /89 TO END 7/ /90.

COMPLETE ONLY IF REQUESTING PRELIMINARY CERTIFICATION

(14) DESCRIBE HOW THE FACILITY'S PRINCIPAL OR SOLE PURPOSE WILL CONFORM TO THE REQUIREMENTS OF 468.155 (SEE INSTRUCTION SHEET). This precipitator is necessary to meet the present and proposed particulate standards for existing Kraft recovery boilers. The unit will reduce particulate air emissions by approximately 30% over the present units performance.

(15) HAS FACILITY, OR ANY PORTION OF IT, PREVIOUSLY BEEN CERTIFIED FOR TAX CREDIT, OR IS A TAX CREDIT APPLICATION PENDING? ☐ YES - PLEASE ATTACH EXPLANATION ☒ NO

(16) HAS FACILITY, OR ANY PORTION OF IT, PREVIOUSLY BEEN CERTIFIED AS AN ENERGY CONSERVATION FACILITY BY THE OREGON DEPARTMENT OF ENERGY, OR IS AN APPLICATION PENDING? ☐ YES - PLEASE ATTACH EXPLANATION ☒ NO

COMPLETE ONLY FOR PRELIMINARY CERTIFICATION OF SOLID WASTE, HAZARDOUS WASTE, OR USED OIL RECYCLING OR RECOVERY FACILITY

(17) DISCUSS EXTENT TO WHICH THE CLAIMED FACILITY IS USED TO RECOVER AND CONVERT WASTE PRODUCTS INTO A SALABLE OR USABLE COMMODITY.

N/A

(18) DESCRIBE WHAT USABLE SOURCE OF POWER OR OTHER ITEM OF REAL ECONOMIC VALUE IS THE END PRODUCT AND ITS VALU

N/A

(19) DISCUSS WHETHER THE END PRODUCT, OTHER THAN A USABLE SOURCE OF POWER, IS COMPETITIVE WITH AN END PRODUCT PRODUCED IN ANOTHER STATE.

N/A

SIGNATURE

I HEREBY CERTIFY THAT I HAVE COMPLETED THIS APPLICATION TO THE BEST OF MY ABILITY AND THAT THE INFORMATION PROVIDED HEREIN AND IN THE ATTACHED EXHIBITS IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

Michael E. Vissers
SIGNATURE

Technical/Environmental Director — May 22, 1989
TITLE — DATE

ATTACH ADDITIONAL SHEETS IF NECESSARY

MANAGEMENT SERVICES DIVISION
P. O. BOX 1760
PORTLAND, OREGON 97207

DATE REC'D ______
REQUEST NO. 949
FILE NO. NWR-30-WQ

NOTICE OF INTENT TO CONSTRUCT
AND
REQUEST FOR PRELIMINARY CERTIFICATION FOR TAX CREDIT

T = 2072

ALL APPLICANTS COMPLETE

(1) OFFICIAL NAME OF APPLICANT

BOISE CASCADE CORP.
OFFICIAL NAME

1300 Kaster Road, St. Helens, OR 97051
MAILING ADDRESS, CITY, STATE, ZIP CODE

(2) LOCATION OF FACILITY

Same
BUSINESS NAME OR DIVISION

STREET ADDRESS

CITY COUNTY

(3) PERSON TO CONTACT FOR ADDITIONAL DETAILS

Michael Vossen — Environmental Engineer
NAME TITLE

1300 Kaster Road
ADDRESS

St. Helens, OR 97051 503/397-9401
CITY ZIP CODE PHONE NO

(4) TYPE OF REQUEST (CHECK ONE OR BOTH)
☐ CONSTRUCTION APPROVAL ☒ PRELIMINARY CERTIFICATION FOR TAX CREDIT

(5) IF NOTICE OF INTENT TO CONSTRUCT AND REQUEST FOR CONSTRUCTION APPROVAL, INDICATE TYPE OF FACILITY BY CHECKING APPROPRIATE BOX.
☐ AIR CONTAMINANT SOURCE ☐ CONFINED ANIMAL FEEDING OR HOLDING OPERATION

(6) IF REQUEST FOR PRELIMINARY CERTIFICATION, INDICATE TYPE OF POLLUTION CONTROL OR WASTE UTILIZATION FACILITY PROPOSED BY CHECKING APPROPRIATE BOX(ES).
☐ AIR ☐ NOISE ☒ WATER ☐ SOLID WASTE ☐ HAZARDOUS WASTE ☐ USED OIL

(7) BRIEFLY DESCRIBE NATURE OF BUSINESS WHERE FACILITY WILL BE LOCATED, AND WHETHER BUSINESS IS NEW OR NEW AT THIS LOCATION.

At solid waste landfill for pulp and paper manufacturer.
Neither business nor location are new.

(8) PROVIDE A BRIEF TECHNICAL DESCRIPTION OF THE PROPOSED FACILITY AND ITS FUNCTION. ATTACH PLANS AND SPECIFICATIONS. ATTACH PROCESS FLOW DIAGRAM AND PLOT PLAN, AS APPROPRIATE.

We plan to install about 2 miles of pipe to carry leachate from our mill's landfill to the city sewer line. Pumping will be done by modifying the existing irrigation pump station and instrumentation. Flow and plot plan attached.

(9) BRIEFLY DESCRIBE PROPOSED POLLUTION CONTROL OR WASTE UTILIZATION EQUIPMENT.

See #8 above.

(10) LIST TYPES AND AMOUNTS OF POLLUTANTS DISCHARGED OR WASTES UTILIZED BEFORE INSTALLATION OF FACILITY. INDICATE HOW WASTES ARE DISPOSED.

About 6-10 million gallons per year of rainfall falling onto our mill's clarifier solid waste (mostly fiber, lime, clay and sand) landfill and collection through the leachate system is sprayed onto a 3 acre field.

ATTACH ADDITIONAL SHEETS IF NECESSARY

ALL APPLICANTS COMPLETE ITEMS (11) THROUGH (13)

(11) [illegible] INSTALLATION OF FACILITY. INDICATE HOW WASTES ARE DISPOSED.

The 6-10 million gallons per year of leachate will be pumped into the City of St. Helens' Sykes road trunk sewer line for inclusion in their regular primary and secondary sewage treatment.

(12) ESTIMATED TOTAL COST OF PROPOSED FACILITY INCLUDING POLLUTION CONTROL EQUIPMENT $ 445,000. ESTIMATED COST OF POLLUTION CONTROL OR WASTE UTILIZATION EQUIPMENT $ $445,000.

(13) DATE CONSTRUCTION ESTIMATED TO BEGIN 8/1/88 TO END 10/31/88

COMPLETE ONLY IF REQUESTING PRELIMINARY CERTIFICATION

(14) DESCRIBE HOW THE FACILITY'S PRINCIPAL OR SOLE PURPOSE WILL CONFORM TO THE REQUIREMENT OF 468.155 (SEE INSTRUCTION SHEET).

Required by DEQ in place of current disposal by spray irrigation.
(See April 15, 1988 letter from DEQ's Schmidt)

(15) HAS FACILITY, OR ANY PORTION OF IT, PREVIOUSLY BEEN CERTIFIED FOR TAX CREDIT, OR IS A TAX CREDIT APPLICATION PENDING? ☐ YES - PLEASE ATTACH EXPLANATION ☒ NO

(16) HAS FACILITY, OR ANY PORTION OF IT, PREVIOUSLY BEEN CERTIFIED AS AN ENERGY CONSERVATION FACILITY BY THE OREGON DEPARTMENT OF ENERGY, OR IS AN APPLICATION PENDING? ☐ YES - PLEASE ATTACH EXPLANATION ☒ NO

COMPLETE ONLY FOR PRELIMINARY CERTIFICATION OF SOLID WASTE, HAZARDOUS WASTE, OR USED OIL RECYCLING OR RECOVERY FACILITY

(17) DISCUSS EXTENT TO WHICH THE CLAIMED FACILITY IS USED TO RECOVER AND CONVERT WASTE PRODUCTS INTO A SALABLE OR USABLE COMMODITY.

N/A

(18) DESCRIBE WHAT USABLE SOURCE OF POWER OR OTHER ITEM OF REAL ECONOMIC VALUE IS THE END PRODUCT AND ITS VALUE.

N/A

(19) DISCUSS WHETHER THE END PRODUCT, OTHER THAN A USABLE SOURCE OF POWER, IS COMPETITIVE WITH AN END PRODUCT PRODUCED IN ANOTHER STATE.

N/A

SIGNATURE

I HEREBY CERTIFY THAT I HAVE COMPLETED THIS APPLICATION TO THE BEST OF MY ABILITY AND THAT THE INFORMATION PROVIDED HEREIN AND IN THE ATTACHED EXHIBITS IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

Eugene D. Frost
SIGNATURE

Asst. Environmental Engineer — 7/21/88
TITLE — DATE

ATTACH ADDITIONAL SHEETS IF NECESSARY

Form Approved OMB No.: 2070-0093
Approval Expires: 01/91
Page 1 of 5

(Important: Type or print; read instructions before completing form.)

U.S. Environmental Protection Agency

EPA TOXIC CHEMICAL RELEASE INVENTORY REPORTING FORM

EPA FORM **R**

Section 313, Title III of The Superfund Amendments and Reauthorization Act of 1986

PART I. FACILITY IDENTIFICATION INFORMATION

☆ REC'D ☆ JUN 29 1988 FIRE MARSHAL'S OFFICE

(This space for EPA use only.) 05-1849

1.	1.1 Does this report contain trade secret information? ☐ Yes (Answer 1.2) ☒ No (Do not answer 1.2)	1.2 Is this a sanitized copy? ☐ Yes ☐ No	1.3 Reporting Year 1987

2. CERTIFICATION (Read and sign after completing all sections.)

I hereby certify that I have reviewed the attached documents and that, to the best of my knowledge and belief, the submitted information is true and complete and that the amounts and values in this report are accurate based on reasonable estimates using data available to the preparers of this report.

Name and official title of owner/operator or senior management official: Don Kosterow, Mill Manager

Signature: Don Kosterow

Date signed: 6/27/88

3. FACILITY IDENTIFICATION

3.1 Facility or Establishment Name: Boise Cascade Papers
Street Address: 1300 Kaster Road
City: St. Helens
County: Columbia
State: Oregon
Zip Code: 97051-3199

3.2 This report contains information for: (check one)
a. ☒ An entire covered facility.
b. ☐ Part of a covered facility.

3.3 Technical Contact: Diane Dillard — Telephone Number (include area code): (503) 397-2900

3.4 Public Contact: Diane Dillard — Telephone Number (include area code): (503) 397-2900

3.5 a. SIC Code: 2611 b. 2621 c. N/A

3.6 Latitude Deg. Min. Sec.: 04 65 05 0 — Longitude Deg. Min. Sec.: 122 48 08

3.7 Dun & Bradstreet Number(s) a. 01-910719-13099 b. N/A-

3.8 EPA Identification Number (RCRA I.D. No.) a. ORD010191016 5 b. N/A

3.9 NPDES Permit Number(s) a. N/A b.

3.10 Name of Receiving Stream(s) or Water Body(s)
a. N/A
b.
c.

3.11 Underground Injection Well Code (UIC) Identification No.: N/A

Where to send completed forms:

U.S. Environmental Protection Agency
P.O. Box 70266
Washington, DC 20024-0266
Attn: Toxic Chemical Release Inventory

4. PARENT COMPANY INFORMATION

4.1 Name of Parent Company: Boise Cascade Corporation

4.2 Parent Company's Dun & Bradstreet No.: 00-907-3099

(This space for EPA use only.)

EPA FORM R
PART II. OFF-SITE LOCATIONS TO WHICH TOXIC CHEMICALS ARE TRANSFERRED IN WASTES

1. PUBLICLY OWNED TREATMENT WORKS (POTW)

Facility Name: City of St. Helens Secondary Treatment Facility

Street Address: End of South 6th

City: St. Helens | County: Columbia

State: Oregon | Zip: 97051-2517

2. OTHER OFF-SITE LOCATIONS – Number these locations sequentially on this and any additional page of this form you use.

[1] Other off-site location

EPA Identification Number (RCRA ID. No.): ORD009101965

Facility Name: Boise Cascade Clarifier Solids Landfill

Street Address: Kappler Road

City: St. Helens | County: Columbia

State: Oregon | Zip: 97051-3199

Is location under control of reporting facility or parent company? [X] Yes [ ] No

[ ] Other off-site location

EPA Identification Number (RCRA ID. No.):

Facility Name: N/A

Street Address:

City: | County:

State: | Zip:

Is location under control of reporting facility or parent company? [ ] Yes [ ] No

[ ] Other off-site location

EPA Identification Number (RCRA ID. No.):

Facility Name:

Street Address:

City: | County:

State: | Zip:

Is location under control of reporting facility or parent company? [ ] Yes [ ] No

[ ] Check if additional pages of Part II are attached.

(This space for EPA use only.)

EPA FORM R

PART III. CHEMICAL SPECIFIC INFORMATION

1. CHEMICAL IDENTITY

1.1 ☐ Trade Secret (Provide a generic name in 1.4 below. Attach substantiation form to this submission.)

1.2 CAS # 0 0 7 4 4 0 - 4 7 - 3 (Use leading zeros if CAS number does not fill space provided.)

1.3 Chemical or Chemical Category Name: Chromium

1.4 Generic Chemical Name (Complete only if 1.1 is checked.)

2. MIXTURE COMPONENT IDENTITY (Do not complete this section if you have completed Section 1.)

2. Generic Chemical Name Provided by Supplier (Limit the name to a maximum of 70 characters (e.g., numbers, letters, spaces, punctuation)).

3. ACTIVITIES AND USES OF THE CHEMICAL AT THE FACILITY (Check all that apply.)

3.1 Manufacture: a. ☐ Produce b. ☐ Import c. ☐ For on-site use/processing d. ☐ For sale/ distribution e. ☐ As a byproduct f. ☒ As an impurity

3.2 Process: a. ☐ As a reactant b. ☐ As a formulation component c. ☐ As an article component d. ☐ Repackaging only

Otherwise Used: a. ☐ As a chemical processing aid b. ☐ As a manufacturing aid c. ☐ Ancillary or other use

4. MAXIMUM AMOUNT OF THE CHEMICAL ON SITE AT ANY TIME DURING THE CALENDAR YEAR

0 1 (enter code)

5. RELEASES OF THE CHEMICAL TO THE ENVIRONMENT

You may report releases of less than 1,000 lbs. by checking ranges under A.1.		A. Total Release (lbs/yr) A.1 Reporting Ranges 0	1-499	500-999	A.2 Enter Estimate	B. Basis of Estimate (enter code)	C. % From Stormwater
5.1 Fugitive or non-point air emissions	5.1a	✓				5.1b 0	
5.2 Stack or point air emissions	5.2a				6,700	5.2b 0	
5.3 Discharges to water 5.3.1 ☐ (Enter letter code from Part I Section 3.10 for streams(s).)	5.3.1a				N/A	5.3.1b ☐	5.3.1c
5.3.2 ☐	5.3.2a					5.3.2b ☐	5.3.2c
5.3.3 ☐	5.3.3a					5.3.3b ☐	5.3.3c
5.4 Underground injection	5.4a				N/A	5.4b ☐	
5.5 Releases to land 5.5.1 (enter code)	5.5.1a				N/A	5.5.1b ☐	
5.5.2 (enter code)	5.5.2a					5.5.2b ☐	
5.5.3 (enter code)	5.5.3a					5.5.3b ☐	

☐ (Check if additional information is provided on Part IV-Supplemental Information.)

St. Helens - Chromium

6. TRANSFERS OF THE CHEMICAL IN WASTE TO OFF-SITE LOCATIONS

		A. Total Transfers (lbs/yr)				B. Basis of Estimate (enter code)	C. Type of Treatment/ Disposal (enter code)
	You may report transfers of less than 1,000 lbs. by checking ranges under A.1.	A.1 Reporting Ranges 0	1-499	500-999	A.2 Enter Estimate		
6.1	Discharge to POTW				14,000	6.1b [0]	
6.2	Other off-site location (Enter block number from Part II, Section 2.) [1]				800	6.2b [0]	6.2c [M][7][2]
6.3	Other off-site location (Enter block number from Part II, Section 2.) [ ]				N/A	6.3b [ ]	6.3c [ ][ ][ ]
6.4	Other off-site location (Enter block number from Part II, Section 2.) [ ]					6.4b [ ]	6.4c [ ][ ][ ]

[ ] (Check if additional information is provided on Part IV-Supplemental Information)

7. WASTE TREATMENT METHODS AND EFFICIENCY

A. General Wastestream (enter code)	B. Treatment Method (enter code)	C. Range of Influent Concentration (enter code)	D. Sequential Treatment? (check if applicable)	E. Treatment Efficiency Estimate	F. Based on Operating Data? Yes	No
7.1a [N/A]	7.1b [ ][ ][ ]	7.1c [ ]	7.1d [ ]	7.1e %	7.1f [ ]	[ ]
7.2a [ ]	7.2b [ ][ ][ ]	7.2c [ ]	7.2d [ ]	7.2e %	7.2f [ ]	[ ]
7.3a [ ]	7.3b [ ][ ][ ]	7.3c [ ]	7.3d [ ]	7.3e %	7.3f [ ]	[ ]
7.4a [ ]	7.4b [ ][ ][ ]	7.4c [ ]	7.4d [ ]	7.4e %	7.4f [ ]	[ ]
7.5a [ ]	7.5b [ ][ ][ ]	7.5c [ ]	7.5d [ ]	7.5e %	7.5f [ ]	[ ]
7.6a [ ]	7.6b [ ][ ][ ]	7.6c [ ]	7.6d [ ]	7.6e %	7.6f [ ]	[ ]
7.7a [ ]	7.7b [ ][ ][ ]	7.7c [ ]	7.7d [ ]	7.7e %	7.7f [ ]	[ ]
7.8a [ ]	7.8b [ ][ ][ ]	7.8c [ ]	7.8d [ ]	7.8e %	7.8f [ ]	[ ]
7.9a [ ]	7.9b [ ][ ][ ]	7.9c [ ]	7.9d [ ]	7.9e %	7.9f [ ]	[ ]
7.10a [ ]	7.10b [ ][ ][ ]	7.10c [ ]	7.10d [ ]	7.10e %	7.10f [ ]	[ ]
7.11a [ ]	7.11b [ ][ ][ ]	7.11c [ ]	7.11d [ ]	7.11e %	7.11f [ ]	[ ]
7.12a [ ]	7.12b [ ][ ][ ]	7.12c [ ]	7.12d [ ]	7.12e %	7.12f [ ]	[ ]
7.13a [ ]	7.13b [ ][ ][ ]	7.13c [ ]	7.13d [ ]	7.13e %	7.13f [ ]	[ ]
7.14a [ ]	7.14b [ ][ ][ ]	7.14c [ ]	7.14d [ ]	7.14e %	7.14f [ ]	[ ]

[ ] (Check if additional information is provided on Part IV-Supplemental Information.)

8. OPTIONAL INFORMATION ON WASTE MINIMIZATION

(Indicate actions taken to reduce the amount of the chemical being released from the facility. See the instructions for coded items and an explanation of what information to include.)

A. Type of modification (enter code)	B. Quantity of the chemical in the wastestream prior to treatment/disposal			C. Index	D. Reason for action (enter code)
	Current reporting year (lbs/yr)	Prior year (lbs/yr)	Or percent change		
[ ][ ]	_____	_____	_____ %	[ ].[ ]	[ ][ ]

St. Helens - Chromium

OF APPLICATION AND EXHIBITS TO
F OF ENVIRONMENTAL QUALITY
NT SERVICES DIVISION
BOX 1760
ND, OREGON 97207

FOR DEQ USE ONLY
DATE REC'D SEP 12 1986
REQUEST NO NC 2176
FILE NO 05-1849

TC 2175 SIC 2621

NOTICE OF INTENT TO CONSTRUCT
AND
REQUEST FOR PRELIMINARY CERTIFICATION FOR TAX CREDIT

mail ID 34780

(1) OFFICIAL NAME OF APPLICANT

Boise Cascade Corporation
OFFICIAL NAME

Kaster Road, St. Helens, OR 97051
MAILING ADDRESS, CITY, STATE, ZIP CODE

(2) LOCATION OF FACILITY

Boise Cascade Papers
BUSINESS NAME OR DIVISION

Kaster Road
STREET ADDRESS

St. Helens — Columbia
CITY — COUNTY

(3) PERSON TO CONTACT FOR ADDITIONAL DETAILS

Michael Vossen, Environmental Engineer
NAME — TITLE

Same
ADDRESS

(503) 397-2900
CITY — ZIP CODE — PHONE NO

(4) TYPE OF REQUEST (CHECK ONE OR BOTH)
☒ CONSTRUCTION APPROVAL ☒ PRELIMINARY CERTIFICATION FOR TAX CREDIT

(5) IF NOTICE OF INTENT TO CONSTRUCT AND REQUEST FOR CONSTRUCTION APPROVAL, INDICATE TYPE OF FACILITY BY CHECKING APPROPRIATE BOX.
☒ AIR CONTAMINANT SOURCE ☐ CONFINED ANIMAL FEEDING OR HOLDING OPERATION

(6) IF REQUEST FOR PRELIMINARY CERTIFICATION, INDICATE TYPE OF POLLUTION CONTROL OR WASTE UTILIZATION FACILITY PROPOSED BY CHECKING APPROPRIATE BOX(ES).
☒ AIR ☐ NOISE ☐ WATER ☐ SOLID WASTE ☐ HAZARDOUS WASTE ☐ USED OIL

(7) BRIEFLY DESCRIBE NATURE OF BUSINESS WHERE FACILITY WILL BE LOCATED, AND WHETHER BUSINESS IS NEW OR NEW AT THIS LOCATION.

Pulp and paper manufacture - neither business nor location is new

(8) PROVIDE A BRIEF TECHNICAL DESCRIPTION OF THE PROPOSED FACILITY AND ITS FUNCTION. ATTACH PLANS AND SPECIFICATIONS. ATTACH PROCESS FLOW DIAGRAM AND PLOT PLAN, AS APPROPRIATE.

See (9) below

(9) BRIEFLY DESCRIBE PROPOSED POLLUTION CONTROL OR WASTE UTILIZATION EQUIPMENT.

Install a waste gas incinerator to burn noncondensable gas from blow heat system and multiple effect evaporators.

(10) LIST TYPES AND AMOUNTS OF POLLUTANTS DISCHARGED OR WASTES UTILIZED BEFORE INSTALLATION OF FACILITY. INDICATE HOW WASTES ARE DISPOSED.

Noncondensable gases are occasionally vented to atmosphere when #4 lime kiln is inoperable. No estimate of amount available.

ATTACH ADDITIONAL SHEETS IF NECESSARY

ALL APPLICANTS COMPLETE

(11) LIST TYPES AND AMOUNTS OF POLLUTANTS DISCHARGED OR WASTES UTILIZED AFTER INSTALLATION OF FACILITY. INDICATE HOW WASTES ARE DISPOSED.

Venting of noncondensable gases will not exceed one hour when #4 lime kiln is inoperable.

Cost of equip. and construction data were obtained by telecon with Mike Vossen from Boise Cascade - W. Fuller 9-12-86 11:40 AM

(12) ESTIMATED TOTAL COST OF PROPOSED FACILITY INCLUDING POLLUTION CONTROL EQUIPMENT $ 200,000.00. ESTIMATED COST OF POLLUTION CONTROL OR WASTE UTILIZATION EQUIPMENT $ 200,000.00.

(13) DATE CONSTRUCTION ESTIMATED TO BEGIN 1/1/87 TO END 6/1/87

COMPLETE ONLY IF REQUESTING PRELIMINARY CERTIFICATION

(14) DESCRIBE HOW THE FACILITY'S PRINCIPAL OR SOLE PURPOSE WILL CONFORM TO THE REQUIREMENTS OF 468.155 (SEE INSTRUCTION SHEET).

This facility is required by Oregon DEQ to reduce air pollution.

(15) HAS FACILITY, OR ANY PORTION OF IT, PREVIOUSLY BEEN CERTIFIED FOR TAX CREDIT, OR IS A TAX CREDIT APPLICATION PENDING? ☐ YES-PLEASE ATTACH EXPLANATION ☒ NO

(16) HAS FACILITY, OR ANY PORTION OF IT, PREVIOUSLY BEEN CERTIFIED AS AN ENERGY CONSERVATION FACILITY BY THE OREGON DEPARTMENT OF ENERGY, OR IS AN APPLICATION PENDING? ☐ YES-PLEASE ATTACH EXPLANATION ☒ NO

COMPLETE ONLY FOR PRELIMINARY CERTIFICATION OF SOLID WASTE, HAZARDOUS WASTE, OR USED OIL RECYCLING OR RECOVERY FACILITY

(17) DISCUSS EXTENT TO WHICH THE CLAIMED FACILITY IS USED TO RECOVER AND CONVERT WASTE PRODUCTS INTO A SALABLE OR USABLE COMMODITY.

(18) DESCRIBE WHAT USABLE SOURCE OF POWER OR OTHER ITEM OF REAL ECONOMIC VALUE IS THE END PRODUCT AND ITS VALUE.

(19) DISCUSS WHETHER THE END PRODUCT, OTHER THAN A USABLE SOURCE OF POWER, IS COMPETITIVE WITH AN END PRODUCT PRODUCED IN ANOTHER STATE.

SIGNATURE

I HEREBY CERTIFY THAT I HAVE COMPLETED THIS APPLICATION TO THE BEST OF MY ABILITY AND THAT THE INFORMATION PROVIDED HEREIN AND IN THE ATTACHED EXHIBITS IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

Michael E. Vossen

SIGNATURE

Michael Vossen
Environmental Engineer

TITLE

9/10/86

DATE

ATTACH ADDITIONAL SHEETS IF NECESSARY

NEIL GOLDSCHMIDT
GOVERNOR

Department of Environmental Quality

811 SW SIXTH AVENUE, PORTLAND, OREGON 97204-1390 PHONE (503) 229-5696

December 29, 1988

Mr. Michael Vossen
Technical/Environmental Director
Boise Cascade Paper Group
1300 Kaster Road
St. Helens, Oregon 97051

Re: AQ-Columbia Co.
Boise Cascade
AQ-NWR-88-180
NOTICE OF NONCOMPLIANCE

Dear Mr. Vossen:

A review of the monthly air emissions monitoring reports for the Boise Cascade St. Helens paper mill shows that the following was reported for incineration of non-condensible gases (NCG):

Month	Reported
June, 1988	605 minutes interruption of incineration
July, 1988	1668 minutes interruption of incineration
August, 1988	664 minutes operation of incineration
September, 1988	1491 minutes interruption of incineration
October, 1988	465 minutes interruption of incineration
November, 1988	3000 minutes interruption of incineration

Condition 13 of your Air Contaminant Discharge Permit (ACDP) states:

Non-condensible gases shall be continuously collected and treated as follows:

a. TRS from digester blow and relief processes and from multiple-effect evaporator condensers ("noncondensible gases") shall be continuously treated by efficient incineration.

b. In the event that the equipment in use at any time for incinerating noncondensibles fails or is removed from service the efficient incineration of noncondensibles shall be transferred to an alternate device within one hour.

The Department considers the minutes of interruption reported for July, September and November, 1988, to be excessive, and finds the 664 minutes of operation reported for August, 1988 to be particularly disconcerting.

The Department requires that a report be submitted by January 20, 1988 that details all periods during the months of June through November, 1988 in which interruption of incineration exceeded 60 minutes. For each such period, an explanation of why the interruption exceeded 60 minutes shall be given, along with actions that were taken by Boise Cascade to minimize the length of the interruptions and transfer incineration to alternate equipment. The report should also detail the actions that Boise Cascade plans to take to minimize incineration interruptions and correct any deficiencies in the incineration equipment and operations.

Following review of your report, the Department may choose to initiate further enforcement action or modification of Boise Cascade's ACDP. If you have any questions regarding this notice, please contact me at 229-6872.

Sincerely,

George Davis

George F. Davis
Regional Supervisor
Northwest Region

cc: Air Quality Division, DEQ
Enforcement Section, DEQ

OSPIRG
OREGON STATE PUBLIC INTEREST RESEARCH GROUP
027 SW Arthur St.
Portland. OR 97201
(503) 222-9641

Comments of
Quincy Sugarman, Environmental Advocate
to the
Environmental Quality Commission
in support of beginning
implementation of SB1100
January 19,1990

Good morning Mr. Hutchison and members of the Commission. Thank you for this opportunity to comment in the public forum. My name is Quincy Sugarman, and I am the environmental advocate for the Oregon State Public Interest Research Group. OSPIRG is a statewide consumer and environmental research and advocacy organization with 30,000 members. I am speaking today to encourage implementation of SB1100 provisions for reducing atmospheric emissions of chlorofluorocarbons (CFCs) through the recycling of automobile air conditioning coolant.

SB1100 was passed by the Oregon Legislature in 1989 because, in the legislature's words "chlorofluorocarbons ...are being unnecessarily released into the atmosphere, destroying the Earth's protective ozone layer and causing damage to all life." According to EPA, automobile air conditioning coolant is the single largest use of CFCs in this country, accounting for 26% of the CFCs used.

Again according to EPA, 48% of the emissions of coolant occur during servicing and recharge. CFCs are routinely vented into the air during air conditioner repair as well as occasionally prior to other types of repair work on vehicles.

For these reasons, SB1100 requires that: "One year after the EQC determines that equipment for the recovery and recycling of CFCs used in automobiles air conditioners is affordable

and available, no person shall engage in the business of installing, servicing, repairing, disposing of or otherwise treating automobile air conditioners without recovering and recycling CFCs with approved recovery and recycling equipment."

OSPIRG believes that the recycling equipment is now affordable and available, and respectfully requests the Commission to make such a determination so that CFC recycling is implemented as soon as possible in Oregon.

Suggested retail prices for the models of recycling equipment currently available range from $2000 to $7000. Most models cost around $3500. The investment in the recycling equipment is eligible for the Business Energy Tax Credit (BETC), administered by the Oregon Department of Energy, for 35% of the purchase price taken over a five-year period.

Another offset will come from the savings in purchases of CFC coolant. The price of the coolant is rising rapidly. In March 1989, one cylinder (30 pounds) cost $36.50, and in January 1990 one cylinder costs $101. Projections for July 1990 are up to $150.

At current prices, and assuming approximately seven repairs per week (this can go up to fifty during the summer) and savings of 2.5 pounds of coolant per repair, it will take 17 months to make back the investment in an average model of recycling equipment. If the BETC is subtracted from the purchase price, that time frame is condensed to eleven months.

$2275 ($3500 cost of average machine
-$1225 BETC)
÷ $52.50 ($3 per pound of coolant X

2.5 pounds of coolant saved per repair X
7 repairs per week)
÷ 4 (number of weeks in a month)
=approximately 11 months

At least one manufacturer has machines available in the state currently. Robinair has stated that because they expect this requirement to be nationwide by 1992, they are producing the recycling machines 24 hours a day at their plants. At this time 26 machines are in the Portland area, 3600 nationwide. (According to the Bureau of the Census, there are 1,306 automobile repair shops in the state.)

According to the National Aeronautics and Space Administration, the "ozone hole" has just been measured for the spring in Antarctica as the most severe depletion yet detected. The resultant increase in ultraviolet light, if such depletion continues, can cause increase skin cancers,change agricultural productivity and decrease the growth of plankton, which form the basis of the food chain in our oceans. It is time to begin implementing this provision of SB1100.

Thank you and I would be happy to answer any questions.

CITY OF PORTLAND
ENVIRONMENTAL SERVICES

1120 S.W. 5th Avenue
Room 400
Portland, Oregon
97204-1972
(503) 796-7740

January 19, 1990

TO: Environmental Quality Commission

FROM: John Lang, Administrator

SUBJECT: Principal Recyclable Material Lists

The City of Portland supports the recommendation of the Department of Environmental Quality that no changes be made at this time in the principal recyclable material lists.

Curbside recycling service provides an important outlet that many citizens use to recycle waste materials. In the second year of our City program over 17,750 tons of materials were recycled.

At this time, the City supports the DEQ recommendation that no additional materials be added to the principal recyclable material lists. Markets for both plastics and mixed waste paper do not appear capable of accepting additional large volumes of residential recyclables. Just last month a major plastics processor located in Portland stopped accepting plastics from the public. Mixed waste paper has proved difficult for recyclers to handle because of low market prices and reliance on export markets. Until industry demonstrates an ability to consume additional quantities of plastics and waste paper and to pay prices that would substantially offset collection costs of these materials, it would be inappropriate to mandate additional collection requirements.

Additional insights on the subject of modifying the principal recyclable material lists could be provided through the goals and standards for curbside programs being developed by the DEQ Waste Reduction Advisory Committee. The City is participating on this committee and looks forward to bringing recommendations forward to the EQC later this year.

The City is currently in the process of reviewing its curbside recycling program in order to achieve higher recycling rates. Participation in the Metro planning process for implementation of a yard debris collection program will also lead to greater diversion from the waste stream. The City recommends that the EQC adopt the DEQ position that additional materials not be required for curbside collection without adequate market support.