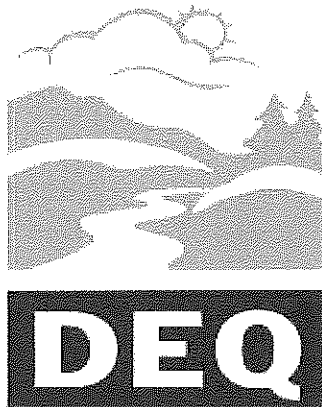


OREGON  
ENVIRONMENTAL QUALITY  
COMMISSION MEETING  
MATERIALS 09/20/2001



State of Oregon  
**Department of  
Environmental  
Quality**

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**Environmental Quality Commission Meeting Agenda**  
**September 20-21, 2001**

Windmill Inns of America  
2525 Ashland Street, Mt. McLoughlin Room  
Ashland, Oregon 97520

**Thursday, September 20, 2001** Beginning at 10:00 a.m.

- A. Discussion Item: Development of Performance Appraisal Process for Director
- B. Discussion Item: Strategic Doing and Performance Measures
- C. Contested Case No. WQ/I-NWR-00-125 regarding Reggie Huff
- D. Informational Item, Geoff Huntington, OWEB Director
- E. Joint Discussion with Oregon Watershed Enhancement Board: our Shared Oregon Plan Mission  
(This agenda item will be in Mt. Shasta Room)

Thursday evening, Commissioners will hold a joint reception with the Oregon Watershed Enhancement Board in the Mt. McLoughlin room.

**Friday, September 21, 2001** Beginning at 8:30 a.m.

The Commission will hold an executive session at 8:00 a.m. to consult with counsel concerning legal rights and duties regarding current and potential litigation against the Department. Executive session is held pursuant to ORS 192.660(1)(h). Only representatives of the media may attend but will not be allowed to report on any deliberations during the session.

- P. Approval of Minutes
- Consideration of Tax Credit Requests
- H. Action Item: Approval Process for Umatilla Chemical Agent Disposal Facility Operation
- I. Director's Report
- J. †Rule Adoption: On-Site Vehicle Testing Program for Auto Dealers
- K. †Rule Adoption: Water Quality General Permit Program Rule Amendments
- L. Action Item: Petition for Temporary and Permanent Rulemaking to Amend OAR 340-122-0115, regarding Hazardous Substances
- M. Commissioners' Reports

†Hearings have been held on Rule Adoption items and public comment periods have closed. In accordance with ORS 183.335(13), no comments may be presented by any party to either Commission or Department on these items at any time during this meeting.

**Note:** Because of the uncertain length of time needed for each agenda item, the Commission may hear any item at any time during the meeting. If a specific time is indicated for an agenda item, an effort will be made to consider that item as close to that time as possible. However, scheduled times may be modified if participants agree. Those wishing to hear discussion of an item should arrive at the beginning of the meeting to avoid missing the item.

**Public Forum:** The Commission will break the meeting at approximately 11:30 a.m. on Friday, September 21, 2001, for public forum if people are signed up to speak. Public forum is an opportunity for citizens to speak to the Commission on environmental issues and concerns not part of the agenda for this meeting. Individual presentations will be limited to five minutes. The Commission may discontinue public forum after a reasonable time if a large number of speakers wish to appear. Public comment periods for Rule Adoption items have closed and, in accordance with ORS 183.335(13), no comments may be presented to the Commission on those agenda items.

The next Commission meeting is scheduled for December 6-7, 2001.

Copies of staff reports for individual agenda items are available by contacting the Director's Office of the Department of Environmental Quality, 811 S. W. Sixth Avenue, Portland, Oregon 97204, telephone 503-229-5301, or toll-free 1-800-452-4011.

Please specify the agenda item letter when requesting reports. If special physical, language or other accommodations are needed at this meeting, please advise the Emma Djodjic, Director's Office, 503-229-5990 (voice)/503-229-6993 (TTY) as soon as possible but at least 48 hours in advance of the meeting.

## Commission Itinerary

### September 20-21, 2001 EQC Meeting, Ashland

#### Thursday, September 20, 2001

8:00-9:06 United flight 6905 PDX to Medford  
 9:06-9:30 Travel in vans from airport to Windmill Inns, 2525 Ashland Street, Ashland, 541-482-3010  
 9:30 Drop off luggage at front desk

#### 10:00 – 5:00 EQC Meeting in Mt. McLoughlin room

- A. Discussion Item: Development of Performance Appraisal Process for Director (10:00 – 10:30)
  - Commissioner Van Vliet and Commissioner Bennett will report to EQC.
- B. Discussion Item: Strategic Doing and Performance Measures (10:30 – 12:00, working lunch at 11:30)  
 Break (Melinda needs to leave the meeting during this time) (12:00 – 1:00)
- C. Contested Case No. WQ/I-NWR-00-125 regarding Reggie Huff (1:00 – 2:00)
  - Appellant requested no oral arguments; Larry Knudsen will present
- D. Informational Item, Geoff Huntington, OWEB Director (2:00 – 3:00)
  - Update on Willamette Toxics Study
  - Status of SB 945 and SB 946
  - Coordination for achieving water quality standards, funding monitoring work, implementing TMDLs (EQC moves across the hall to join OWEB in the Mt. Shasta room)
- E. Joint EQC/OWEB Discussion of Common Agency Mission (3:15 – 5:00)
  - Presentation from Rogue Basin Coordinating Council on basin restoration efforts (3:15 – 4:15)
  - EQC/OWEB discussion of the common Oregon Plan mission: how we're measuring success and how DEQ and OWEB can improve coordination on funding priorities. Discussion led by Mike Llewelyn and Geoff Huntington (4:15 – 5:00)

5:00 - 6:00 Check in to rooms  
 6:00 – 7:00 Joint EQC/OWEB reception with poster session by Rogue Basin Coordinating Council

#### Friday, September 21, 2001

7:00 – 8:00 Check out of rooms  
 8:00 – 8:30 Executive Session in Mt. McLoughlin room

#### 8:30 – 2:00 EQC Meeting in Mt. McLoughlin room

- F. Approval of Minutes (8:30 – 8:35)
- G. Consideration of Tax Credit Requests (8:35 – 9:00)
- H. Action Item: Approval Process for Umatilla Chemical Agent Disposal Facility Operation (9:00 – 11:00)
- I. Director's Report (11:00 – 11:30)
- J. Rule Adoption: On-Site Vehicle Testing Program for Auto Dealers (11:30 – 12:00)  
 Lunch (12:00 – 12:30)
- K. Rule Adoption: Water Quality General Permit Program Rule Amendments (12:30 – 1:00)
- L. Action Item: Petition for Temporary and Permanent Rulemaking to Amend OAR 340-122-0115, regarding Hazardous Substances (1:00 – 1:20)
- M. Temporary Rule Adoption: Pollution Control Facilities Tax Credit (1:20 – 1:40)
- N. Commissioners' Reports (1:40 – 1:45)

2:30 – 3:00 Travel Ashland to Medford airport  
 3:50 - 4:52 United flight 6910 Medford to PDX

**Flight reservations for:**

- |                      |                     |
|----------------------|---------------------|
| 1) Stephanie Hallock | 9) Andy Ginsburg    |
| 2) Mikell O'Mealy    | 10) Mike Kortenhof  |
| 3) Neil Mullane      | 11) Ranei Nomura    |
| 4) Mark Reeve        | 12) Emma Djodjic    |
| 5) Larry Knudsen     | 13) Helen Lottridge |
| 6) Mike Llewelyn     | 14) Jerry Coffe     |
| 7) Dawn Farr         | 15) Paul Slyman     |
| 8) Maggie Vandehey   |                     |

**Lodging reservations for:**

- |                            |                     |
|----------------------------|---------------------|
| 1) Stephanie Hallock       | 13) Wayne Thomas    |
| 2) Mikell O'Mealy          | 14) Andy Ginsburg   |
| 3) Neil Mullane            | 15) Mike Kortenhof  |
| 4) Melinda Eden (2 nights) | 16) Ranei Nomura    |
| 5) Mark Reeve              | 17) Emma Djodjic    |
| 6) Tony Van Vliet          | 18) Sue Oliver      |
| 7) Deirdre Malarkey        | 19) Trisha Markham  |
| 8) Harvey Bennett          | 20) Helen Lottridge |
| 9) Larry Knudsen           | 21) Jerry Coffe     |
| 10) Mike Llewelyn          | 22) Tom Beam        |
| 11) Dawn Farr              | 23) Paul Slyman     |
| 12) Maggie Vandehey        | 24) Kerri Nelson    |



State of Oregon  
Department of Environmental Quality

Memorandum

**Date:** September 18, 2001  
**To:** Environmental Quality Commission  
**From:** Stephanie Hallock, Director *S. Hallock*  
**Subject:** Agenda Item A: Development of Performance Appraisal Process for Director;  
Review and Approval of Director's Transactions  
September 20, 2001 EQC Meeting

**Department Recommendation** The Department requests the Commission adopt a policy (Attachment 1) delegating to the Management Services Division Administrator the review and approval of certain financial transactions of the Director. The Commission would review the approved transactions annually. These post transaction reviews and approvals would be documented in Commission meeting minutes.

**Key Issues** The Department of Administrative Services issued Oregon Accounting Manual (OAM) Policy No. 10.90.00.PO effective July 16, 2001, which set accountability and control standards for the review and approval of certain agency head transactions. The recommended action ensures the Department is in compliance with this new policy.

**EQC Action Alternatives** OAM 10.90.00.PO gives the Commission the option of reviewing and approving each specified transaction itself or delegating this task to the agency second-in-command or chief financial officer. Commissions delegating the process must at least annually review the financial transactions of the Director approved as delegated.

**Attachments**

1. Proposed Department Policy for Approval of Director's Transactions
2. Oregon Accounting Manual Policy No. 10.90.00.PO

Approved:


Section:

Division:

*Debra Lottidge*  
*Debra Lottidge*

Report Prepared By: Judith L. Hatton

Phone: 503-229-5389

<b>DEPARTMENT OF ENVIRONMENTAL QUALITY</b>  <b>POLICIES AND PROCEDURES</b>	<b>POLICY NUMBER:</b> <b>A10.90.00.PO</b>
	<b>SEPTEMBER 20, 2001</b>
	<b>PAGE 1 OF 1</b>
<b>SUBJECT: APPROVAL OF DIRECTOR'S TRANSACTIONS</b>	<b>APPROVAL:</b> 

**INTENT:** to set accountability and control standards for the review and approval of the director's financial transactions.

**AUTHORITY:** Oregon Accounting Manual (OAM) Policy No. 10.90.00.PO

**POLICY:** As delegated by the Environmental Quality Commission, the Management Services Division administrator will review and approve the Director's monthly time reports, requests for vacation payoff, use of exceptional performance leaves, travel expense reimbursement claims, and Small Purchase Order Transaction System (SPOTS) card purchases. This review will be performed in accordance with OAM 10.90.00.PO.

Annually, at the time of the Director's evaluation, the Commission will review the transactions approved as delegated. These post transaction reviews and approvals will be documented in the minutes of the Commission meeting.

<b>OREGON ACCOUNTING MANUAL</b>	Number 10.90.00.PO
Oregon Department of Administrative Services State Controller's Division	Effective Date  July 16, 2001
Chapter <b>Internal Control</b>	
Part <b>Approval of Agency Head Transactions</b>	
Section	Approval: (Signature on File at SCD)

### Accountability and Control Standards

.101	This policy sets accountability and control standards for the determination and delegation of review and approval authority for the agency head's monthly time report, requests for vacation payoff, use of exceptional performance leave, travel expense reimbursement claims, and Small Purchase Order Transaction System (SPOTS) card purchases. This policy is intended to ensure that these transactions are reviewed for completeness and accuracy and that they are in conformance with and measured against the documentation and compliance standards provided herein. In the case of agency heads that are elected, this policy may be applied at the option of that elected official.
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### Establishing Review and Approval Authority

.102	<p>Agency heads appointed by the Governor shall delegate review and approval authority for agency head financial transactions to the chief financial officer or to the person who holds the position of second-in-command to the agency head. The delegation shall be in writing.</p> <p>Agency heads appointed by or reporting to a board or commission shall work with that body to create a review and approval structure for financial transactions of the agency head. The board or commission may delegate the review and approval authority, by direct designation or motion, in writing, to the board or commission chair or ranking officer. Or, the board or commission may delegate to the agency second-in-command, chief financial officer, or may choose to retain an active role in the approval process. Boards and commissions choosing to take an active role in the review and approval process must make the review and approvals of financial transactions a part of their regular meetings and document them in the minutes.</p> <p>Boards and commissions delegating the review and approval process must at least annually review the financial transactions of the agency head approved as delegated. These post transaction reviews and approvals must be documented in the minutes of the board or commission annual meeting.</p>
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### Requirement for Internal Procedure and Review

.103	<p>This policy requires agencies to develop internal procedures for the review and approval of the following agency head transactions:</p> <p>a. Time reporting: Review and approve the agency head's monthly report of sick</p>
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leave, vacation, holiday or other leave hours used. Review for completeness and accuracy and to ensure that all time that has been taken has been reported. Ensure that leave hours comply with HRSD 60.000.01 Sick Leave, 60.000.05 Vacation Leave, 60.010.01 Holidays, 60.000.15 Family Medical Leave, 60.005.01 Leave Without Pay and 60.000.10 Special Leaves with Pay. Time reporting (leave usage) must be documented using either paper or electronic timekeeping methods. The documentation must show that the time reports have been and approved by the appropriate authority, which, in the case of a board or commission, may be the ranking officer of the board. Note: Heads of agencies are classified as exempt from the Fair Labor Standards Act (FLSA) and as such should not be required to report actual hours worked. The time reporting review is intended to focus only on hours related to the categories defined above. The documentation must provide evidence for an audit trail and must be maintained by the agency for the prescribed IRS retention schedule for time records of three years and one quarter as well as the current record retention standards per Secretary of State, Archives Division.

- b. Travel expense reimbursements: Review and approve all travel claims submitted by the agency head, whether for in-state or out-of-state travel. Ensure compliance with DAS Travel Rules **OAM 40 10 00.PO** as well as **OAM 10 40 00 PO**, Expenditures. The review and approval of travel transactions must be documented to provide an audit trail and evidence that the review complies with and was conducted in accordance with the prevailing state policies as listed.
- c. Exceptional Performance Leave: This leave shall be granted to agency heads using the criteria set forth in HRSD 60.000.10 "Special Leaves With Pay". For agency heads appointed by the Governor, this leave shall only be granted by the Governor or by the Director of the Department of Administrative Services on behalf of the Governor. For agency heads reporting to a board or commission, this leave shall be granted by that body or by the board or commission chair and documented in the minutes of the board or commission. The review and approval responsibility is to ensure that the Exceptional Performance leave was granted based on appropriate criteria and authority and is in compliance with HRSD policy 60.000.10. The review and approval of these transactions must be documented to provide an audit trail and evidence that the review complies with and was conducted in accordance with the prevailing state policies as listed. The documentation must clearly demonstrate the criteria upon which the leave was granted. The documentation must include copies of the written request and approval granting the leave and copies of the board or commission minutes, if applicable. The documentation must be retained according to the current record retention standards per Secretary of State, Archives Division.
- d. Vacation Payoff: Review and approve ensuring compliance with HRSD policy 60 000.05 "Vacation Leave". The review and approval of these transactions must be documented to provide an audit trail and evidence that the review complies with and was conducted in accordance with HRSD 60.000.05. That review must clearly demonstrate that the vacation payoff was approved in accordance with Section (6) (b) of that policy which mandates that a vacation payoff is only granted when taking vacation leave is not appropriate. Copies of the written request and approval granting the vacation payoff and copies of the board or commission minutes, if applicable, must be part of the documentation for these transactions.
- e. Use of the Small Purchase Order Transaction System (SPOTS) purchase card: Review purchases to ensure that they are appropriate expenditures that further the business of the state and the mission of the agency and that the use of the SPOTS card complies with **OAM 55 30 00.PO**. The review must be conducted by someone other than the person whose name appears on the card. The review approval of transactions must be documented to provide an audit trail and evidence that the review complies with and was conducted in accordance with the

prevailing state policies as listed.

The documentation for all of the above should be retained according to the current record retention standards per Secretary of State, Archives Division.

#### **Fiscal Officer Responsibility**

.104	Agency fiscal officers processing these financial transactions for the agency head have a duty to pre-audit and verify that the transactions comply with this policy.
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#### **Seeking Guidance from State Controller's Division**

.105	For the purposes of this policy, those persons delegated to review and approve financial transactions for state agency heads have a duty to comply with the provisions of this policy. Any agency head requests to deviate from this policy must be approved by the State Controller. Those persons delegated review and approval authority having reservations or questions about an agency head financial transaction may seek guidance from the State Controller's Division.
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#### **Transactions Subject to Audit**

.106	All financial transactions of state agency heads are subject to periodic audit by the Secretary of State Audits Division.
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FILED: June 5, 2003

IN THE COURT OF APPEALS OF THE STATE OF OREGON

REGGIE D. HUFF,

Petitioner,

v.

ENVIRONMENTAL QUALITY  
COMMISSION,

Respondent.

Environmental Quality Comm.  
No. WQ/I-NWR-00-125

A117410

Argued or submitted on briefs: May 1, 2003

Before Haselton, Presiding Judge, and Linder and Wollheim, Judges

Attorney for Petitioner: Reggie D. Huff, *pro se*

Attorney for Respondent: Jas. Jeffrey Adams

**AFFIRMED WITHOUT OPINION**

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**DESIGNATION OF PREVAILING PARTY AND AWARD OF COSTS**

Prevailing party: Respondent

No costs allowed.                       Costs allowed, payable by:

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Appellate Judgment

Effective Date: August 25, 2003

COURT OF APPEALS



**APPELLATE JUDGMENT**

THIS IS THE APPELLATE JUDGMENT OF  
THE APPELLATE COURTS AND SHOULD  
BE ENTERED PURSUANT TO ORS 19.450.

**BEFORE THE ENVIRONMENTAL QUALITY COMMISSION  
OF THE STATE OF OREGON**

In the Matter of	)	
	)	FINAL ORDER
REGGIE D. HUFF,	)	No. WQ/I-NWR-00-125
	)	
Respondent	)	

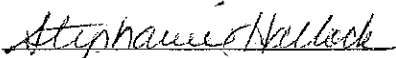
On September 20, 2001, the Environmental Quality Commission considered the Respondent's appeal of Hearing Officer Kevin Anselm's proposed contested case order. That order is dated April 21, 2001 and incorporated herein as Attachment A. The Commission considered the exceptions and brief submitted by the Respondent and the briefs submitted by the Department of Environmental Quality. Neither the Respondent nor the Department requested oral arguments.

At the September hearing, the Commission determined that it wished to hear oral argument on the issue of how the phrase "likely to escape or be carried into waters of the state" in ORS 468B.025(1) should be interpreted and applied to this case. Accordingly, the Commission set the matter over to its regular meeting on December 6, 2001. At the December meeting, oral arguments were provided by Mr. Huff and by Susan Greco, an environmental law specialist with the Department.

After considering the written and oral arguments presented by Mr. Huff and the Department, the Commission affirms the April 27, 2001 proposed order of the Hearing Officer and adopts it as its final order with the following clarification:

The Commission concludes that the term "likely" as used in ORS 468B.025 should be given its ordinary and common meaning and applied on a case-by-case basis. The Hearing Officer correctly found that the waste water was placed in a storm drain. The storm drain was designed to convey storm water into the surrounding ground and groundwater. Under these circumstances, the waste water was placed in a location where it was likely to reach waters of the state.

Dated this 19 day of December, 2001.

  
Stephanie Hallock, Director  
Department of Environmental Quality  
On behalf of the  
Environmental Quality Commission

State of Oregon  
Department of Environmental Quality

Memorandum

**Date:** August 31, 2001  
**To:** Environmental Quality Commission  
**From:** Stephanie Hallock, Director *S. Hallock*  
**Subject:** Agenda Item C, Action Item: Appeal of Proposed Order in the Matter of Reggie Huff, Case No. WQ/I-NWR-00-125, September 20, 2001, EQC Meeting

**Appeal to EQC** Reggie Huff appealed the Proposed Order (Attachment E), dated April 27, 2001, which found Mr. Huff liable for a civil penalty in the amount of \$1,200 for placing waste where it was likely to escape or be carried into waters of the state.

**Background** Findings of fact made by the Hearing Officer are summarized as follows:

On October 30, 2000, the Department assessed Mr. Huff a \$1,400 penalty for allegedly placing waste in a location where it was likely to escape or be carried into waters of the state. Mr. Huff appealed and a contested case hearing was held on February 27, 2001. Mr. Huff operates Acro-Tech, Inc., from a building located at 51377 S.W. Old Portland Road in Scappoose, Oregon. In this building was a 2000-gallon tank, which in 1999, contained approximately 450-500 gallons of water and 55 gallons of ethylene glycol. The solution was used to cool engines used in research. In the spring of 1999, Mr. Huff disposed of the approximately 500 gallons of cooling solution into a storm drain located in the property's parking lot. The storm drain consists of a sump from which fluids flow into a drywell under the parking lot, then drain or seep into the surrounding ground. When disposed of by Mr. Huff, the solution contained ethylene glycol and metal leachings. The ground in the area is generally well drained and includes deposits of clay or clay mixed with other soil types from the surface to depths ranging from 11 to 30 feet.

The Hearing Officer held that Mr. Huff placed 500 gallons of waste where it was likely to escape or be carried into waters of state and he was liable for a civil penalty in the amount of \$1,200. On May 29, 2001, Mr. Huff timely appealed the Proposed Order.

Mr. Huff took the following exceptions to the Proposed Order:

1. the waste was not likely to enter waters of the state,
2. the Hearing Officer erred by replacing 'likely' with 'may' in the Proposed Order,



3. the waste must still be waste by definition when it enters waters of the state, and
4. the wastewater disposed of was not waste.

Additionally, Mr. Huff raises the issue that the Department's Brief was not filed in a timely manner (see Attachment B, Reply Brief). The Department's Brief was filed with Mikell O'Mealy on behalf of the Commission, on June 26, 2001, within 30 days of filing of Mr. Huff's Brief (May 29, 2001), as set forth in the Department's rules. *See* OAR 340-011-0132(3)(b) and Attachments C and D.

The Department expressed concerns that Mr. Huff relied on facts to support his arguments that are not in the record or are not in the Hearing Officer's findings of fact (see Attachment C, Department's Brief). As explained below, the Commission is limited in its ability to modify a recommended finding of fact or accept additional evidence.

**EQC Action  
Alternatives**

The Commission may:

1. As requested by Mr. Huff, find that he did not place waste were it was likely to escape or be carried into waters of the state and is thus, not liable for a civil penalty; or
2. Uphold the Proposed Order determining that Mr. Huff violated ORS 468B.025 and is liable for a civil penalty in the amount of \$1,200.

The Commission may substitute its judgment for that of the Hearing Officer except as noted below.<sup>1</sup> The Order was issued under 1999 statutes and rules for the Hearings Officer Panel Pilot Project,<sup>2</sup> which require contested case hearings to be conducted by a hearing officer appointed to the panel. The Commission's authority to review and reverse the Hearing Officer's decision is limited by the statutes and rules of the Department of Justice that implement the project.<sup>3</sup>

The most important limitations are as follows:

1. The Commission may not modify the form of the Order in any substantial manner without identifying and explaining the modifications.<sup>4</sup>
2. The Commission may not modify a recommended finding of historical

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<sup>1</sup> OAR 340-011-0132.

<sup>2</sup> Or Laws 1999 Chapter 849.

<sup>3</sup> *Id.* at § 5(2); § 9(6).

<sup>4</sup> *Id.* at § 12(2).

fact unless it finds that the recommended finding is not supported by a preponderance of the evidence.<sup>5</sup> Accordingly, the Commission may not modify any historical fact unless it has reviewed the entire record or at least all portions of the record that are relevant to the finding.

3. The Commission may not consider any new or additional evidence, but may only remand the matter to the Hearing Officer to take the evidence.<sup>6</sup>

Rules implementing the 1999 statutes also have more specific provisions for how Commissioners must declare and address any ex parte communications and potential or actual conflicts of interest.<sup>7</sup>

In addition, a number of procedural provisions are established by the Commission's own rules. These include:

1. The Commission will not consider matters not raised before the hearing officer unless it is necessary to prevent a manifest injustice.<sup>8</sup>
2. The Commission will not remand a matter to the Hearing Officer to consider new or additional facts unless the proponent of the new evidence has properly filed a written motion explaining why evidence was not presented to the Hearing Officer.<sup>9</sup>

#### **Attachments**

- A. Letter from Mikell O'Mealy dated August 29, 2001
- B. Mr. Huff's Reply Brief dated July 23, 2001
- C. Department's Brief dated June 26, 2001
- D. Mr. Huff's Petition for Review, Exceptions to Proposed Order, Brief and Attachments dated May 29, 2001
- E. Proposed Order dated April 27, 2001
- F. Exhibits from Hearing of February 27, 2001
  1. Notice of Hearing, Amended Notice of Hearing and Changed Notice of Hearing
    - 1A. Notice of Contested Case Rights and Procedures
  2. Notice of Assessment of Civil Penalty dated August 1, 2000
  3. Huff Request for Hearing dated August 9, 2000
  4. Amended Notice of Assessment of Civil Penalty dated October 30, 2000
  5. Huff Request for Hearing dated November 13, 2000

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<sup>5</sup> *Id.* at § 12(3). A historical fact is a determination that an event did or did not occur or that a circumstance or status did or did not exist either before or at the time of the hearing.

<sup>6</sup> *Id.* at § 8; OAR 137-003-0655(4).

<sup>7</sup> OAR 137-003-0655(5); 137-003-0660.

<sup>8</sup> OAR 340-011-132(3)(a).

<sup>9</sup> *Id.* at (4).

6. Wabschall Letter dated December 10, 1999
7. Notice of Noncompliance dated April 26, 2000
8. Huff Letter dated May 3, 2000
9. Area Map and Well Logs
10. EPA Hazard Summary – Ethylene Glycol/ToxFAQs – Propylene Glycol
11. Condensed Chemical Dictionary – Ethylene Glycol definitions
12. Conversion Factors
13. Crow Water Systems letter and attachments with fax dated August 23, 2000
14. Cox email dated February 25, 2000
15. Complaint log dated August 16, 2000
16. Murphy's note dated April 10, 2000
17. Huff affidavit signed February 14, 2001
18. The Chronicle news release dated October 28, 2000
19. NCA test results dated February 19, 2001
20. NCA letter dated February 22, 2001
21. AcroTech brochure
22. Pictures of grate and recent construction in area of AcroTech parking lot
23. Columbia County Department of Land Development letter dated August 17, 2000 with tax map
24. Greco letter and Mutual Agreement and Order dated September 18, 2000
25. Center for Hazardous Materials Research letter dated January 7, 1994
26. Transmittal of Question dated March 8, 2001
27. Huff letter dated March 15, 2001
28. Letter to Huff from hearing officer dated March 21, 2001
29. Fax from Susan Greco dated March 29, 2001
30. Department Response to Transmitted Question dated April 4, 2001
31. Huff Rebuttal to Transmitted Question dated April 11, 2001

Report Prepared By: Mikell O'Mealy  
Assistant to the Commission

Phone: (503) 229-5301



# Oregon

John A. Kitzhaber, M.D., Governor

Department of Environmental Quality

811 SW Sixth Avenue  
Portland, OR 97204-1390  
(503) 229-5696  
TTY (503) 229-6993

August 29, 2001

Via Certified Mail

Reggie D. Huff  
34685 Bachelor Flat Rd.  
St. Helens, Oregon 97051


RE: Case No. WQ/I-NWR-00-125

The appeal in the above referenced matter has been set for the regularly scheduled Environmental Quality Commission meeting on Thursday, September 20, 2001. The matter will be heard in the regular course of the meeting. The meeting will be held in the McLoughlin Room of the Windmill Inns of America, 2525 Ashland Street, Ashland, Oregon. I will send you the agenda and case record as soon as it is available.

Your representatives are welcome to attend the meeting. However, because you have not requested oral argument before the Commission, your representatives and representatives of the Department will not be allowed to address the Commission on the issues involved in this matter.

If you should have any questions or should need special accommodations, please feel free to call me at (503) 229-5301 or (800) 452-4011 ex. 5301 within the state of Oregon.

Sincerely,

  
Mikell O'Mealy  
Assistant to the Commission



DEQ-1

Attachment A

**Received**  
JUL 23 2001

OFFICE OF THE DIRECTOR

1 Environmental Quality Commission  
2 C/O Mikell O'Mealy, Assistant to the Director, DEQ  
3 811 SW Sixth Avenue  
4 Portland, Oregon 97204

5  
6 July 20, 2001

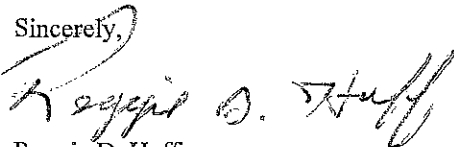
7  
8 RE: **REPLY BRIEF**

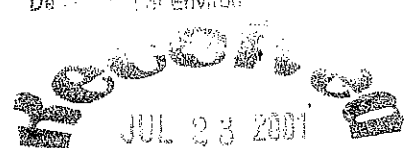
9  
10 Dear Miss O'Mealy:

11 You will find herein the following Reply Brief.

12 Thank you for your consideration of this matter.

13 Sincerely,

14   
15 Reggie D. Huff

State of Oregon  
 Department of Environmental Quality  
  
 JUL 23 2001  
 OFFICE OF THE DIRECTOR

1                    **STATE OF OREGON ENVIRONMENTAL QUALITY COMMISSION**

2	Reggie D. Huff	}	Case No. WQ11-NWR-00-125
3	Respondent - Petitioner	}	
4		}	
5		}	<b>REPLY BRIEF</b>
6	v.	}	
7		}	
8	Department of Environmental Quality	}	
9	Respondent on Petition	}	

10

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11                    The respondent – petitioner, Reggie D. Huff, submits this REPLY BRIEF pursuant to OAR 340-011-

12 0132(3)(c) to the Environmental Quality Commission in order to reply to the Department of Environmental

13 Quality Brief in response to petitioner’s petition for review and brief.

14                    **ARGUMENTS AGAINST DEQ BRIEF**

15                    **Technical Issues**

- 16 1.            The brief is in fact untimely pursuant to OAR 340-011-0132(3)(b).
- 17 2.            No proof of service has been submitted to the petitioner. The cover letter and brief are dated June
- 18 27<sup>th</sup>, 2001, (33 days after service of Petition & Brief), but the envelope it came in is internal meter
- 19 stamped the 28<sup>th</sup>, and further, its delivery suggests it was not actually deposited in the mail until at least
- 20 the 29<sup>th</sup>. Without proof of service the petitioner does not know what date, if any, should be relied on in
- 21 reply.

22                    The petitioner will not object to the acceptance of the untimely and improperly served brief subject

23 to the commission’s acknowledgement of the errors and the DEQ’s refrain from objections to similar

24 oversights if they exist in the future.

25                    **FACTUAL & LEGAL ISSUES**

- 26 1.            The respondent DEQ has asserted in its brief that I have asserted facts not in the record and have
- 27 improperly challenged findings of fact by the hearing officer. Both assertions are incorrect.
- 28                    OAR 340-011-0132(3)(a) states “*Matters not raised before the hearing officer will not be*

1 *considered except when necessary to prevent manifest injustice.*” (Emphasis supplied.)

2 No new “matters” have been raised. At worst I have added some clarification and arguments  
3 exclusive to existing “matters” raised and on the record.

4 Amazingly, however, most of the items Miss Greco cites in her “Attachment A”, and claims are not  
5 on the record, actually are on the record directly. Her claims are just flat wrong.

6 For example: Item #4 – “The discharge had no environmental impact”. Miss Greco clearly claims  
7 this to not be on the record. In fact, a witness for the petitioner, a certified hydrologist, Rob Gill,  
8 testified under oath at the hearing that he believed the discharge had no environmental impact. I have  
9 also stated this repeatedly on the record. This is a fact I will stand on and is clearly on the record.

10 In addition, items #5, 6, 7, 8, and 11 I would challenge as being on the record directly. Miss Greco  
11 is disingenuous in these claims. All of the other items are clearly clarification and arguments of  
12 existing matters all on the record. Surely Miss Greco is not trying to argue (outside of the record) that  
13 arguments are not allowed in the petitioner’s brief.

14 This may, in fact, be the case, as Miss Greco is also arguing that it is improper to challenge the  
15 hearings officer’s finding of fact. Of course this is absurd, both from a practical standpoint as it would  
16 render this entire process meaningless and from a legal standpoint. OAR 340-011-0132(3)(a) actually  
17 requires a challenge to the hearings officer finding and/or conclusions and more specifically requires  
18 that “alternative findings of fact” be presented.

19 It gets even worse however. Miss Greco states in item #5 of her Attachment B that Exhibit 31, my  
20 response to a transmitted question from the hearing officer, which was accepted as being part of the  
21 record prior to her ruling, is not part of the record. Clearly the hearing officer herself considered this  
22 part of the record, as her Exhibit List shows the documents as part of the record without objection.  
23 Miss Greco is just flat wrong. I realize that this document is very threatening to her case, but to  
24 blatantly attempt, through misleading statements, to remove this document from consideration seems  
25 highly inappropriate. This fact also calls into question the credibility of all other statements made by  
26 Miss Greco.

27 2. There are more examples of both Miss Greco and the hearing officer’s ability to fabricate facts on  
28 the fly. They cannot even be true to their own evidence offered by the department. One of many

1 excellent examples is the issue regarding the ubiquitous clay layer in the discharge area and its  
2 thickness. Miss Greco takes exception to my statements that the clay is ubiquitous and approximately  
3 30-35 feet thick. She states that "the hearing officer must have found the documents contained in DEQ  
4 Exhibit 9 and the department's witness more persuasive." (Respondent's brief page 3, line 1 & 2)

5 In fact, the Department's own Exhibit #9 shows that the closest well to the discharge point, half the  
6 distance of any other well, showed a clay layer starting at 2 feet and running down to 46 feet. That is a  
7 clay layer of 44 feet. (See Exhibit - 9 Well 1. Please look at the actual log, not the department's listing  
8 and description.) Another nearby well, owned by the city of Scappoose, and presented by myself as  
9 part of Exhibit #13, shows a clay layer from 3 feet to 60 feet, or 57 feet of clay. (See Exhibit #13 -  
10 Well Log COLU 100)

11 In addition, the one well which the department focused on, which showed "silt" rather than clay  
12 may, in fact, be a re-drill of a decommissioned well, which may explain the presence of silt and gravel.  
13 This question was raised by hydrologist Rob Gill on the record, and officials at the Columbia County  
14 Department of Land Development Services indicated knowledge of a nearby re-drilled well. The DEQ  
15 never clarified the matter. In any event this well is located in the direction deemed least likely to be in  
16 the line of the flow from the discharge point according to Mr. Rob Gill.

17 3. Miss Greco states that the department did not argue that the discharge was toxic.

18 This is a false statement as there is no question that the department did just that, repeatedly.

19 4. Miss Greco points to the initial blush wine color of the discharge in arguing that it must be  
20 considered a waste and that it must be considered a waste in perpetuity regardless of the science and  
21 the facts. The fact is the solution had a light blush wine color some 2 years and 4 months prior to its  
22 discharge. By the time of the discharge the wine color had been gone for many months, and, yes, these  
23 facts are on the record. I know because I put them there several times, including at the hearing itself.

24 5. While attempting to redefine the English language in a most embarrassingly incredulous manner in  
25 order to prop up an extremely poor case, Miss Greco has attacked the cases I cited to illustrate a legal  
26 difference between the words "may" and "likely". Miss Greco has so entirely missed the point here, I  
27 believe intentionally, that it hardly warrants in-depth comment. I will just state, the department,  
28 through her, is just flat wrong again. She is actually trying to claim that there is no difference between



1 these words. I do not understand how any intelligent person, such as Miss Greco, can take these  
2 positions with a straight face.

3 6. On page #6, paragraph #1 & 2 of the Department Brief Miss Greco sticks her neck out again.  
4 Essentially she argues in a convoluted fashion that ORS 468B.025(1)(a) is divided into two sections.  
5 The first is regarding actually 'causing pollution', which has a clear standard that must be met. The  
6 second section, regarding simply "placing wastes", has no standard and amazingly she further argues, I  
7 sincerely doubt with a straight face, that the legislature meant it to be that way.

8 Once again, under her and the hearing officer's new self-appointed re-legislation, everyone is a  
9 violator. I don't understand why she has to pick on me, a person who's very career involves the  
10 development of environmental compatible technologies. Starting from her office she could work  
11 outwards, writing up every man, woman and child she meets, and it would take her 100 years to get to  
12 Columbia County.

13 Miss Greco takes more liberty with the law by declaring that once a water solution meets the  
14 definition of wastes it is always a waste. She clearly argues that placing waste where they are to  
15 become non-wastes by legal definition before entering any waters of the state is a violation of ORS  
16 468B.025(1)(a). Let me repeat: She states unequivocally and clearly that 'placing wastes where they  
17 are to become non-wastes before entering any waters of the state where there is no evidence it even  
18 could or would enter the waters of the state is a violation of the law!

19 Miss Greco has just made every town, city, responsible industrial processor, the Oregon gardens,  
20 etc., violators. By placing wastes where known scientific processes will turn them into non-wastes, (as  
21 opposed to doing what?), these entities have not only violated the law, but the legislature purposely  
22 wrote the law so everyone would become a violator! This is the position you are being asked to  
23 defend!

24 7. On page #5, paragraph #1 of the department's brief it states that the department agrees that an  
25 "error" has been committed by the hearing officer. Then Miss Greco puts forth the most intellectually  
26 dishonest argument of all in order to cover the "error" and claim it to be "harmless"!

27 To you, the reviewer, I must declare it is real easy for Miss Greco, who is not being falsely accused,  
28 asked to give up \$1,200 of her family's money, and, most importantly, is not facing the permanent

1 soiling of her reputation to shamelessly assert that this "error" is "harmless". This "error" goes to the  
2 heart of the mess that has been created by the department's unwillingness to drop a non-case and is  
3 very harmful to me.

4 I am deeply offended by this comment and the intellectually vacant arguments surrounding it.

5 CONCLUSION

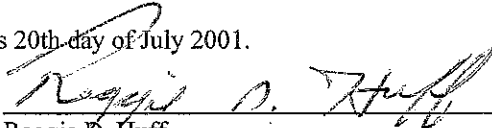
6 The department has admitted that the hearing officer has committed an "error". In addition, the  
7 hearings officer has not found that the petitioner has violated any law, only an illegal, unofficial, self-  
8 serving revision thereof.

9 Therefore a prima facie case for a complete review has been made. The commission has a duty to  
10 review this case at this point and time.

11 I recognize that I am at a distinct disadvantage in this situation. I do not know any of the key  
12 people in this process, as Miss Greco most likely does. I don't know the commission's schedule, etc. I  
13 know at this point that Miss Greco will accept a technical victory, one based on political positioning or the  
14 like. However, I will apologize at this time for the comment I made in my Exception & Brief regarding the  
15 "fox guarding the hen house". I should not have presumed upon the disposition of the commission to this  
16 case.

17 Now that a prima facie case for review has been made the next move by the commission will  
18 determine whether that comment was merely premature rather than incorrect.

19 Respectfully submitted this 20th day of July 2001.

20   
21 \_\_\_\_\_  
22 Reggie D. Huff,  
23 34685 Bachelor Flat Rd.  
24 St. Helens, Oregon 97051

25 Phone: (503)543-8220 - OR - (503) 366-0223

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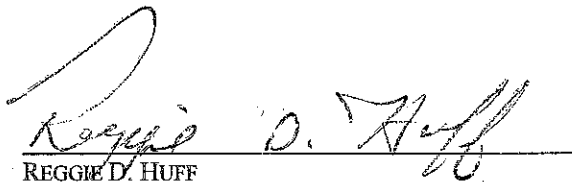
**CERTIFICATE OF MAILING**

I hereby certify that on the 20<sup>th</sup> day of July 2001, I mailed a true copy of the attached REPLY BRIEF and all its attachments in the matter in the State of Oregon Environmental Quality Commission - Case No. WQ11-NWR-00-125, Reggie D. Huff v. Department of Environmental Quality to:

Environmental Quality Commission  
C/O Mikell O'Mealy, Assistant to the Director, DEQ  
811 SW Sixth Avenue  
Portland, Oregon 97204

AND

Susan Greco  
Environmental Law Specialist  
DEQ Enforcement Section  
2020 SW 4<sup>th</sup> Ave., Suite 400  
Portland, Oregon 97201-4959

  
REGGIE D. HUFF

*Crow Water Systems, Inc.*

P.O. BOX 665  
51320 OLD PORTLAND ROAD  
SCAPPOOSE, OREGON 97056  
(503) 543-6326

**To Whom It May Concern:**

The static water levels in the wells I have worked on in the area of Old Portland Road and Dutch Canyon all have been over 40 feet. I am sending three well logs of wells in the area. The logs show static water levels and the material the well driller went through when constructing the well. This area is well drained and the static water level does not change in the different seasons. There is a clay layer in most of this area that helps to seal off surface water from the ground water. If you have any other questions please contact me.

David Graham

Crow Water Systems

EXHIBIT 13

WATER RESOURCES DEPARTMENT  
SALEM, OREGON 97310  
within 30 days from the date  
of well completion.

STATE OF OREGON

(Please type or print)

(Do not write above this line)

State Well No. \_\_\_\_\_

State Permit No. \_\_\_\_\_

Columbia 100

**RECEIVED**

**1) OWNER:**

City of Scapoose

Address \_\_\_\_\_

Scapoose, Oregon 97056

**2) TYPE OF WORK (check):**

new Well  Deepening  Reconditioning  Abandon   
abandonment, describe material and procedure in Item 12.

**3) TYPE OF WELL:**

Surface  Driven   
Tie back  Jetted   
Aug  Bored

**(4) PROPOSED USE (check):**

Domestic  Industrial  Municipal   
Irrigation  Test Well  Other

**5) CASING INSTALLED:**

Threaded  Welded   
12" Diam. from 0 ft. to 186 ft. Casing 375  
10" Diam. from 185 ft. to 1869 ft. Casing 250  
" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Casing \_\_\_\_\_

**6) PERFORATIONS:**

Perforated?  Yes  No.  
Type of perforator used \_\_\_\_\_  
Size of perforations \_\_\_\_\_ in. by \_\_\_\_\_ in.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

**SCREENS:**

Well screen installed?  Yes  No

Manufacturer's Name Johnson Co.  
 Stainless Steel Model No. \_\_\_\_\_  
12" slot size 50 Set from 186'9" ft. to 206'9" ft.  
12" slot size 60 Set from 206'9" ft. to 216'9" ft.  
12" slot size 80 Set from 216'9" ft. to 226'9" ft.

**7) WELL TESTS:**

Drawdown is amount water level is lowered below static level.

As a pump test made?  Yes  No If yes, by whom? Driller  
Flow rate: 500 gal./min. with 72 ft. drawdown after 48 hrs.  
\_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
\_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
Artesian flow \_\_\_\_\_ g.p.m.  
Temperature of water \_\_\_\_\_ Depth artesian flow encountered \_\_\_\_\_ ft.

**8) CONSTRUCTION:**

Material used cement  
Well sealed from land surface to 45 ft.  
Distance of well bore to bottom of seal 16 in.  
Distance of well bore below seal 12 in.  
Number of sacks of cement used in well seal 36 sacks  
How was cement grout placed? pressure pumped

Was a drive shoe used?  Yes  No Plugs \_\_\_\_\_ Size: location \_\_\_\_\_ ft.  
Do strata contain unusable water?  Yes  No  
Depth of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
How of sealing strata off \_\_\_\_\_  
Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_

**(10) LOCATION OF WELL:**

County Columbia Driller's well number 100  
W. 1/2 Section 13 T. 3N R. 2W W.M. \_\_\_\_\_  
Bearing and distance from section or subdivision \_\_\_\_\_  
Dutch Canyon Rd. #2

**(11) WATER LEVEL: Completed well**

Depth at which water was first found \_\_\_\_\_ ft.  
Static level 61 ft. below land surface  
Artesian pressure 228 lbs. per square foot

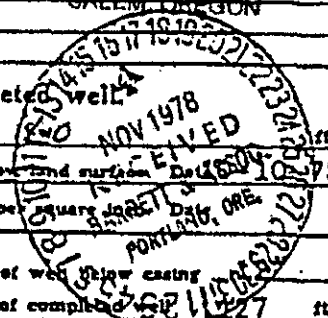
**(12) WELL LOG:**

Diameter of well through casing \_\_\_\_\_ ft.  
Depth drilled 228 ft. Depth of completion 227 ft.  
Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Top soil	0	3	
Clay Brwn. sandy	3	11	
Clay brwn.	11	22	
Clay Br. w/gravel	22	60	
Gravel & Sand cemented	60	123	
Sand w/ trace gravel	123	158	
Gravel med sand fine water	158	180	
Gravel w/mod sand water	180	227	
Clay Blue	227	228	

Work started Sept. 7 1978 Completed Oct. 10 1978  
Date well drilling machine moved off of well 9/25/ 1978  
Drilling Machine Operator's Certification:  
This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.  
(Signed) David Drinnell Date 11/2, 1978  
Drilling Machine Operator's License No. 888

Water Well Contractor's Certification:  
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
Name S & M Drilling & Supply Inc.  
Address 399 se Walnut St. Canby, Oregon 970  
(Signed) Walter Mace



RECEIVED

MAR 20 1998

STATE OF OREGON WATER SUPPLY WELL REPORT (as required by ORS 537.765)

WATER RESOURCES DEPT. WELL I.D. # L 23620 SALEM, OREGON START CARD # 110277

Instructions for completing this report are on the last page of this form.

Colly 50690

(1) OWNER: Well Number Name TED WHITE Address 51583 COLUMBIA RIVER HWY. City SCAPPOOSE State OR Zip 97056

(2) TYPE OF WORK [X] New Well [ ] Deepening [ ] Alteration (repair/recondition) [ ] Abandonment

(3) DRILL METHOD: [X] Rotary Air [ ] Rotary Mud [ ] Cable [ ] Auger [ ] Other

(4) PROPOSED USE: [X] Domestic [ ] Community [ ] Industrial [ ] Irrigation [ ] Thermal [ ] Injection [ ] Livestock [ ] Other

(5) BORE HOLE CONSTRUCTION: Special Construction approval [ ] Yes [X] No Depth of Completed Well 187 ft. Explosives used [ ] Yes [X] No Type Amount

Table with columns: HOLE, SEAL, Diameter, From, To, Material, From, To, Sacks or pounds. Row 1: 13, 0, 20, Bentonite, 0, 20, 27 SKS. Row 2: 8, 20, 187

How was seal placed: Method [ ] A [ ] B [ ] C [ ] D [ ] E [X] Other Poured into dry annular Backfill placed from ft. to ft. Material Gravel placed from ft. to ft. Size of gravel

(6) CASING/LINER: Table with columns: Diameter, From, To, Gauge, Steel, Plastic, Welded, Threaded. Rows for Casing (8") and Liner (6")

Final location of shoe(s) Fig. K Packer @ 167', Shoe @ 176'

(7) PERFORATIONS/SCREENS: Table with columns: From, To, Slot size, Number, Diameter, Type, Material, Casing, Liner. Row 1: 177, 183, .020, 6", pipe

(8) WELL TESTS: Minimum testing time is 1 hour. Table with columns: Yield gpm, Drawdown, Drill stem at, Time. Rows: 80-90, 165, 1 hr; 40-45, 100, 2-3 hrs

Temperature of water 52°F Depth Artesian Flow Found Was a water analysis done? [ ] Yes By whom Did any strata contain water not suitable for intended use? [ ] Too little [ ] Salty [ ] Muddy [ ] Odor [ ] Colored [X] Other IRON

(9) LOCATION OF WELL by legal description: County COLUMBIA Latitude Longitude Township 3N N or S Range 2W E or W. WM. Section 13 SE 1/4 NW 1/4 Tax Lot 12000 Lot Block Subdivision Street Address of Well (or nearest address) 51577 COLUMBIA RIVER HWY., SCAPPOOSE, OR

(10) STATIC WATER LEVEL: 43 ft. below land surface. Date 03/16/98 Artesian pressure lb. per square inch. Date

(11) WATER BEARING ZONES: Depth at which water was first found 97

Table with columns: From, To, Estimated Flow Rate, SWL. Row 1: 177, 183, 80-90 GPM, 43

(12) WELL LOG: Ground Elevation

Table with columns: Material, From, To, SWL. Rows: Brown silty clay occ. boulder 0, 12; Brown gravel & sand, tight boulders 12, 97; Brown sand w/some gravel 97, 111, 43; Brown sand & gravel 111, 135; Gray-black sand & gravel 135, 146; Brown sand w/gravel 146, 158; Gray-black sand w/gravel 158, 162; Gray-black gravel w/course sand 162, 187, 43

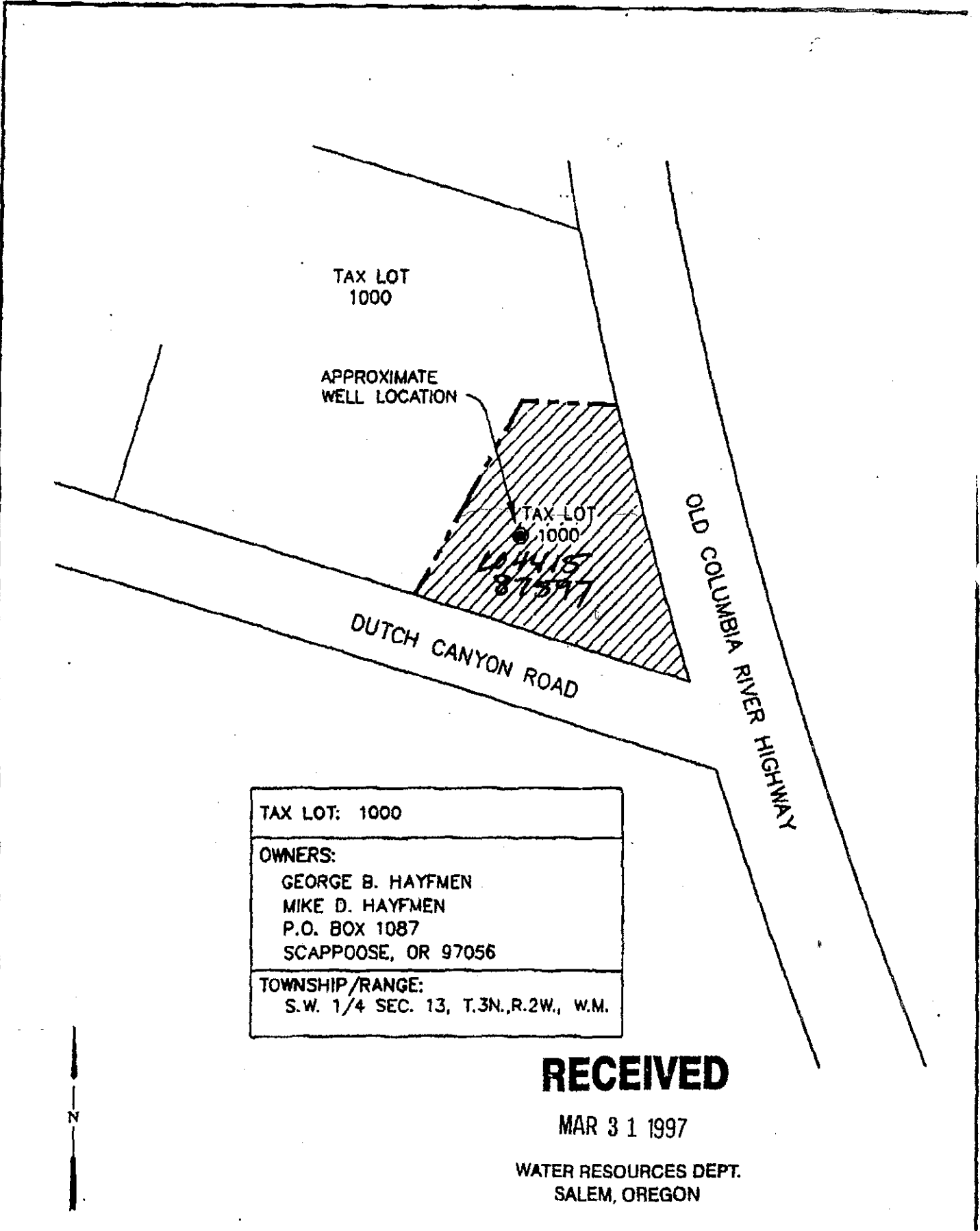
Date started 02/24/98 Completed 03/16/98 (unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.

Signed WWC Number Date

(bonded) Water Well Constructor Certification: I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief. WWC Number 573

NOU-21-1996 08:45



TAX LOT: 1000
OWNERS: GEORGE B. HAYFMEN MIKE D. HAYFMEN P.O. BOX 1087 SCAPPOOSE, OR 97056
TOWNSHIP/RANGE: S.W. 1/4 SEC. 13, T.3N.,R.2W., W.M.

**RECEIVED**

MAR 31 1997

WATER RESOURCES DEPT.  
SALEM, OREGON

DESIGNED BY: P.B	CHECKED BY: RW
DRAWN BY: PAB	SCALE: N.T.S

PROPERTY MAP  
OBSERVATION WELL SITE

DATE: 11/96
----------------

COLU  
50410

WELL # 204415

Start Card # 87597

STATE OF OREGON  
MONITORING WELL REPORT

(as required by ORS 537.765 & OAR 900-240-095)

OWNERS: GEORGE B. & MIKE D. HAVEMEN

(1) OWNER/PROJECT: WELL NO. L04415

Name: ~~George B. Havemen~~

Address: P.O. Box # 1087

City: Scappoose, OR 97056

(2) TYPE OF WORK:

- New construction
- Repair
- Recondition
- Conversion
- Deepening
- Abandonment

(3) DRILLING METHOD

- Rotary Air
- Rotary Mud
- Cable
- Hollow Stem Auger
- Other

(6) LOCATION OF WELL By legal description

Well Location: County Columbia

Township 3 N (N or S) Range 2 W (E or W) Section 1

1. NE 1/4 of SW 1/4 of above section.

2. Street address of well location Intersection of Dutch Canyon Rd & Old Hwy

3. Tax lot number of well location 2205802 #1000

(7) STATIC WATER LEVEL:

52 Ft. below land surface. Date 8-14-96

Artesian Pressure          B/sq. in. Date         

(4) BORE HOLE CONSTRUCTION

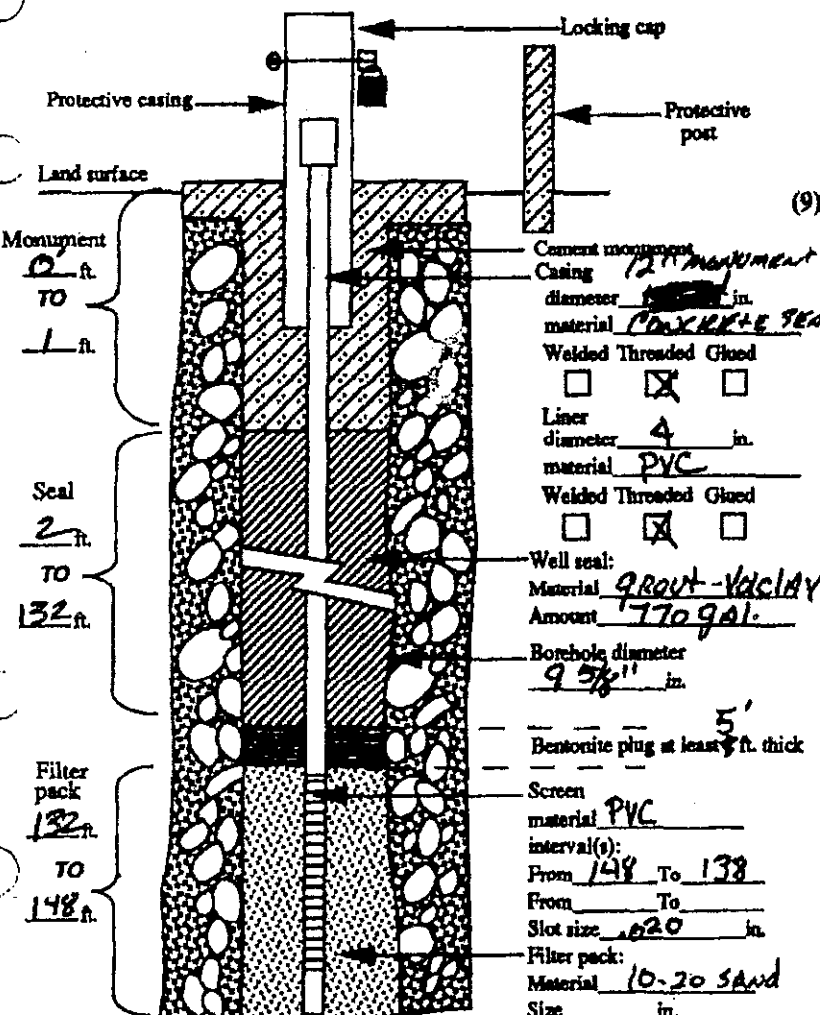
Special Standards  Yes  No Depth of completed well 148 ft.

(8) WATER BEARING ZONES: Depth at which water was first found 52'

From	To	Est. Flow Rate	SWL
76'	80'	5-6 gpm	
146'	148'	50+	

(9) WELL LOG: Ground elevation         

Material	From	To	ft
SAND, GRAVEL, silt	0	76'	
Cobbles			
SAND, GRAVEL, silt	76'	82'	
Cobbles - wet			
SAND, GRAVEL, Cobbles	82'	146'	
WET Silt			
SAND, GRAVEL + Cobbles no silt			
WET	146'	148'	



(5) WELL TEST:

- Pump
- Bailer
- Air
- Flowing Artesian

Permeability          Yield 50+ GPM

Conductivity          PH         

Temperature of water 56 °F Depth artesian flow found          ft.

Was water analysis done?  Yes  No

By whom?         

(unbonded) Monitor Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to the best knowledge and belief.

Signed Clayton MWC Number 104 Date 8-23-96

(bonded) Monitor Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed on this well during the construction dates reported above. All work performed on this well during the construction dates reported above. All work performed on this well during the construction dates reported above.

RECEIVED

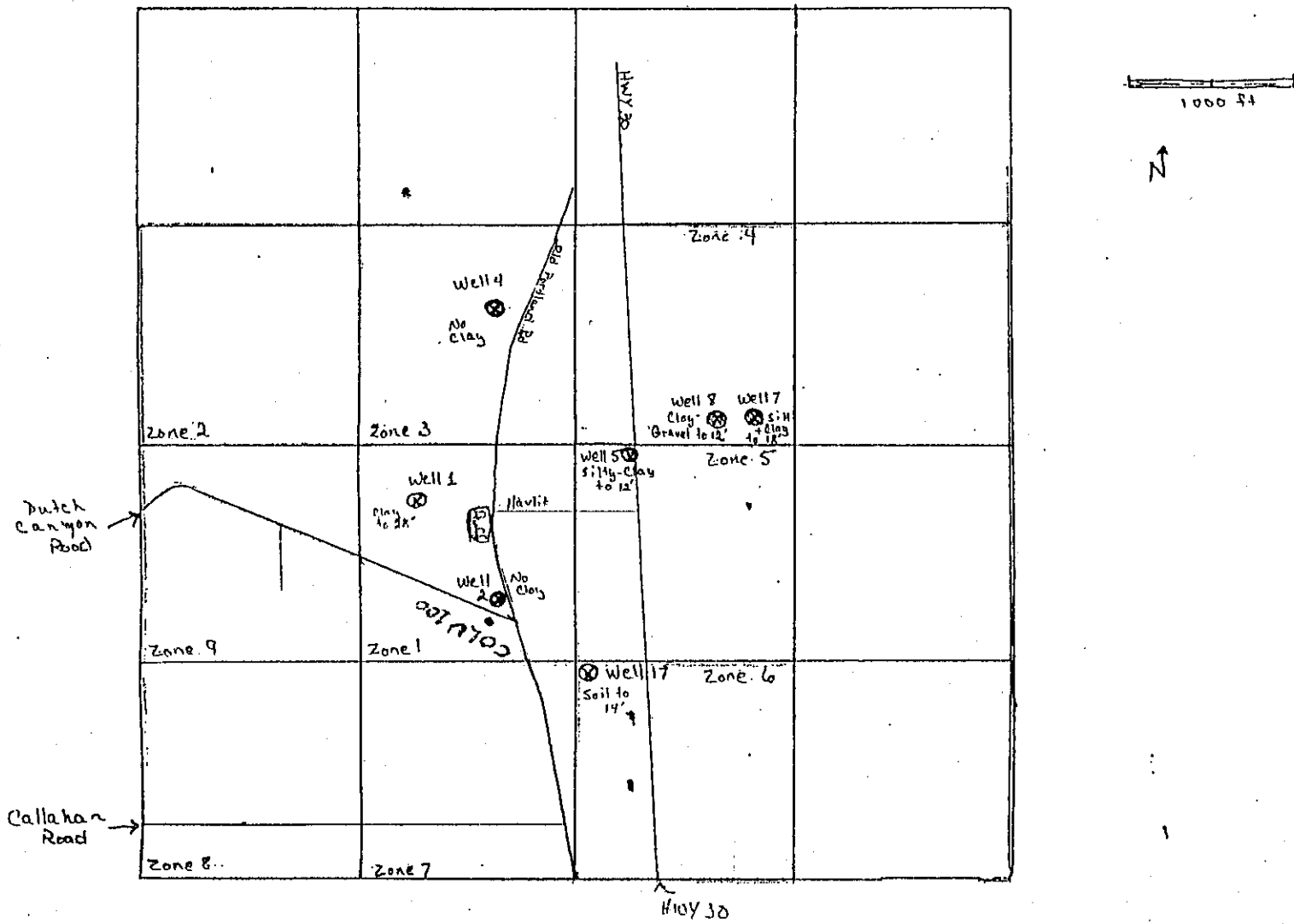
MAR 31 1997

WATER RESOURCES DEPT.  
SALEM OREGON

Date started 8-12-96 Completed 8-14-96



Section 13, T3N, R2W



Well Records within Quarter-Quarter of Section, "Zones" 1 - 9.

**Zone 1:**

- COLU2944 (Well 1): Clay to 28', then 5' boulders, 13' clay, and WB sand.
- \*COLU50410 (Well 2): [Mon. well] No clay to 148'.
- COLU 3105: Clay to 35', then 43 ft. sandy clay.

**Zone 2:**

No wells specifically located in zone.

**Zone 3:**

- COLU3109 (Well 4): No clay.

**Zone 4:**

- COLU726 (Well 7): Silt-clay, silt to 18'; Water found at 10'.
- COLU849 (Well 8): Clay-gravel to 12'; Water found at 12'.
- COLU3102: Clay to 25'; Water found at 45'.

**Zone 5:**

- \*COLU50690 (Well 5): Silty clay to 12'.

**Zone 6:**

- COLU3110 (Well 17): "Soil" to 14'.

**Zone 7:**

- COLU3087 & COLU3084: Clay to 25'.
- COLU3107: Clay to 19'.

**Zone 8:**

- COLU3082: Silty clay & clay to 26'.

**Zone 9:**

- COLU3106: Clay(?) to 25'.

**Zone 1 + 9 (N1/2-SW1/4):**

- \*COLU100: Clay to 22'.
- COLU3090: Clay to 30'.
- COLU3092: Clay to 11'.

**Zone 8 + 9 (S1/2-SW1/4):**

- COLU3086: Clay to 20'.
- COLU3095: Clay to 20'.

# TopoZone.com

Find Super Products.

Type & Click

Get a Map

What's New?

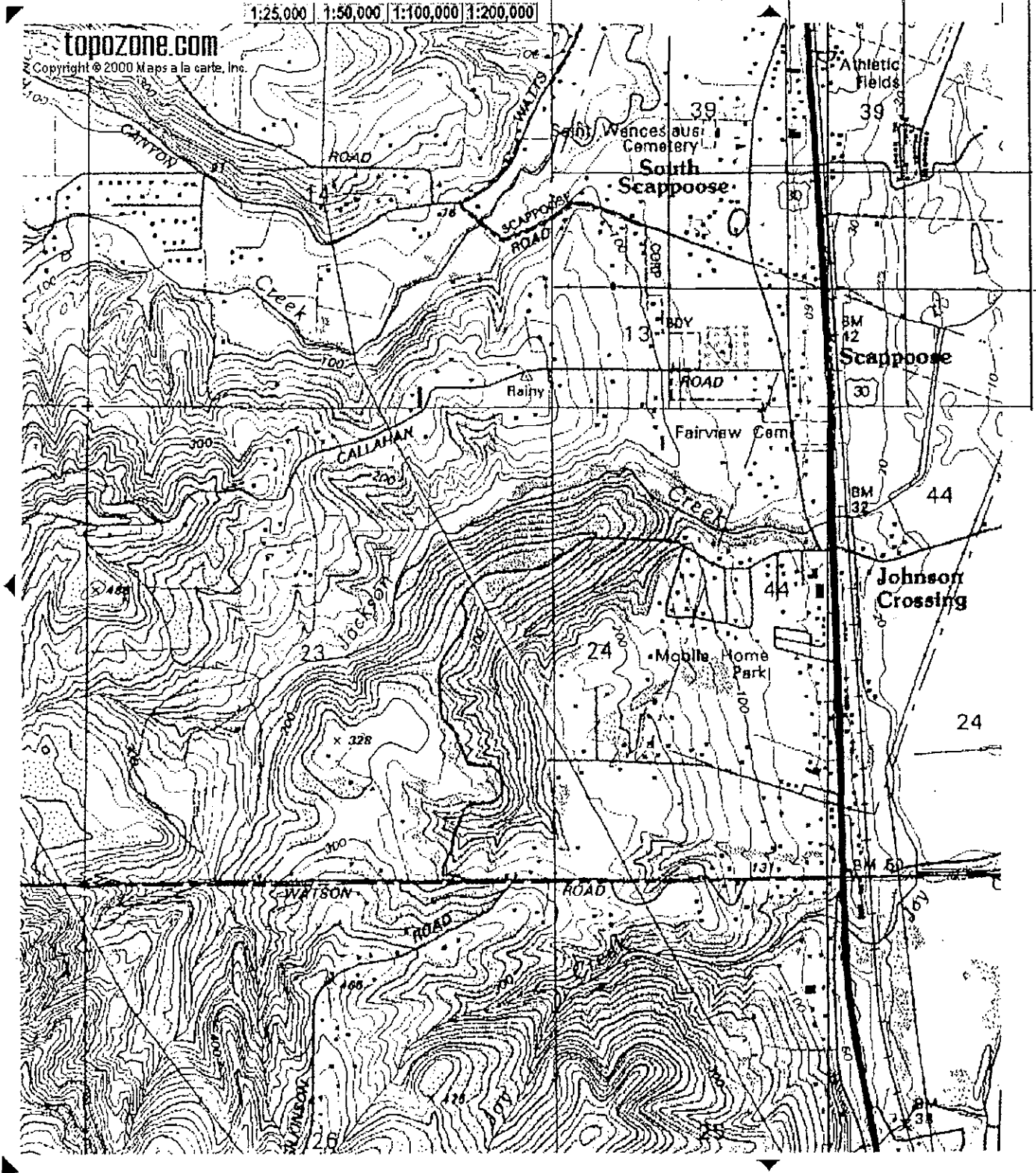
Partners

Info

Map target is 45.7337°N, 122.8762°W - UTM Zone 10, N 5064249, E 509632  
Exact center of display is UTM Zone 10, N 5063871, E 509524

Show Quad Names

1:25,000 | 1:50,000 | 1:100,000 | 1:200,000



NOTICE TO WATER WELL CONTRACTOR  
The original and first copy of this report  
are to be filed with the

**RECEIVED**

WATER RESOURCES DEPARTMENT  
SALEM, OREGON 97310  
within 30 days from the date  
of well completion.

STATE OF OREGON MAY -13 1977

State Well No. 311/2W-300

WATER WELL REPORT  
(Please type or print)  
WATER RESOURCES DEPT. Permit No. 1 cab  
(Do not write above this line)  
SALEM, OREGON

(1) OWNER: *Jack Rusteren*  
Name *Jack Rusteren*  
Address *1177 Box 309 Scappoose Ore*

(10) LOCATION OF WELL:  
County *Columbia* Driller's well number  
NE 1/4 NE 1/4 Section 13 T. 31N R. 2W W.M.  
Bearing and distance from section or subdivision corner

(2) TYPE OF WORK (check):  
New Well  Deepening  Reconditioning  Abandon   
If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL: (4) PROPOSED USE (check):  
Rotary  Driven  Domestic  Industrial  Municipal   
Cable  Jetted  Irrigation  Test Well  Other   
Dug  Bored

(11) WATER LEVEL: Completed well.  
Depth at which water was first found *48* ~~45-15-1977~~  
Static level *8* ft. below land surface. Date *4-10-77*  
Artesian pressure lbs. per square inch. Date

CASING INSTALLED: Threaded  Welded   
6" Diam. from *0* ft. to *4.8* ft. Gage *250*  
" Diam. from ft. to ft. Gage  
" Diam. from ft. to ft. Gage

(12) WELL LOG: Diameter of well below casing *6*  
Depth drilled *50* ft. Depth of completed well *50* ft.

Formation: Describe color, texture, grain size and structure of materials;  
and show thickness and nature of each stratum and aquifer penetrated,  
with at least one entry for each change of formation. Report each change in  
position of Static Water Level and indicate principal water-bearing strata

MATERIAL	From	To	SWL
<i>Bra soil</i>	<i>0</i>	<i>2</i>	
<i>Bra clay</i>	<i>2</i>	<i>28</i>	
<i>Bra clay small boulders</i>	<i>28</i>	<i>33</i>	
<i>Blue clay</i>	<i>33</i>	<i>46</i>	
<i>Black Water bearing sand</i>	<i>46</i>	<i>50</i>	<i>8</i>

PERFORATIONS: Perforated?  Yes  No.  
Type of perforator used  
Size of perforations in. by in.  
perforations from ft. to ft.  
perforations from ft. to ft.  
perforations from ft. to ft.

(7) SCREENS: Well screen installed?  Yes  No  
Manufacturer's Name  
Type Model No.  
Diam. Slot size Set from ft. to ft.  
Diam. Slot size Set from ft. to ft.

(8) WELL TESTS: Drawdown is amount water level is  
lowered below static level  
Was a pump test made?  Yes  No If yes, by whom?  
Yield: gal./min. with ft. drawdown after hrs.  
" " " " " "  
" " " " " "  
Bailer test *40* gal./min. with *10* ft. drawdown after *1* hrs.  
Artesian flow g.p.m.

Work started *4-14* 1977 Completed *4-15* 1977  
Date well drilling machine moved off of well *4-15* 1977

(9) CONSTRUCTION:  
Well seal—Material used *cement & Bentonite*  
Well sealed from land surface to *20* ft.  
Diameter of well bore to bottom of seal *10* in.  
Diameter of well bore below seal *6* in.  
Number of sacks of cement used in well seal *4* sacks  
How was cement grout placed? *Poured in*

Drilling Machine Operator's Certification:  
This well was constructed under my direct supervision.  
Materials used and information reported above are true to my  
best knowledge and belief.  
[Signed] *Joseph Trussell* Date *4-25*, 1977  
(Drilling Machine Operator)  
Drilling Machine Operator's License No. *832*

Was a drive shoe used?  Yes  No Plugs Size: location ft.  
Did any strata contain unusable water?  Yes  No  
Type of water? depth of strata  
Method of sealing strata off  
Was well gravel packed?  Yes  No Size of gravel:  
Gravel placed from ft. to ft.

Water Well Contractor's Certification:  
This well was drilled under my jurisdiction and this report is  
true to the best of my knowledge and belief.  
Name *Frank J. Russell*  
(Person, firm or corporation) (Type or print)  
Address *Manning Ave*  
[Signed] *Frank J. Russell*  
(Water Well Contractor)  
Contractor's License No. *HTA* Date *4-15*, 1977

STATE OF OREGON  
MONITORING WELL REPORT

(as required by ORS 537.765 & OAR 590-240-095)

OWNERS: GEORGE B. & MIKE D. HAYEMEN

COLU by map attached  
50410 WELL # 204415  
Start Card # 87597

(1) OWNER/PROJECT: WELL NO. L04415  
Name ~~George B. Hayemen~~  
Address P.O. Box # 1087  
City Scappoose State OR Zip 97056

(6) LOCATION OF WELL By legal description  
Well Location: County Columbia  
Township 3N (N or S) Range 2W (E or W) Section 13  
1. NE 1/4 of SW 1/4 of above section.  
2. Street address of well location Intersection of Dutchman Rd & Old Hwy 50  
3. Tax lot number of well location 0203802 Scappoose  
4. ATTACH MAP WITH LOCATION IDENTIFIED. #1000 OK

(2) TYPE OF WORK:  
 New construction  Repair  Recondition  
 Conversion  Deepening  Abandonment

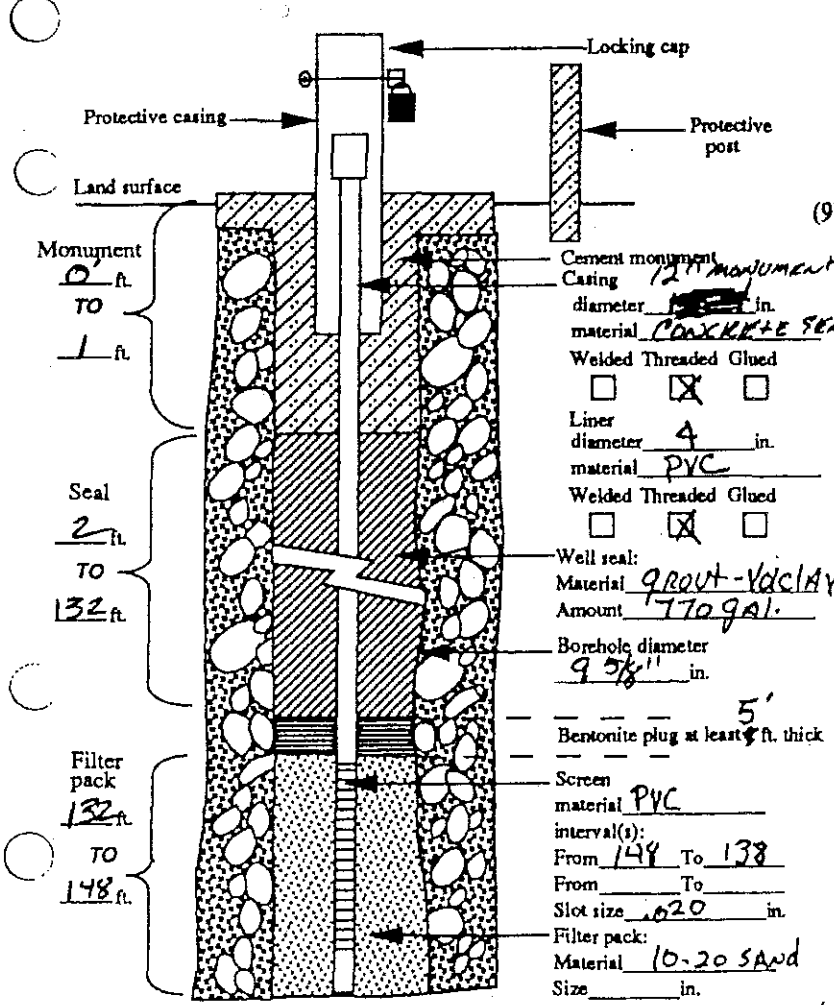
(3) DRILLING METHOD  
 Rotary Air  Rotary Mud  Cable  
 Hollow Stem Auger  Other \_\_\_\_\_

(7) STATIC WATER LEVEL:  
52 Ft. below land surface. Date 8-14-96  
Artesian Pressure \_\_\_\_\_ lb/sq. in. Date \_\_\_\_\_

(4) BORE HOLE CONSTRUCTION  
Special Standards Yes  No  Depth of completed well 148 ft.

(8) WATER BEARING ZONES:  
Depth at which water was first found 52'

From	To	Est. Flow Rate	SWL
76'	80'	5-6 gpm	
140'	148'	50+	



(9) WELL LOG: Ground elevation \_\_\_\_\_

Material	From	To	SWL
SAND, GRAVEL, SILT	0	76'	
Cobbles			
SAND, GRAVEL, SILT	76'	82'	
Cobbles - WET			
SAND, GRAVEL, COBBLES	82'	140'	✓
WET SILT			
SAND, GRAVEL + COBBLES NO SILT			
WET	140'	148'	

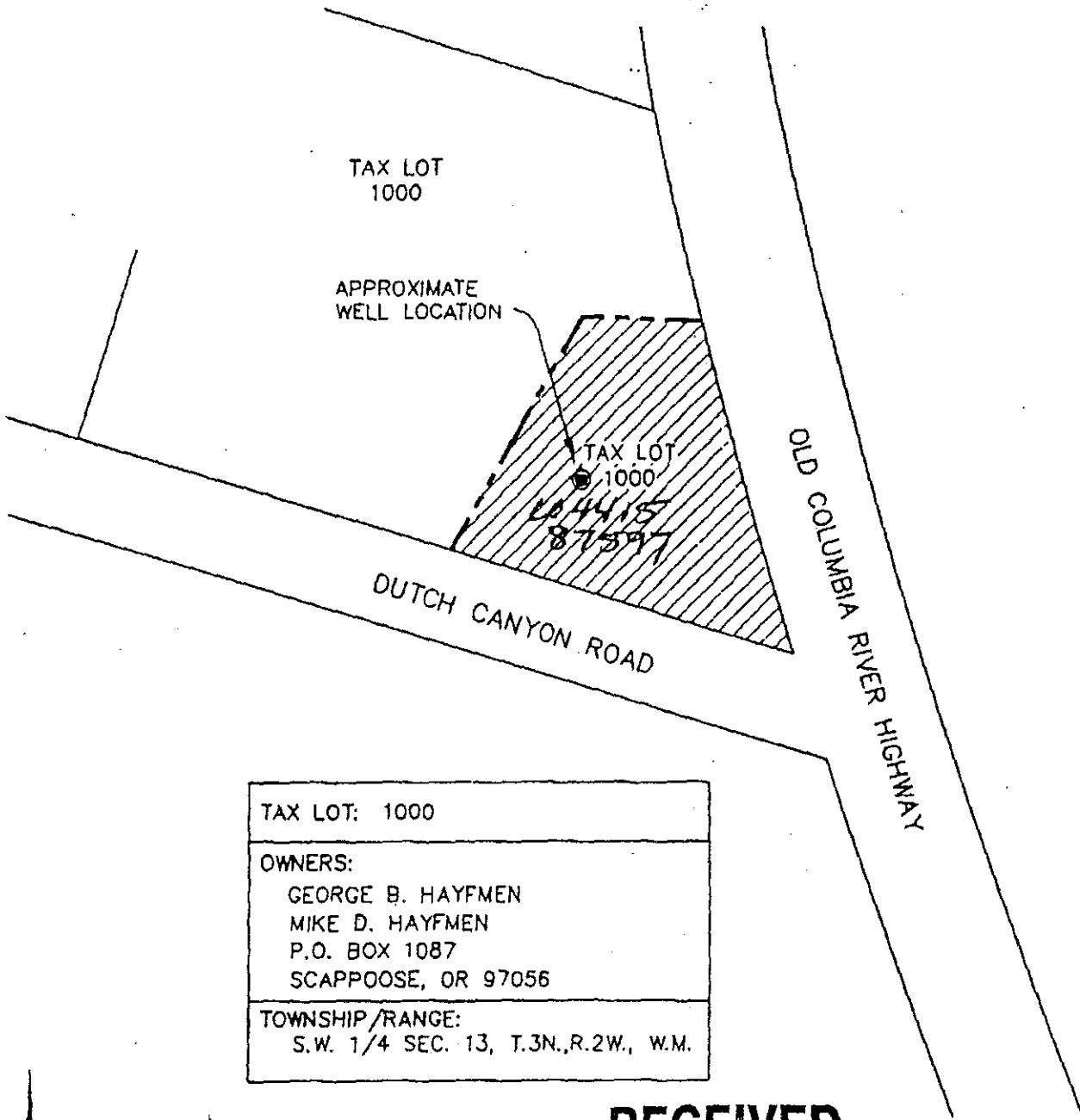
**RECEIVED**  
MAR 1 1997  
WATER RESOURCES DEPT.  
SALEM OREGON  
Date started 8-12-96 Completed 8-14-96

(5) WELL TEST:  
 Pump  Bailer  Air  Flowing Artesian  
Permeability \_\_\_\_\_ Yield 50+ GPM  
Conductivity \_\_\_\_\_ PH \_\_\_\_\_  
Temperature of water 56 °F Depth artesian flow found \_\_\_\_\_ ft.  
Was water analysis done?  Yes  No  
By whom? \_\_\_\_\_  
Depth of strata to be analyzed. From \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Remarks: \_\_\_\_\_

(unbonded) Monitor Well Constructor Certification:  
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to the best knowledge and belief.  
Signed George B. Hayemen MWC Number 10409 Date 8-23-96  
(bonded) Monitor Well Constructor Certification:  
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.  
Signed Travis Thornton MWC Number 10024 Date 8-23-96

Name of supervising Geologist/Engineer Travis Thornton  
GEOLOGICAL RESOURCES - O.R.

OR 60716

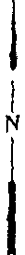



TAX LOT: 1000
OWNERS: GEORGE B. HAYFMAN MIKE D. HAYFMAN P.O. BOX 1087 SCAPPOOSE, OR 97056
TOWNSHIP/RANGE: S.W. 1/4 SEC. 13, T.3N., R.2W., W.M.

**RECEIVED**

MAR 31 1997

WATER RESOURCES DEPT.  
SALEM, OREGON



DESIGNED BY: PB	CHECKED BY: RW	PROPERTY MAP OBSERVATION WELL SITE SCAPPOOSE, OREGON		DATE: 11/96
DRAWN BY: PAB	SCALE: N.T.S.			FIGURE: 1
FILE: 40751001\01\59Z_OBS.DWG				

STATE OF OREGON  
**MONITORING WELL REPORT**  
 Required by ORS 537.765 & OAR 690-240-095)

COLU  
 50409

WELL NO. LO4415

Start Card # 94126

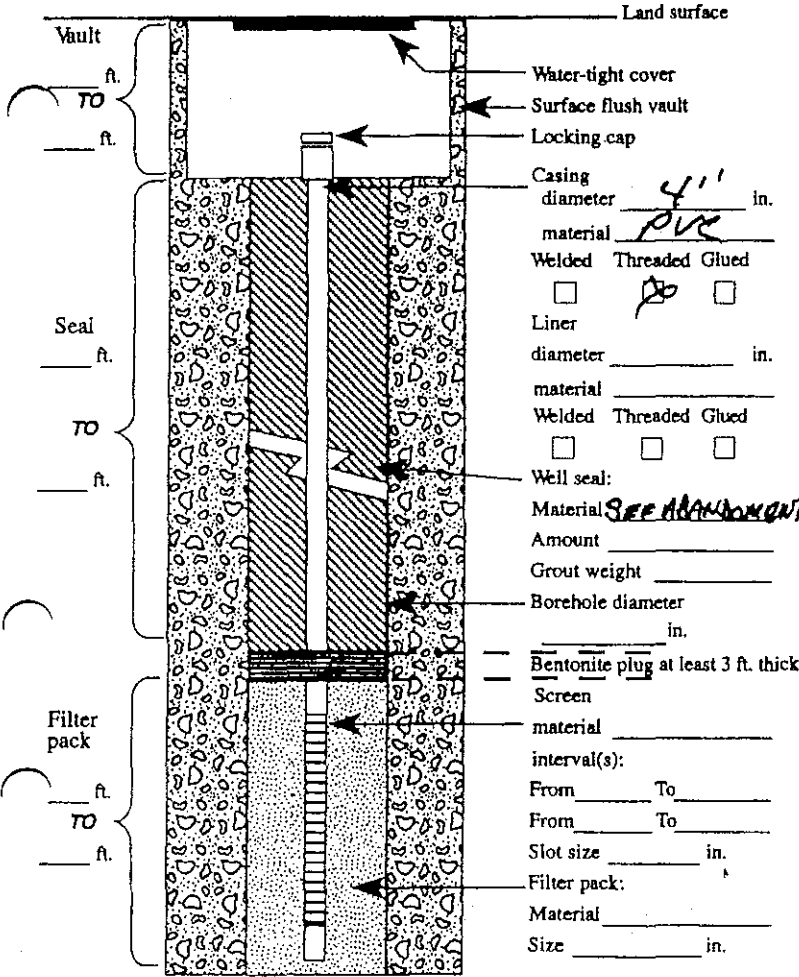
Instructions for completing this report are on the last page of this form.

(1) OWNER/PROJECT: WELL NO. LO4415  
 Name George R. Milled  
 Address P.O. Box 1087  
 City Scappoose State OR Zip 97134

(2) TYPE OF WORK:  
 New construction     Alteration (Repair/Recondition)  
 Conversion     Deepening     Abandonment

(3) DRILLING METHOD  
 Rotary Air     Rotary Mud     Cable  
 Hollow Stem Auger     Other \_\_\_\_\_

(4) BORE HOLE CONSTRUCTION  
 Yes No  
 Special Standards   Depth of completed well 150 ft.



(5) WELL TEST:  
 Pump     Bailer     Air     Flowing Artesian  
 Permeability \_\_\_\_\_ Yield \_\_\_\_\_ GPM  
 Conductivity \_\_\_\_\_ PH \_\_\_\_\_  
 Temperature of water \_\_\_\_\_ °F/C    Depth artesian flow found \_\_\_\_\_ ft.  
 Was water analysis done?  Yes  No  
 By whom? \_\_\_\_\_  
 Depth of strata to be analyzed. From \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 Remarks: \_\_\_\_\_

Name of supervising Geologist/Engineer Ron Weigel  
Century West Eng

(6) LOCATION OF WELL By legal description  
 Well Location: County Columbia  
 Township 3 N (N or S) Range 2 W (E or W) Section 13  
 1. NE 1/4 of SW 1/4 of above section.  
 2. Either Street address of well location Dutch Canyon Rd  
& Old Highway 80, Scappoose, OR  
 or Tax lot number of well location 03003802

(7) STATIC WATER LEVEL: n/a  
 \_\_\_\_\_ Ft. below land surface. Date \_\_\_\_\_  
 Artesian Pressure \_\_\_\_\_ lb/sq. in. Date \_\_\_\_\_

(8) WATER BEARING ZONES:  
 Depth at which water was first found n/a

From	To	Est. Flow Rate	SWL

(9) WELL LOG: Ground elevation \_\_\_\_\_

Material	From	To	SWL
<u>Volcanic grout</u>	<u>1</u>	<u>150</u>	
<u>9.5" 225 gallons</u>			
<u>grout casing in place</u>			

**RECEIVED**

MAR 31 1997

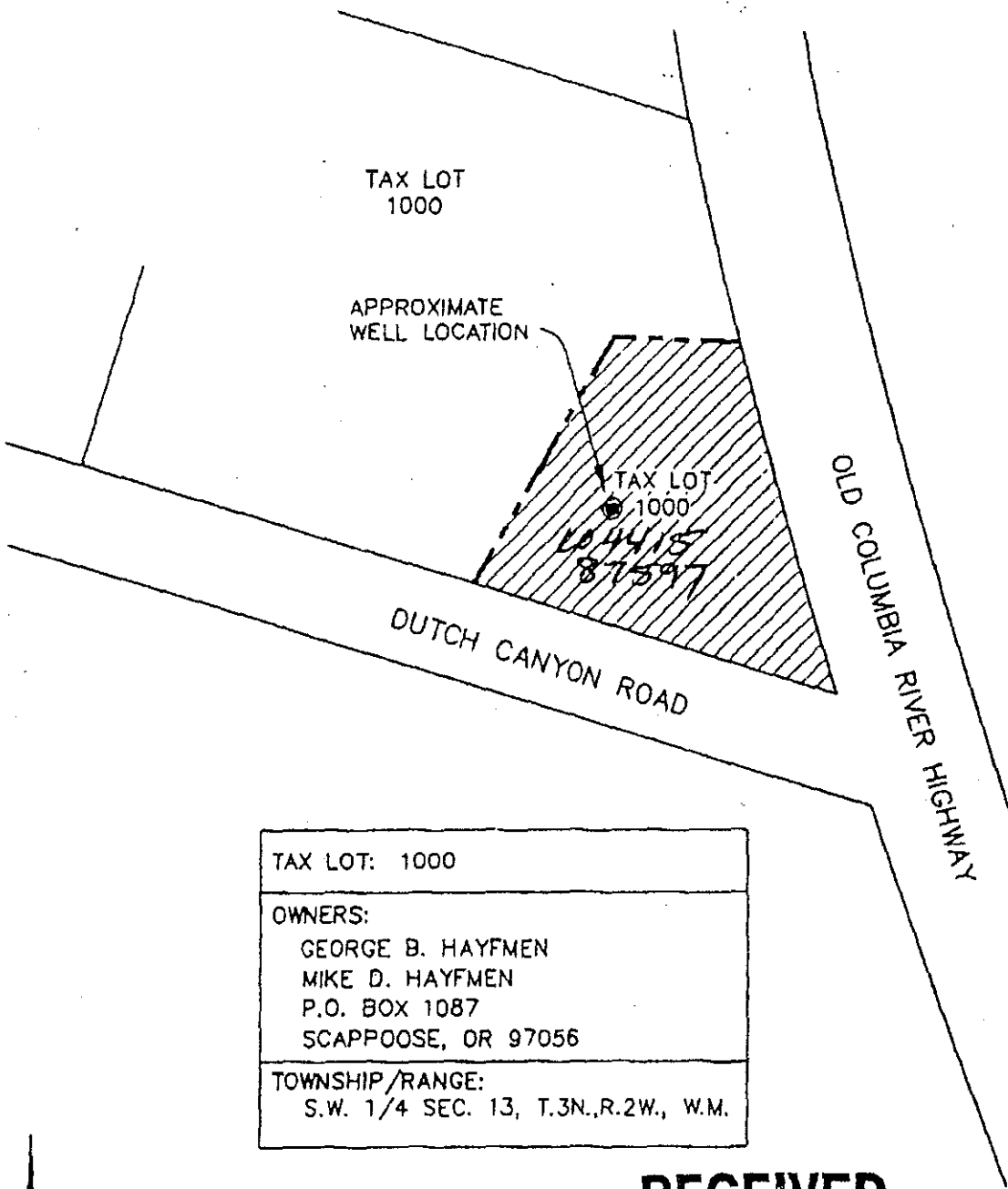
WATER RESOURCES DEPT.  
 SALEM, OREGON

Date started 10-14-96 Completed 10-14-96

(unbonded) Monitor Well Constructor Certification:  
 I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to the best knowledge and belief.  
 Signed Rodney Labrosse MWC Number 10329 Date 10-14-96

(bonded) Monitor Well Constructor Certification:  
 I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.  
 Signed [Signature] MWC Number 10024 Date 10-14-96

OR6107



TAX LOT: 1000

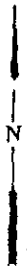
OWNERS:  
 GEORGE B. HAYFMEN  
 MIKE D. HAYFMEN  
 P.O. BOX 1087  
 SCAPPOOSE, OR 97056


TOWNSHIP/RANGE:  
 S.W. 1/4 SEC. 13, T.3N.,R.2W., W.M.

**RECEIVED**

MAR 31 1997

WATER RESOURCES DEPT.  
SALEM, OREGON



DESIGNED BY: PAB	CHECKED BY: RW	PROPERTY MAP OBSERVATION WELL SITE SCAPPOOSE, OREGON		DATE: 11/96
DRAWN BY: PAB	SCALE: N.T.S			FIGURE: 1
FILE: 40751001\01\59Z_OBS.DWG				

NOTICE TO WATER WELL CONTRACTOR

The original and first copy, of this report are to be filed with the

STATE ENGINEER, SALEM, OREGON 97310 within 30 days from the date of well completion.

WATER WELL REPORT

STATE OF OREGON (Please type or print)

(Do not write above this line)

RECEIVED

JUN 30 1976

WATER RESOURCES DEPT.

State Well No. 3N-2W-13-CA

State Permit No. 372176

(1) OWNER:

Name Wilhelm Rickert Address Route 1, Box 112, Scappoose, Ore. 97056

(2) TYPE OF WORK (check):

New Well [x] Deepening [ ] Reconditioning [ ] Abandon [ ] If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary [x] Cable [ ] Dug [ ] Driven [ ] Jetted [ ] Bored [ ]

(4) PROPOSED USE (check):

Domestic [x] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ]

(5) CASING INSTALLED:

6" Diam. from 0 ft. to 160 ft. Gage 250

PERFORATIONS:

Perforated? [ ] Yes [x] No

Type of perforator used Size of perforations in. by in. perforations from ft. to ft.

(7) SCREENS:

Well screen installed? [ ] Yes [x] No

Manufacturer's Name Type Model No. Diam. Slot size Set from ft. to ft.

(8) WELL TESTS:

Drawdown is amount water level is lowered below static level

Was a pump test made? [ ] Yes [x] No If yes, by whom? Yield: 25 gal./min. with total drawdown after 1 hrs.

(9) CONSTRUCTION:

Well seal—Material used Cement Well sealed from land surface to 18 ft. Diameter of well bore to bottom of seal 9 in.

(10) LOCATION OF WELL:

County Columbia Driller's well number NE 1/4 SW 1/4 Section 13 T. 3N R. 2W W.M. Bearing and distance from section or subdivision corner

(11) WATER LEVEL: Completed well.

Depth at which water was first found 70 ft. Static level 84 ft. below land surface. Date 6-23-76 Artesian pressure lbs. per square inch. Date

(12) WELL LOG:

Diameter of well below casing 6

Depth drilled 240 ft. Depth of completed well 240 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated with at least one entry for each change of formation.

Table with 4 columns: MATERIAL, From, To, SWI. Rows include Top Soil, Brown Clay, Sandy Brown clay, Glue clay, Soft brown rock, Black basalt, Gray basalt, Gray basalt, fractured water, Gray basalt.

Work started 6-22 1976 Completed 6-23 1976 Date well drilling machine moved off of well 6-23-1976

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.

[Signed] David Donnelly Date 6-25-1976 (Drilling Machine Operator)

Drilling Machine Operator's License No. 883

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Name S & M Drilling & Supply, Inc. (Person, firm or corporation)

Address 399 S.E. Walnut St., Canby, Ore.

[Signed] Walter Mac (Water Well Contractor)

Contractor's License No. 497 Date 6-25, 1976



STATE OF OREGON  
**GEOTECHNICAL HOLE REPORT**  
(as required by OAR 690-240-035)

COLL  
 50077

WELL

14

(1) OWNER/PROJECT: Hole Number B-1  
 Name Scappoose School District  
 Address 33700 SE High School Way  
 City Scappoose State OR Zip \_\_\_\_\_

(2) TYPE OF WORK  
 New  Deepening  Alteration (repair/recondition)  Abandonment

(3) CONSTRUCTION:  
 Rotary Air  Hand Auger  Hollow Stem Auger  
 Rotary Mud  Cable Tool  Push Probe  Other

(4) TYPE OF HOLE:  
 Uncased Temporary  Cased Permanent  
 Uncased Permanent  Slope Stability  Other

(5) USE OF HOLE:  
Geotechnical

(6) BORE HOLE CONSTRUCTION:  
 Special Construction approval  Yes  No Depth of Completed Hole \_\_\_\_\_ ft.

HOLE			SEAL			Sacks or pounds
Diameter	From	To	Material	From	To	
			N/A			

Backfill placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_  
 Filter Pack placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Size of pack \_\_\_\_\_

(7) CASING/SCREEN:

	Diameter	From	To	Gauge	Material			
					Steel	Plastic	Welded	Threaded
Casing:					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Screen:					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Slot size \_\_\_\_\_

(8) WELL TEST:  
 Pump  Bailer  Air  Flowing Artesian  
 Permeability \_\_\_\_\_ Yield \_\_\_\_\_ GPM \_\_\_\_\_  
 Conductivity \_\_\_\_\_ PH \_\_\_\_\_  
 Temperature of water N/A °F/C Depth artesian flow found \_\_\_\_\_ ft.  
 Was water analysis done?  Yes  No  
 By whom? \_\_\_\_\_  
 Depth of strata analyzed. From \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 Remarks: \_\_\_\_\_

NW Geotech #1301

(9) LOCATION OF HOLE by legal description:  
 County Columbia Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
 Township 3 N or S Range 2 E or W. WM.  
 Section 13 NW 1/4 NE 1/4  
 Tax Lot NONE Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
 Street Address of Well (or nearest address) 33700 SE High School Way, Scappoose, OR  
Varies with Per Columbia County  
Map with location identified must be attached tax assessor's

(10) STATIC WATER LEVEL:  
 \_\_\_\_\_ ft. below land surface. Date 1/13/96  
 Artesian pressure \_\_\_\_\_ lb. per square inch. Date \_\_\_\_\_

(11) SUBSURFACE LOG:  
 Ground Elevation \_\_\_\_\_

Material Description	From	To	SWL
Brown, moist to very moist, dense, slightly silty to silty, sandy gravel w/occass. cobbles.	0'	12'	
Gray-bwn, saturated, very dense, silty, sandy gravel w/occasional cobbles.	12'	25.5'	

Date Started 1/13/96 Date Completed 1/13/96

(12) ABANDONMENT LOG:

Material Description	From	To	Sacks or Pounds
Bentonite chips & Bentonite powder	0'	25.5'	2 sacks
Native			1 sack

Date started 1/13/96 Date Completed 1/13/96

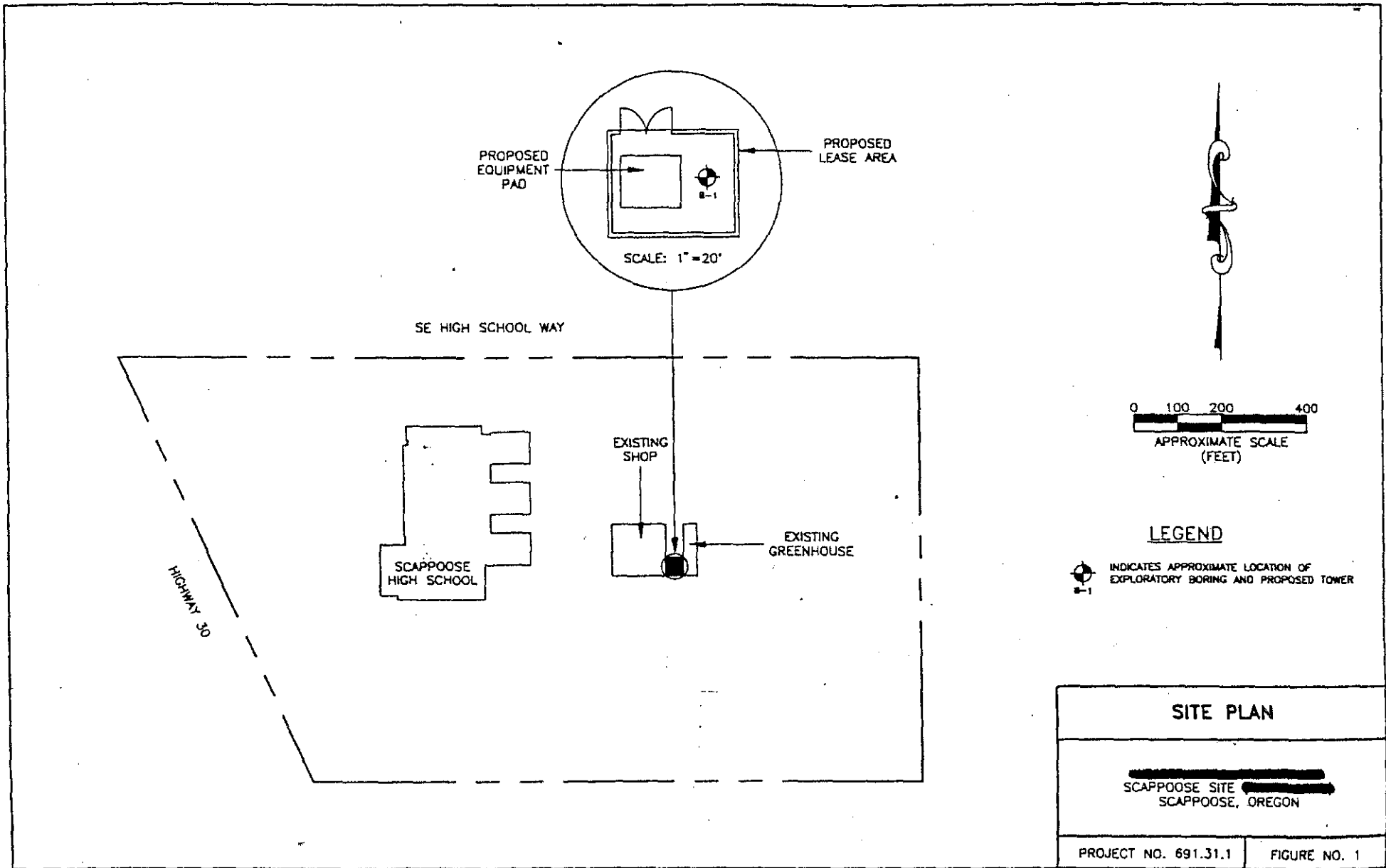
**Professional Certification**  
 (to be signed by a licensed water supply or monitoring well constructor, or registered geologist or civil engineer).


I accept responsibility for the construction, alteration, or abandonment work performed on during the construction dates reported above. All work performed during this time is in compliance with Oregon geotechnical hole construction standards. This report is true to the best of my knowledge and belief.

License or Registration Number 10013  
 Signed Randy L. Crisman Date 2/13/96  
 Affiliation Crisman Dilling, Inc.

THIS REPORT MUST BE SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK

ORIGINAL & FIRST COPY-WATER RESOURCES DEPARTMENT SECOND COPY-CONSTRUCTOR THIRD COPY-CUSTOMER



<b>SITE PLAN</b>	
 SCAPPOOSE SITE SCAPPOOSE, OREGON	
PROJECT NO. 691.31.1	FIGURE NO. 1

RECEIVED

MAY 26 2000

STATE OF OREGON  
GEOTECHNICAL HOLE REPORT  
(as required by OAR 690-240-035)

colu  
51328

most likely in  
NW of NE

WATER RESOURCES DEP  
SALEM, OREGON

(1) OWNER/PROJECT: Hole Number #1  
Name Scappoose School Dist 15  
Address 33700 SE High School Way  
City Scappoose State OR Zip \_\_\_\_\_

(2) TYPE OF WORK  
 New  Deepening  Alteration (repair/recondition)  Abandonment

(3) CONSTRUCTION:  
 Rotary Air  Hand Auger  Hollow Stem Auger  
 Rotary Mud  Cable Tool  Push Probe  Other \_\_\_\_\_

(4) TYPE OF HOLE:  
 Uncased Temporary  Cased Permanent  
 Uncased Permanent  Slope Stability  Other \_\_\_\_\_

(5) USE OF HOLE: Well Tower

(6) BORE HOLE CONSTRUCTION:  
Special Construction approval  Yes  No Depth of Completed Hole 27 ft.

HOLE			SEAL			Sacks or pounds
Diameter	From	To	Material	From	To	
<u>8 1/4"</u>	<u>0</u>	<u>27</u>	<u>Decorative</u>	<u>27</u>	<u>0</u>	<u>9</u>

Backfill placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_  
Filter Pack placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Size of pack \_\_\_\_\_

(7) CASING/SCREEN:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Screen:					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Slot size					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(8) WELL TEST:  
 Pump  Bailer  Air  Flowing Artesian  
Permeability \_\_\_\_\_ Yield \_\_\_\_\_ GPM \_\_\_\_\_  
Conductivity \_\_\_\_\_ PH \_\_\_\_\_  
Temperature of water \_\_\_\_\_ °F/C Depth artesian flow found \_\_\_\_\_ ft.  
Was water analysis done?  Yes  No  
By whom? \_\_\_\_\_  
Depth of strata analyzed. From \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Remarks: \_\_\_\_\_

(9) LOCATION OF HOLE by legal description:  
County Columbia Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
Township 3 N or S Range 2 W E or W WM.  
Section 13 NW 1/4 SW 1/4  
Tax Lot 101 Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
Street Address of Well (or nearest address) 33700 SE High School Way

Map with location identified must be attached

(10) STATIC WATER LEVEL:  
none ft. below land surface. Date 4-26-00  
Artesian pressure \_\_\_\_\_ lb. per square inch. Date \_\_\_\_\_

(11) SUBSURFACE LOG:  
Ground Elevation \_\_\_\_\_

Material Description	From	To	SWL
<u>Gravel</u>	<u>0</u>	<u>27</u>	

Date Started 4-26-00 Date Completed 4-26-00

(12) ABANDONMENT LOG:

Material Description	From	To	Sacks or Pounds
<u>Bentonite chips</u>	<u>27</u>	<u>0</u>	<u>3</u>

Date started 4-26-00 Date Completed 4-26-00

Professional Certification  
(to be signed by a licensed water supply or monitoring well constructor, or Oregon registered geologist or civil engineer).  
I accept responsibility for the construction, alteration, or abandonment work performed during the construction dates reported above. All work performed during this time is in compliance with Oregon's geotechnical hole construction standards. This report is true to the best of my knowledge and belief.  
License or Registration Number 10013  
Signed Larry L. Cusman Date 5/24/00  
Affiliation \_\_\_\_\_

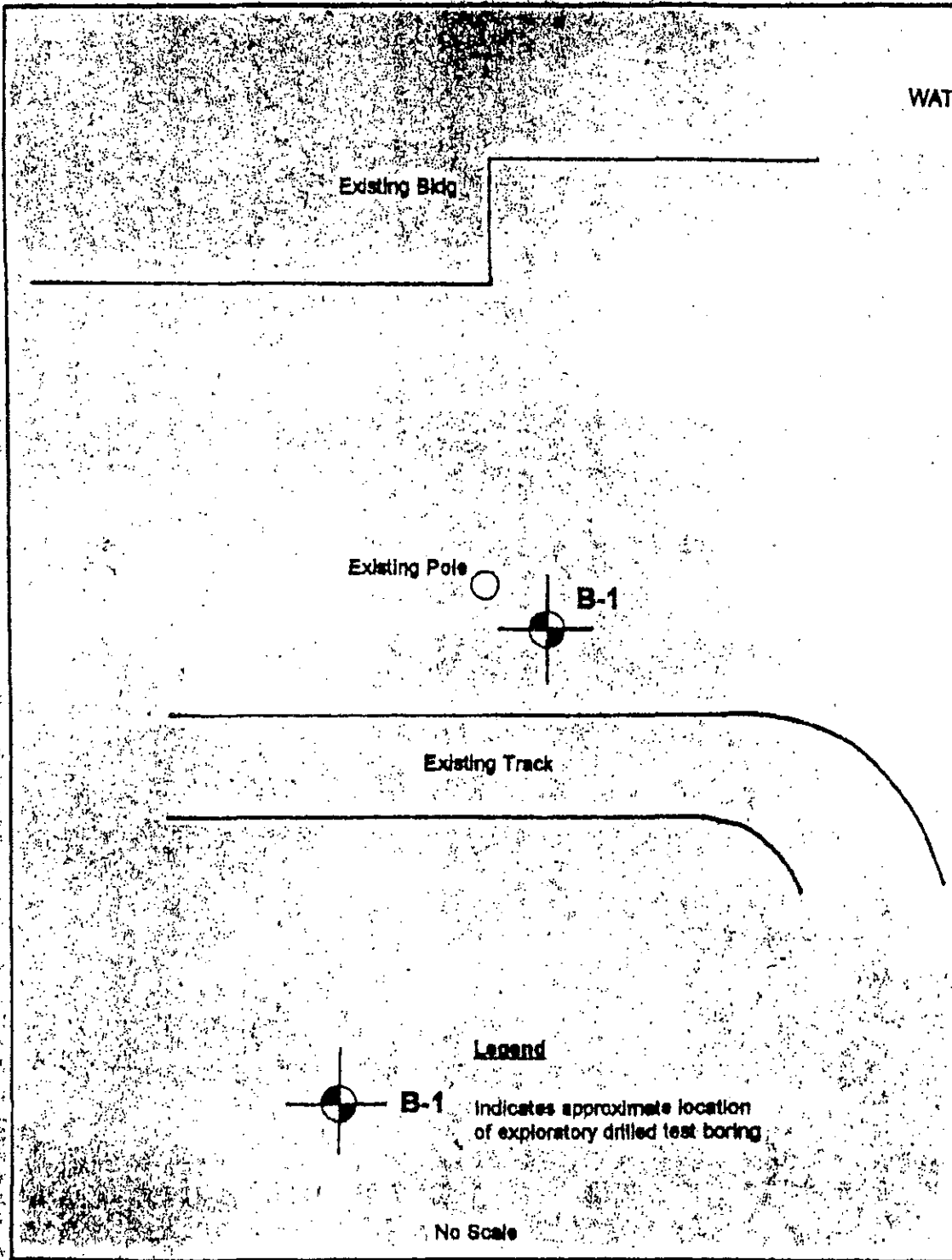
THIS REPORT MUST BE SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK

ORIGINAL - WATER RESOURCES DEPARTMENT FIRST COPY - CONSTRUCTOR SECOND COPY - CUSTOMER

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MAY 26 2000

WATER RESOURCES DEP  
SALEM, OREGON



**SITE EXPLORATION MAP**

Project No. 110.119.G

**PROPOSED SCAPPOOSE CELL SITE**

Figure No. 2

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STATE OF OREGON  
**GEOTECHNICAL HOLE REPORT**  
 (as required by OAR 690-240-035)

(1) OWNER/PROJECT: Hole Number B/1  
 Name SCARPOOSE HIGH SCHOOL  
 Address 33700 SE HIGH SCHOOL WAY  
 City SCARPOOSE State OR Zip 97106

(2) TYPE OF WORK  
 New  Deepening  Alteration (repair/recondition)  Abandonment

(3) CONSTRUCTION:  
 Rotary Air  Hand Auger  Hollow Stem Auger  
 Rotary Mud  Cable Tool  Push Probe  Other

(4) TYPE OF HOLE:  
 Uncased Temporary  Cased Permanent  
 Uncased Permanent  Slope Stability  Other

(5) USE OF HOLE:  
GEOTECH

(6) BORE HOLE CONSTRUCTION:  
 Special Construction approval  Yes  No Depth of Completed Hole 22 ft.

HOLE			SEAL			Sacks or pounds
Diameter	From	To	Material	From	To	
8"	22	0	BENTONITE	22	0	11

Backfill placed from 22 ft. to 0 ft. Material BENTONITE  
 Filter Pack placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Size of pack \_\_\_\_\_

(7) CASING/SCREEN:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Screen:					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Slot size	_____							

(8) WELL TEST:  
 Pump  Bailer  Air  Flowing Artesian  
 Permeability \_\_\_\_\_ Yield \_\_\_\_\_ GPM \_\_\_\_\_  
 Conductivity \_\_\_\_\_ PH \_\_\_\_\_  
 Temperature of water \_\_\_\_\_ °C. Depth artesian flow found \_\_\_\_\_ ft.  
 Was water analysis done?  Yes  No  
 By whom? None  
 Depth of strata analyzed. From \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 Remarks: \_\_\_\_\_

(9) LOCATION OF HOLE by legal description:  
 County COLUMBIA Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
 Township 3 or S Range 2  
 Section 13 NE 1/4 NE 1/4  
 Tax Lot 00101 Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
 Street Address of Well (or nearest address) \_\_\_\_\_

Map with location identified must be attached

(10) STATIC WATER LEVEL:  
 \_\_\_\_\_ ft. below land surface. Date \_\_\_\_\_  
 Artesian pressure \_\_\_\_\_ lb. per square inch. Date \_\_\_\_\_

(11) SUBSURFACE LOG:  
 Ground Elevation \_\_\_\_\_

Material Description	From	To	SWL
SAND GRAVEL & COBBLES	0	22	

Date Started 10/17/00 Date Completed 10/17/00

(12) ABANDONMENT LOG:

Material Description	From	To	Sacks or Pounds
BENTONITE	22	0	11

Date started 10/17/00 Date Completed 10/17/00

**Professional Certification**

(to be signed by a licensed water supply or monitoring well constructor, or Oregon registered geologist or civil engineer).

I accept responsibility for the construction, alteration, or abandonment work performed during the construction dates reported above. All work performed during this time is in compliance with Oregon's geotechnical hole construction standards. This report is true to the best of my knowledge and belief.

License or Registration Number 10306  
 Signed J. Paul Carter Date 10/23/00  
 Affiliation SUBSURFACE TECH.

THIS REPORT MUST BE SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK

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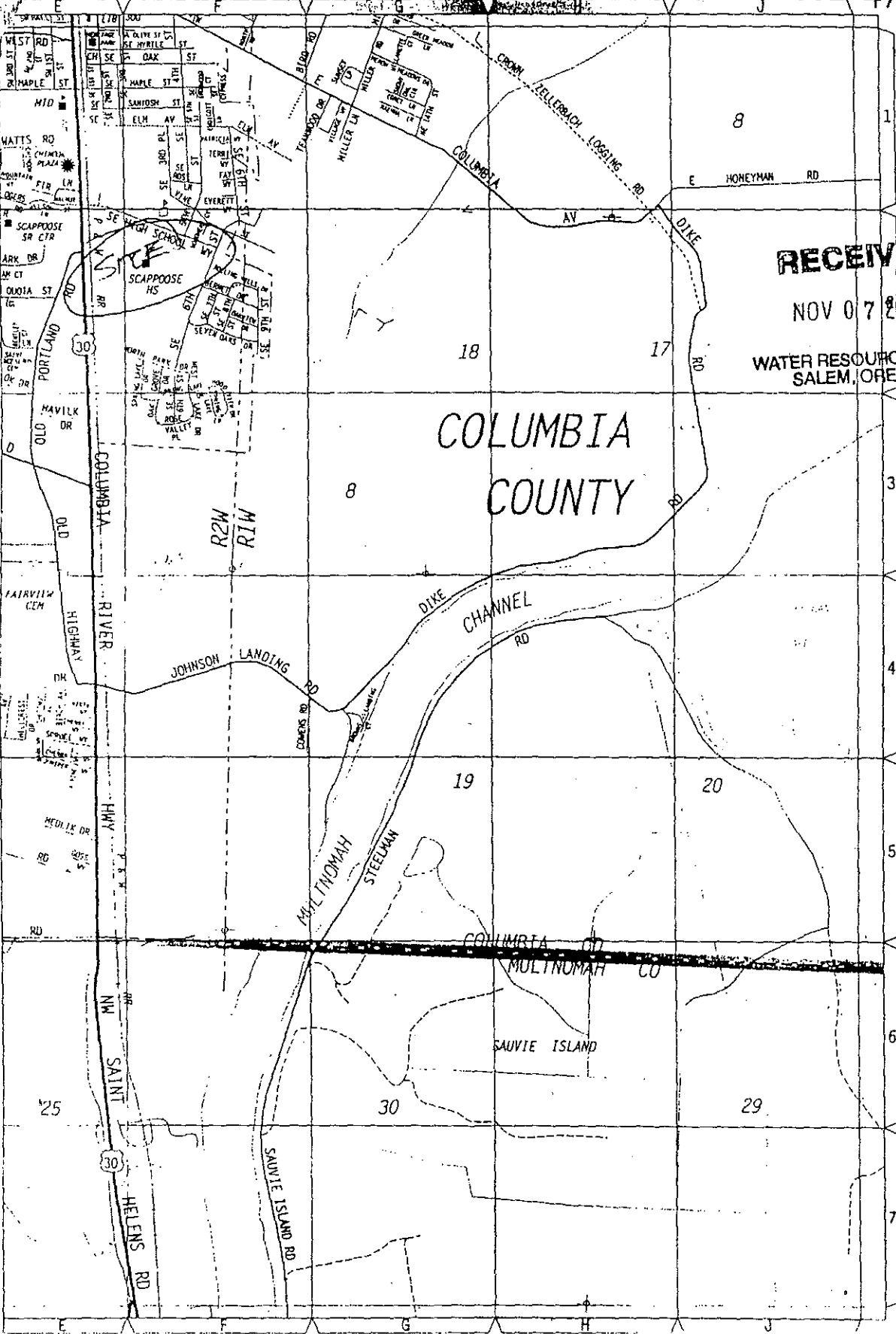
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NOV 07 2000

WATER RESOURCES DEPT.  
SALEM, OREGON

# COLUMBIA COUNTY



SL 475 WP

COLU 51429

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NOV 07 2000

WATER RESOURCES DEPT.  
SALEM, OREGON

Hiway 30

HIGH  
SCHOOL

Football  
FIELD

-B/1

N

1" = 100'

NOTICE TO WATER WELL CONTRACTOR

The original and first copy of this report are to be filed with the

STATE ENGINEER, SALEM, OREGON 97310  
within 30 days from the date of well completion.

WATER WELL REPORT

STATE OF OREGON

(Please type or print)

(Do not write above this line)

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NOV 2 1976

State Well No.

Permit No.

SALEM, OREGON

3N/2W-13

1) OWNER:

Name LEONARD M. WULFF JR.  
Address RT. 1 BOX 70 A SCARPOOSE, OR. 97056

2) TYPE OF WORK (check):

New Well  Deepening  Reconditioning  Abandon

If abandonment, describe material and procedure in Item 12.

3) TYPE OF WELL:

Rotary  Driven   
Cable  Jetted   
Dug  Bored

4) PROPOSED USE (check):

Domestic  Industrial  Municipal   
Irrigation  Test Well  Other

CASING INSTALLED:

Threaded  Welded   
6" Diam. from 0 ft. to 92 ft. Gage 250  
" Diam. from " ft. to " ft. Gage  
" Diam. from " ft. to " ft. Gage

PERFORATIONS:

Perforated?  Yes  No

Type of perforator used

Size of perforations in. by in.  
perforations from " ft. to " ft.  
perforations from " ft. to " ft.  
perforations from " ft. to " ft.

7) SCREENS:

Well screen installed?  Yes  No

Manufacturer's Name \_\_\_\_\_ Model No. \_\_\_\_\_  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

8) WELL TESTS:

Drawdown is amount water level is lowered below static level

Was a pump test made?  Yes  No If yes, by whom?  
D: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
" " " " " "  
" " " " " "  
Bailey test 13 gal./min. with 20 ft. drawdown after 1 hrs.  
Artesian flow \_\_\_\_\_ g.p.m.  
Temperature of water \_\_\_\_\_ °C Depth artesian flow encountered \_\_\_\_\_ ft.

9) CONSTRUCTION:

Well seal—Material used BENTONITE  
Well sealed from land surface to 30 ft.  
Diameter of well bore to bottom of seal 10 in.  
Diameter of well bore below seal 6 in.  
Number of sacks of cement used in well seal 5 sacks  
Number of sacks of bentonite used in well seal 5 sacks  
Brand name of bentonite INTERNATIONAL  
Number of pounds of bentonite per 100 gallons of water 100 lbs./100 gals.  
Was a drive shoe used?  Yes  No Plugs \_\_\_\_\_ Size: location \_\_\_\_\_ ft.  
Did any strata contain unusable water?  Yes  No  
Type of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
Method of sealing strata off \_\_\_\_\_  
Well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
Placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

10) LOCATION OF WELL:

County COLUMBIA Driller's well number \_\_\_\_\_  
NE 1/4 NE 1/4 Section 13 T. 3N R. 2W W.M. \_\_\_\_\_  
Bearing and distance from section or subdivision corner SW CORNER

11) WATER LEVEL: Completed well.

Depth at which water was first found 69 ft.  
Static level 57 ft. below land surface. Date 9-8-76  
Artesian pressure \_\_\_\_\_ lbs. per square inch. Date \_\_\_\_\_

12) WELL LOG:

Diameter of well below casing 6"

Depth drilled 92 ft. Depth of completed well 92 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
TOP SOIL	0	1	
CLAY BROWN	1	11	
CLAY BROWN W/ GRAVEL	11	69	
GRAVEL W/ CLAY - GRAY	69	79	57
SAND COURSE W/ CLAY GRAY	79	86	57
GRAVEL & SAND W/ CLAY	86	90	57
GRAVEL MED. W/ COURSE SAND	90	92	57

Work started 8-18 1976 Completed 9-8-1976  
Date well drilling machine moved off of well 9-10-1976

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.

[Signed] Ron Edgell Date 9-12, 1976  
(Drilling Machine Operator)

Drilling Machine Operator's License No. 589

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Name RON EDGELL PUMP & WELL DRILLING  
(Person, firm or corporation) (Type or print) 98611

Address P.O. BOX 695 CASTLE ROCK, W.A.

[Signed] Ron Edgell  
(Water Well Contractor)

Contractor's License No. 515 Date 9-12, 1976



NOTICE TO WATER WELL CONTRACTOR

The original and first copy of this report are to be filed with the

STATE ENGINEER, SALEM, OREGON 97301 within 30 days from the date of well completion.

WATER WELL REPORT

STATE OF OREGON (Please type or print)

(Do not write above this line)

RECEIVED

NOV 2 1976

State Well No. 3N/2W-13a

State Permit No. \_\_\_\_\_

SALEM, OREGON

NE-NE

(1) OWNER:

Name WINSTON A. ROBERTS  
Address RT. 1 BOX 72 SCAPPOOSE OR 97134

(2) TYPE OF WORK (check):

New Well  Deepening  Reconditioning  Abandon   
If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary  Driven   
Cable  Jetted   
Dug  Bored

(4) PROPOSED USE (check):

Domestic  Industrial  Municipal   
Irrigation  Test Well  Other

CASING INSTALLED:

Threaded  Welded   
6" Diam. from 0 ft. to 91 ft. Gage 1350  
" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_  
" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_

PERFORATIONS:

Perforated?  Yes  No.

Type of perforator used \_\_\_\_\_

Size of perforations in. by in.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(7) SCREENS:

Well screen installed?  Yes  No

Manufacturer's Name \_\_\_\_\_  
Type \_\_\_\_\_ Model No. \_\_\_\_\_  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(8) WELL TESTS:

Drawdown is amount water level is lowered below static level

Was a pump test made?  Yes  No If yes, by whom?  
\_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
" " " " " "  
" " " " " "  
Bailer test 13 gal./min. with 20 ft. drawdown after 1 hrs.  
Artesian flow \_\_\_\_\_ g.p.m.  
Temperature of water 57 Depth artesian flow encountered \_\_\_\_\_ ft.

(9) CONSTRUCTION:

Well seal—Material used BENTONITE  
Well sealed from land surface to 25 ft.  
Diameter of well bore to bottom of seal 10 in.  
Diameter of well bore below seal 6 in.  
Number of sacks of cement used in well seal \_\_\_\_\_ sacks  
Number of sacks of bentonite used in well seal 4 sacks  
Brand name of bentonite INTERNATIONAL  
Number of pounds of bentonite per 100 gallons of water 100 lbs./100 gals.  
Was a drive shoe used?  Yes  No Plugs \_\_\_\_\_ Size: location \_\_\_\_\_ ft.  
Did any strata contain unusable water?  Yes  No  
Type of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
Method of sealing strata off \_\_\_\_\_  
Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(10) LOCATION OF WELL:

County COLUMBIA Driller's well number \_\_\_\_\_  
NE 1/4 NE 1/4 Section 13 T. 3N R. 2W W.M. \_\_\_\_\_  
Bearing and distance from section or subdivision corner \_\_\_\_\_

(11) WATER LEVEL: Completed well.

Depth at which water was first found 70 ft.  
Static level 57 ft. below land surface. Date 9-21-76  
Artesian pressure \_\_\_\_\_ lbs. per square inch. Date \_\_\_\_\_

(12) WELL LOG:

Diameter of well below casing 6"

Depth drilled 91 1/2 ft. Depth of completed well 91 1/2 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata

MATERIAL	From	To	SWL
TOP SOIL	0	1	
CLAY BROWN	1	12 1/2	
CLAY BROWN w/ GRAVEL	12 1/2	20	
GRAVEL w/ CLAY BROWN	20	28	57
SAND COURSE w/ CLAY BROWN	28	36	57
GRAVEL + SAND w/ CLAY BROWN	36	39	57
GRAVEL MED. + SAND COURSE	39	91 1/2	57
WATER BEARING			

Work started 8-19 1976 Completed 9-21- 1976  
Date well drilling machine moved off of well 9-21- 1976

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.

[Signed] Ron Edgell Date 9-24, 1976  
(Drilling Machine Operator)

Drilling Machine Operator's License No. 589

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Name RON EDGELL PUMP & WELL DRILLING  
(Person, firm or corporation) (Type or print)

Address P.O. BOX 695 CASTLE ROCK, W.A. 98611

[Signed] Ron Edgell  
(Water Well Contractor)

Contractor's License No. 515 Date 9-21, 1976

NOTICE TO WATER WELL CONTRACTOR  
The original and first copy of this report are to be filed with the  
STATE ENGINEER, SALEM, OREGON 97310 within 30 days from the date of well completion.

COLLY  
3108

RECEIVED  
MAY 24 1967

WATER WELL REPORT  
STATE OF OREGON ENGINEER  
(Please type or print) G-3930 OREGON  
State Well No. 3N/10S-7E  
State Permit No. \_\_\_\_\_

2W-13A

(1) OWNER:

Name *Lewis Lengua*  
Address *Box 1756 Scappoose Ore*

(2) LOCATION OF WELL:

County *Col* Driller's well number *66*  
1/4 Section *18* T. *3N* R. *1W* W.M.  
Bearing and distance from section or subdivision corner

(3) TYPE OF WORK (check):

Well  Deepening  Reconditioning  Abandon   
If abandonment, describe material and procedure in Item 12.

(4) PROPOSED USE (check):

Domestic  Industrial  Municipal  Irrigation  Test Well  Other   
Rotary  Cable  Dug  Driven  Jetted  Bored

(6) CASING INSTALLED:

*6*" Diam. from *0* ft. to *59* ft. Gage *17*  
" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_  
" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_

(7) PERFORATIONS:

Perforated?  Yes  No  
Type of perforator used \_\_\_\_\_  
Size of perforations \_\_\_\_\_ in. by \_\_\_\_\_ in.  
perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(8) SCREENS:

Well screen installed?  Yes  No  
Manufacturer's Name \_\_\_\_\_ Model No. \_\_\_\_\_  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(9) CONSTRUCTION:

Well seal—Material used in seal *Bestonite*  
Depth of seal *18* ft. Was a packer used? *yes*  
Diameter of well bore to bottom of seal *11* in.  
Were any loose strata cemented off?  Yes  No Depth \_\_\_\_\_  
Was a drive shoe used?  Yes  No  
Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Did any strata contain unusable water?  Yes  No  
Type of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
Method of sealing strata off \_\_\_\_\_

(10) WATER LEVELS:

Static level *9* ft. below land surface Date *5/9/67*  
Artesian pressure \_\_\_\_\_ lbs. per square inch Date \_\_\_\_\_

(11) WELL TESTS:

Drawdown is amount water level is lowered below static level  
Was a pump test made?  Yes  No If yes, by whom?  
Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
" " " " " "  
" " " " " "  
Bailer test *45* gal./min. with *25* ft. drawdown after *1* hrs.  
Artesian flow \_\_\_\_\_ g.p.m. Date \_\_\_\_\_  
Temperature of water \_\_\_\_\_ Was a chemical analysis made?  Yes  No

(12) WELL LOG:

Diameter of well below casing \_\_\_\_\_  
Depth drilled *60* ft. Depth of completed well *60* ft.  
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
<i>Black soil</i>	<i>0</i>	<i>3</i>
<i>St. Br. clay</i>	<i>3</i>	<i>7</i>
<i>" " " med. grav.</i>	<i>7</i>	<i>21</i>
<i>St. Br. sand + med. fine gravel</i>	<i>21</i>	<i>35</i>
<i>St. Br. sand coarse</i>	<i>35</i>	<i>60</i>

Work started *April 1* 19 *67* Completed *May 3* 19 *67*  
Date well drilling machine moved off of well *May 4* 19 *67*

(13) PUMP:

Manufacturer's Name *Goulds*  
Type: *Sub.* H.P. *5*

Water Well Contractor's Certification:  
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
NAME *Svend A. Hald*  
(Person, firm or corporation) (Type or print)  
Address *Box 1267 St. Helens Ore.*  
Drilling Machine Operator's License No. *144*  
[Signed] *Svend A. Hald*  
(Water Well Contractor)  
Contractor's License No. *261* Date *5/7/67*, 19 *67*

Colu  
50483

RECEIVED

JUL 30 1997

416003

STATE OF OREGON  
WATER SUPPLY WELL REPORT  
(as required by ORS 537.765)

WATER RESOURCES DEPT.  
SALEM, OREGON

(START CARD) # 097811

Instructions for completing this report are on the last page of this form.

(1) OWNER: Well Number \_\_\_\_\_

Name Stephen & Judie Ingraham  
Address 51836 SE, 6th St  
City Scappoose State OR Zip 97056

(2) TYPE OF WORK  
 New Well  Deepening  Alteration (repair/recondition)  Abandonment

(3) DRILL METHOD:  
 Rotary Air  Rotary Mud  Cable  Auger  
 Other

(4) PROPOSED USE:  
 Domestic  Community  Industrial  Irrigation  
 Thermal  Injection  Livestock  Other

(5) BORE HOLE CONSTRUCTION:  
Special Construction approval  Yes  No Depth of Completed Well 68 ft.  
Explosives used  Yes  No Type \_\_\_\_\_ Amount \_\_\_\_\_

HOLE			SEAL			
Diameter	From	To	Material	From	To	Sacks or pounds
10	0	18	Bentonite	0	18	15

How was seal placed: Method  A  B  C  D  E  
 Other Rotated  
Backfill placed from 0 ft. to 18 ft. Material Bentonite  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Size of gravel \_\_\_\_\_

(6) CASING/LINER:

Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing: <u>6</u>	<u>0</u>	<u>68</u>	<u>450</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Liner:				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Final location of shoe(s) 68'

(7) PERFORATIONS/SCREENS:

Perforations Method \_\_\_\_\_  
 Screens Type \_\_\_\_\_ Material \_\_\_\_\_

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
						<input type="checkbox"/>	<input type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour

Pump  Bailor  Air  Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
<u>50</u>		<u>45</u>	<u>1 hr.</u>

Temperature of water 53 Depth Artesian Flow Found \_\_\_\_\_  
Was a water analysis done?  Yes By whom \_\_\_\_\_  
Did any strata contain water not suitable for intended use?  Too little  
 Salty  Muddy  Odor  Colored  Other \_\_\_\_\_  
Depth of strata: \_\_\_\_\_

(9) LOCATION OF WELL by legal description:  
County Columbia Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
Township 3  N or S Range 2 E  W W.M.  
Section 13 NE 1/4 NE 1/4  
Tax Lot 0064 Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
Street Address of Well (or nearest address) 51836 S.E. 6th St.  
Scappoose, OR

(10) STATIC WATER LEVEL:  
\_\_\_\_\_ ft. below land surface. Date 7-19-97  
Artesian pressure \_\_\_\_\_ lb. per square inch. Date \_\_\_\_\_

(11) WATER BEARING ZONES:  
Depth at which water was first found 11

From	To	Estimated Flow Rate	SWL
<u>11</u>	<u>68</u>	<u>50</u>	<u>11</u>

(12) WELL LOG:  
Ground Elevation \_\_\_\_\_

Material	From	To	SWL
<u>Red Clay</u>	<u>0</u>	<u>8</u>	
<u>Medium to large round gravel</u>	<u>8</u>	<u>15</u>	<u>11</u>
<u>Stony clay</u>	<u>15</u>	<u>16</u>	
<u>Medium to large round gravel</u>	<u>16</u>	<u>30</u>	
<u>Same, but with stony silt</u>	<u>30</u>	<u>36</u>	
<u>Medium to large round gravel</u>	<u>36</u>	<u>77</u>	
<u>Gravel course contains sand</u>	<u>77</u>	<u>79</u>	

Date started 7-18-97 Completed 7-19-97

(unbonded) Water Well Constructor Certification:  
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.  
WWC Number \_\_\_\_\_  
Signed \_\_\_\_\_ Date \_\_\_\_\_

(bonded) Water Well Constructor Certification:  
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.  
WWC Number K079  
Signed [Signature] Date 7-20-97

WATER WELL REPORT

WATER RESOURCES DEPARTMENT
SALEM, OREGON 97310
within 30 days from the date of well completion.

STATE OF OREGON
(Please type or print)

RECEIVED 3N/2W-13ad
MAY 5 1978 State Well No. SE-NE

(Do not write above this line)

WATER RESOURCES DEPT.

(1) OWNER:

Name Fred & Maryellen Bernet
Address Route 1 Box 136 Scappoose Oregon 97056

(2) TYPE OF WORK (check):

New Well [checked] Deepening [ ] Reconditioning [ ] Abandon [ ]

If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary [checked] Driven [ ]
Cable [ ] Jetted [ ]
Dug [ ] Bored [ ]

(4) PROPOSED USE (check):

Domestic [checked] Industrial [ ] Municipal [ ]
Irrigation [ ] Test Well [ ] Other [ ]

CASING INSTALLED:

6" Diam. from 0 ft. to 63 ft. Gage 250
" Diam. from ft. to ft. Gage
" Diam. from ft. to ft. Gage

PERFORATIONS:

Perforated? [ ] Yes [checked] No

Type of perforator used

Size of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

(7) SCREENS:

Well screen installed? [ ] Yes [checked] No

Manufacturer's Name Model No.
Diam. Slot size Set from ft. to ft.

(8) WELL TESTS:

Drawdown is amount water level is lowered below static level

Was a pump test made? [ ] Yes [checked] No
Yield: gal./min. with ft. drawdown after hrs.
40 gal./min. with 10 ft. drawdown after 1 hrs.

(9) CONSTRUCTION:

Well seal—Material used cement
Well sealed from land surface to 35 ft.
Diameter of well bore to bottom of seal 9 in.
Diameter of well bore below seal 6 in.
Number of sacks of cement used in well seal 5 sacks
How was cement grout placed? poured

Was a drive shoe used? [checked] Yes [ ] No Pflugs Size: location ft.
Did any strata contain unusable water? [ ] Yes [checked] No
Temperature of water? depth of strata
Method of sealing strata off
Was well gravel packed? [ ] Yes [checked] No Size of gravel:
Gravel placed from ft. to ft.

(10) LOCATION OF WELL:

County Columbia Driller's well number SE 1/4 NE 1/4 Section 13 T. 3N R. 2W W.M.
Bearing and distance from section or subdivision corner

(11) WATER LEVEL: Completed well.

Depth at which water was first found 50 ft.
Static level 35 ft. below land surface. Date 4-13-78
Artesian pressure lbs. per square inch. Date

(12) WELL LOG:

Diameter of well below casing 6
Depth drilled 65 ft. Depth of completed well 65 ft.
Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

Table with columns: MATERIAL, From, To, SWL. Rows include Topsoil, Brown Silty sand, Brown Sand Gravel, Gravel.

Work started 4-12-1978 Completed 4-13-1978
Date well drilling machine moved off of well 4-13-1978

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.
(Signed) Ralph Turner Date 4-20-1978
(Drilling Machine Operator)
Drilling Machine Operator's License No. 254

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
Name Turner Drilling Co., Inc.
Address Rt. 1 Box 141 Hillsboro Ore.
(Signed) Ralph Turner
(Water Well Contractor)
Contractor's License No. 247 Date 4-20-1978



STATE OF OREGON  
WATER WELL REPORT  
(as required by ORS 537.765)

Colu  
507

RESERVED

JUN 12 1992

3N/2W/13aa

(START CARD) # 42312

(1) OWNER: Lawrence E. Gasky Well Number \_\_\_\_\_ WATER RESOURCES DEPT. STATE OF OREGON  
Name \_\_\_\_\_  
Address 33933 Oakridge Drive  
City Scappoose State OR Zip 97056

(2) TYPE OF WORK:  
 New Well  Deepen  Recondition  Abandon

(3) DRILL METHOD:  
 Rotary Air  Rotary Mud  Cable  
 Other \_\_\_\_\_

(4) PROPOSED USE:  
 Domestic  Community  Industrial  Irrigation  
 Thermal  Injection  Other \_\_\_\_\_

(5) BORE HOLE CONSTRUCTION:  
Special Construction approval  Yes  No Depth of Completed Well 42  
Explosives used  Yes  No Type \_\_\_\_\_ Amount \_\_\_\_\_

HOLE		SEAL		Amount sacks or pounds		
Diameter	From To	Material	From To			
10	0	19	BENTONITE	0	19	11
6	19	44				

How was seal placed: Method  A  B  C  D  E  
 Other POURED

Backfill placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Size of gravel \_\_\_\_\_

(6) CASING/LINER:

Diameter	From To	Gauge	Steel	Plastic	Welded	Threaded
6	12	42	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Final location of shoe(s) \_\_\_\_\_

(7) PERFORATIONS/SCREENS:

Perforations Method \_\_\_\_\_  
 Screens Type \_\_\_\_\_ Material \_\_\_\_\_

From To	Slot size	Number	Diameter	Tble/pipe size	Casing	Liner
					<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour

Pump  Bailor  Air  Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
25		30	1 hr.

Temperature of Water 52 Depth Artesian Flow Found \_\_\_\_\_  
Was a water analysis done?  Yes By whom \_\_\_\_\_  
Did any strata contain water not suitable for intended use?  Too little  
 Salty  Muddy  Odor  Colored  Other \_\_\_\_\_  
Depth of strata: \_\_\_\_\_

(9) LOCATION OF WELL by legal description:  
County Columbia Longitude \_\_\_\_\_  
Township 3N N or S. Range 2W E or W. WM. \_\_\_\_\_  
Section 13 NE 1/4 NE 1/4 \_\_\_\_\_  
Tax Lot 403 Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
Street Address of Well (or nearest address) SAME  
Address correlates to NE-NE-SE 2

(10) STATIC WATER LEVEL:  
17 ft. below land surface. Date 5-28-92  
Artesian pressure \_\_\_\_\_ lb. per square inch. Date \_\_\_\_\_

(11) WATER BEARING ZONES:  
Depth at which water was first found 24

From	To	Estimated Flow Rate	SWL
24	42	25	17

(12) WELL LOG:  
Ground elevation \_\_\_\_\_

Material	From	To	SWL
SOIL	0	3	
SILTY CLAY	3	13	
CEMENTED GRAVEL	13	18	
GREY CLAY	18	24	
BRN CLAY + GRAVEL	24	30	17
BRN SAND + GRAVEL	30	42	

Date started 5-27-92 Completed 5-28-92  
(unbonded) Water Well Constructor Certification:  
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.

Signed \_\_\_\_\_ WWC Number \_\_\_\_\_  
Date \_\_\_\_\_

(bonded) Water Well Constructor Certification:  
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

Signed Dan Fealen WWC Number 715  
Date 6-4-92

STATE OF OREGON  
WATER WELL REPORT  
(as required by ORS 537.765)

**COLU 045**

AUG. 29 1990

3N/2W/13 bb

WATER RESOURCES DEPT (START CARD) #

20128

(1) OWNER:

Name: Warren E. Wickum  
Address: 32140 G. P. West Road  
City: Scappoose State: OR Zip: 97056

(2) TYPE OF WORK:

New Well  Deepen  Recondition  Abandon

(3) DRILL METHOD

Rotary Air  Rotary Mud  Cable  
 Other

(4) PROPOSED USE:

Domestic  Community  Industrial  Irrigation  
 Thermal  Injection  Other

(5) BORE HOLE CONSTRUCTION:

Special Construction approval Yes  No  Depth of Completed Well 145 ft.  
Explosives used  Type \_\_\_\_\_ Amount \_\_\_\_\_

HOLE		SEAL		Amount sacks or pounds
Diameter	From To	Material	From To	
10	0 20	Bentonite	0 20	16
6	20 145			

How was seal placed: Method  A  B  C  D  E

Other poached

Backfill placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_

Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Size of gravel \_\_\_\_\_

(6) CASING/LINER:

Casing/Liner	Diameter	From	To	Gauge	Material			
					Steel	Plastic	Welded	Threaded
Casing	6	112	99	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Liner	4	5	145		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Final location of shoe(s) 99

(7) PERFORATIONS/SCREENS:

Perforations Method DRILL  
 Screens Type \_\_\_\_\_ Material \_\_\_\_\_

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
125	145		40	5/8		<input type="checkbox"/>	<input checked="" type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour

Pump  Bailor  Air  Flowing  Artesian

Yield gal/min	Drawdown	Drill stem at	Time
15		125	1 hr.

Temperature of water \_\_\_\_\_ Depth Artesian Flow Found \_\_\_\_\_

Was a water analysis done?  Yes By whom \_\_\_\_\_

Did any strata contain water not suitable for intended use?  Too little

Salty  Muddy  Odor  Colored  Other fine sand

Depth of strata: 26 - 39'

(9) LOCATION OF WELL by legal description:

County Columbia Township 3N N or S. Range 2W E or W, WM. Section 13 NW 1/4 NW 1/4 Tax Lot 51 Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_ Street Address of Well (or nearest address) \_\_\_\_\_

(10) STATIC WATER LEVEL:

80 ft. below land surface. Date 8-22-90  
Artesian pressure \_\_\_\_\_ lb. per square inch. Date \_\_\_\_\_

(11) WATER BEARING ZONES:

Depth at which water was first found 21

From	To	Estimated Flow Rate	SWL
96	145	15	80

(12) WELL LOG:

Material	From	To	SWL
TOP SOIL	0	2	
BRN CLAY	2	6	
SILTY SAND	6	24	
SANDY CLAY, BRN	24	39	
SANDY CLAY, BLUE	39	43	
SANDY CLAY, BRN	43	52	
BRN CLAY + GRAVEL + SAND	52	96	
Weathered Rock + BRN clay	96	145	80

Date started 8-22-90 Completed 8-23-90

(unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.

WWC Number \_\_\_\_\_

Signed \_\_\_\_\_ Date \_\_\_\_\_

(bonded) Water Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. all work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

WWC Number 715

Signed Dan Fealy Date 8-25-90

COLU 50342 NOV 21 1996

WELL I.D.# N/A (maybe NE-ND)

STATE OF OREGON  
 WATER SUPPLY WELL REPORT WATER RESOURCES DEPT.  
 (as required by ORS 537.765) SALEM, OREGON

(START CARD) # 92714

Instructions for completing this report are on the last page of this form.

(1) OWNER: Well Number \_\_\_\_\_  
 Name CITY OF SCAPPOOSE (CENTURY WEST ENG. CORP.)  
 Address 33568 EAST COLUMBIA AVENUE  
 City SCAPPOOSE State OR Zip 97056

(2) TYPE OF WORK  
 New Well  Deepening  Alteration (repair/recondition)  Abandonment

(3) DRILL METHOD:  
 Rotary Air  Rotary Mud  Cable  Auger  
 Other \_\_\_\_\_

(4) PROPOSED USE:  
 Domestic  Community  Industrial  Irrigation  
 Thermal  Injection  Livestock  Other TEST

(5) BORE HOLE CONSTRUCTION:  
 Special Construction approval  Yes  No Depth of Completed Well 0 ft.  
 Explosives used  Yes  No Type \_\_\_\_\_ Amount \_\_\_\_\_

HOLE			SEAL			Sacks or pounds
Diameter	From	To	Material	From	To	
10"	0	20	SEE #12			
6"	20	196	" "			

How was seal placed: Method  A  B  C  D  E  
 Other \_\_\_\_\_

Backfill placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_  
 Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Size of gravel \_\_\_\_\_

(6) CASING/LINER:

Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Liner:				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Final location of shoe(s) \_\_\_\_\_

(7) PERFORATIONS/SCREENS:

Perforations Method \_\_\_\_\_  
 Screens Type SLOTTED/SAW Material PVC

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
156	196	020		4"		<input type="checkbox"/>	<input checked="" type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour

Pump  Bailer  Air  Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
175	63		1 hr.

Temperature of water 52°F Depth Artesian Flow Found \_\_\_\_\_  
 Was a water analysis done?  Yes By whom \_\_\_\_\_  
 Did any strata contain water not suitable for intended use?  Too little  
 Salty  Muddy  Odor  Colored  Other \_\_\_\_\_  
 Depth of strata: \_\_\_\_\_

(9) LOCATION OF WELL by legal description:  
 County COLUMBIA Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
 Township 3N N or S Range 2W E or W. WM.  
 Section 13 NW 1/4 NW 1/4  
 Tax Lot CITY Loc SCAPPOOSE INDUSTRIAL AIRPARK  
 Street Address of Well (or nearest address) 51940 SW CREEKVIEW PL.  
 SCAPPOOSE, OR 97056

(10) STATIC WATER LEVEL:  
41 ft. below land surface. Date 11/07/96  
 Artesian pressure \_\_\_\_\_ lb. per square inch. Date \_\_\_\_\_

(11) WATER BEARING ZONES:

Depth at which water was first found 150

From	To	Estimated Flow Rate	SWL
150	170		
170	196	175 GPM	41

(12) WELL LOG:  
 Ground Elevation \_\_\_\_\_

Material	From	To	SWL
Brown sandy clay	0	10	
Gray-brown sandy clay	10	19	
Brown sand & gravel, cobble	19	50	
Black sand & gravel, tight	50	55	
occ. cobble			
Black muddy sand, occ. gravel & cobble	55	70	
Black sand & gravel tight	70	130	
occ. cobble			
Black sand & gravel, tight	130	150	
Black sand & pea gravel, occ. loose	150	170	41
Black sand & pea gravel, clean loose	170	196	41
WELL ABANDONED, CASING REMOVED			
Bentonite gel w/chips	196	125	
Cement (2 sks + gel)	125	100	
Bentonite gel w/chips	100	30	
Cement (3 sks + gel)	30	10	
Bentonite *	10	0	

Date started 10/22/96 Completed 11/07/96  
 (unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.

Signed \_\_\_\_\_ WWC Number \_\_\_\_\_ Date \_\_\_\_\_

(bonded) Water Well Constructor Certification:  
 I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

Signed \_\_\_\_\_ WWC Number 573 Date 11/18/96



RECEIVED  
OCT 2 1961

WATER WELL REPORT  
STATE OF OREGON

COLU  
3078

State Well No. 3N/2W-13  
State Permit No.

File Original and  
First Copy with the  
STATE ENGINEER  
SALEM, OREGON

(1) OWNER: SALEM, OREGON  
Name: Robert J. Maguire  
Address: 11th, Bldg. 51A  
Supplies Co.

(2) LOCATION OF WELL:  
County: Columbia Owner's number, if any—  
1/4 Section 13 T. 34 R. 26 W.M.  
Bearing and distance from section or subdivision corner  
200 ft. East 70 feet North  
S10 1/2°

(3) TYPE OF WORK (check):  
New Well  Deepening  Reconditioning  Abandon   
Abandonment, describe material and procedure in Item 11.

(4) PROPOSED USE (check):  
Domestic  Industrial  Municipal   
Irrigation  Test Well  Other   
(5) TYPE OF WELL:  
Rotary  Driven   
Cable  Jetted   
Dug  Bored

(6) CASING INSTALLED: Threaded  Welded   
6" Diam. from 0 ft. to 95 ft. Gage 4  
" Diam. from ft. to ft. Gage  
" Diam. from ft. to ft. Gage

(7) PERFORATIONS: Perforated?  Yes  No  
Type of perforator used  
SIZE of perforations in. by in.  
perforations from ft. to ft.  
perforations from ft. to ft.  
perforations from ft. to ft.  
perforations from ft. to ft.  
perforations from ft. to ft.

(8) SCREENS: Well screen installed  Yes  No  
Manufacturer's Name  
Type Model No.  
Slot size Set from ft. to ft.  
Slot size Set from ft. to ft.

(9) CONSTRUCTION:  
Was well gravel packed?  Yes  No Size of gravel:  
Gravel placed from ft. to ft.  
Was a surface seal provided?  Yes  No To what depth? 20 ft.  
Material used in seal— CEMENT  
Did any strata contain unusable water?  Yes  No  
Type of water? Depth of strata  
Method of sealing strata off

(10) WATER LEVELS:  
Static level 60 ft. below land surface Date 8/25  
Artesian pressure lbs. per square inch Date

Accepted by:  
(Signed) R. J. Maguire Date 9/20, 1961  
(Owner)

(11) WELL TESTS: Drawdown is amount water level is lowered below static level  
Was a pump test made?  Yes  No If yes, by whom?  
Yield: gal./min. with ft. drawdown after hrs.  
" " " " "  
" " " " "  
" " " " "  
Bailer test 10 gal./min. with 20 ft. drawdown after 2 1/2 hrs.  
Artesian flow g.p.m. Date  
Temperature of water Was a chemical analysis made?  Yes  No

(12) WELL LOG: Diameter of well 6 inches.  
Depth drilled 95 ft. Depth of completed well 95 ft.  
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation

MATERIAL	FROM	TO
SANDY SOIL	0	1
CLAY	1	22
FINE SAND		
WATER BEARING SOFT CLAY	22	45
MEDIUM GRAVEL	45	80
	80	95

Work started 8/21 1961 Completed 8/25 1961

(13) PUMP: Manufacturer's Name Loucks  
Type: Jet H.P. 1/2

Well Driller's Statement:  
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME G.A. Luttrell Well Drilling  
(Person, firm, or corporation) (Type or print)  
Address RT. 1 Box 430 St. Helens

Driller's well number  
(Signed) G.A. Luttrell  
(Well Driller)  
License No. 232 Date 9/2, 1961

RECEIVED

NOTICE TO WATER WELL CONTRACTOR  
The original and first copy of this report are to be filed with the STATE ENGINEER, SALEM, OREGON within 30 days from the date of well completion.  
JAN 25 1966 WATER WELL REPORT  
STATE OF OREGON (Please type or print)\*

60LU  
3007

State Well No. 3N/2W-13  
State Permit No.

(1) OWNER:  
Name LESLIE MARES  
Address RT 1 BOX 55 SCAPPOOSE, ORE.

(11) WELL TESTS: Drawdown is amount water level is lowered below static level  
Was a pump test made?  Yes  No If yes, by whom?  
Yield: gal./min. with ft. drawdown after hrs.

(2) LOCATION OF WELL:  
County Columbia Driller's well number  
1/4 Section 13 T. 3N.R. 2 W.M.  
Bearing and distance from section or subdivision corner

Ballor test 30 gal./min. with 10 ft. drawdown after 2 hrs.  
Artesian flow g.p.m. Date  
Temperature of water 50 Was a chemical analysis made?  Yes  No

(3) TYPE OF WORK (check):  
New Well  Deepening  Reconditioning  Abandon   
If abandonment, describe material and procedure in Item 13.

(12) WELL LOG: Diameter of well below casing 6"

(4) PROPOSED USE (check):  
Domestic  Industrial  Municipal   
Irrigation  Test Well  Other   
(5) TYPE OF WELL:  
Rotary  Driven   
Cable  Jetted   
Dug  Bored

Depth drilled 90 ft. Depth of completed well 90 ft.  
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
SOIL, BROWN	0	2
COARSE GRAVEL	2	30
COARSE CONGLOMERATE	30	73
MEDIUM SAND	73	76
COARSE CONGLOMERATE	76	85
COARSE GRAVEL	85	90

(6) CASING INSTALLED:  
Threaded  Welded   
6" Diam. from 0 ft. to 89 ft. Gage 250  
" Diam. from ft. to ft. Gage  
" Diam. from ft. to ft. Gage

Work started 21 SEPT 1965 Completed OCT 9 1965  
Date well drilling machine moved off of well 9 OCT 1965

(7) PERFORATIONS:  
Perforated?  Yes  No  
Type of perforator used  
Size of perforations in. by in.  
perforations from ft. to ft.  
perforations from ft. to ft.  
perforations from ft. to ft.  
perforations from ft. to ft.  
perforations from ft. to ft.

(13) PUMP:  
Manufacturer's Name  
Type: H.P.

(8) SCREENS: Well screen installed?  Yes  No  
Manufacturer's Name Model No.  
Diam. Slot size Set from ft. to ft.  
Diam. Slot size Set from ft. to ft.

Water Well Contractor's Certification:  
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
NAME Guy LUTHELL WELL DRILLING  
(Part, firm or corporation) (Type or print)  
Address RT 1, Box 732, ST. HELENS  
Drilling Machine Operator's License No. 198  
[Signed] G. A. Luthell  
(Water Well Contractor)  
Contractor's License No. 238 Date OCT 9, 1965

(9) CONSTRUCTION:  
Well seal—Material used in seal GROUT  
Depth of seal 18 ft. Was a packer used? NO  
Diameter of well bore to bottom of seal 8 in.  
Were any loose strata cemented off?  Yes  No Depth  
Was a drive shoe used?  Yes  No  
Was well gravel packed?  Yes  No Size of gravel:  
Gravel placed from ft. to ft.  
Did any strata contain unusable water?  Yes  No  
Type of water? depth of strata  
Method of sealing strata off

(10) WATER LEVELS:  
Static level 45 ft. below land surface Date 9 OCT 65  
Artesian pressure lbs. per square inch Date

NOTICE TO WATER WELL CONTRACTOR

The original and first copy of this report are to be filed with the

WATER WELL REPORT

STATE ENGINEER, SALEM, OREGON 97310 within 30 days from the date of well completion.

STATE OF OREGON STATE ENGINEER SALEM, OREGON (Please type or print) Do not write above this line

88LU

State Well No. 3N/2W-13 State Permit No.

3096

(1) OWNER:

Name Eng. White Address Box 346 Scappoose Ore.

(2) TYPE OF WORK (check):

New Well X Deepening Reconditioning Abandon If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary Cable Dug Driven Jettied Bored

(4) PROPOSED USE (check):

Domestic Industrial Municipal Irrigation Test Well Other

CASING INSTALLED:

Threaded Welded 6" Diam. from 0 ft. to 134 ft. Gage 17 1/2

PERFORATIONS:

Perforated? No Type of perforator used Size of perforations in. by in.

(7) SCREENS:

Well screen installed? No Manufacturer's Name Type Model No. Diam. Slot size Set from ft. to

(8) WATER LEVEL: Completed well.

Static level 39 ft. below land surface Date 11-12-67 Artesian pressure lbs. per square inch Date

(9) WELL TESTS:

Drawdown is amount water level is lowered below static level Was a pump test made? No If yes, by whom Yield gal./min. with ft. drawdown after hrs. Bailer test 30 gal./min. with 25 ft. drawdown after 1 hrs. Artesian flow g.p.m. Date Temperature of water Was a chemical analysis made? No

(10) CONSTRUCTION:

Well seal—Material used Bentonite Depth of seal 18 ft. Diameter of well bore to bottom of seal 11 in. Were any loose strata cemented off? No Depth Was a drive shoe used? Yes No Did any strata contain unusable water? No Type of water? depth of strata Method of sealing strata off Was well gravel packed? No Size of gravel: Gravel placed from ft. to ft.

(11) LOCATION OF WELL:

County Col. Driller's well number 81 1/4 Section 13 T. 3N R. 2W W.M. Bearing and distance from section or subdivision corner

(12) WELL LOG:

Diameter of well below casing Depth drilled 134 ft. Depth of completed well 134 ft. Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated.

Table with 4 columns: MATERIAL, From, To, SWL. Rows include Soil, Br. Clay, Large Gravel + Br. Clay, Fine Gravel + Gray Sand, Br. Sand, Gray Sand med + fine, and Gray Sand + fine gravel.

Work started 10-12-67 Completed 11-12-67 Date well drilling machine moved off of well 11-12-67

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief. [Signed] Svend A. Hald Date 11-14, 1967

Drilling Machine Operator's License No. 144

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief. NAME SVEND A. HALD (Person, firm or corporation) (Type or print) Address Box 1267 St. Helens Ore. [Signed] Svend A. Hald (Water Well Contractor) Contractor's License No. 261 Date 11-14-67, 19

NOTICE TO WATER WELL CONTRACTOR

The original and first copy of this report are to be filed with the

STATE ENGINEER, SALEM, OREGON within 30 days from the date of well completion.

RECEIVED APR 21 1978 STATE OF OREGON STATE ENGINEER SALEM, OREGON

3094

State Well No. 3N/2W-13 State Permit No.

(1) OWNER:

Name Willard Ness Address RT 1 Box 66 Scappoose Ore

(2) TYPE OF WORK (check):

New Well [X] Deepening [ ] Reconditioning [ ] Abandon [ ] If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary [ ] Driven [ ] Cable [X] Jetted [ ] Dug [ ] Bored [ ]

(4) PROPOSED USE (check):

Domestic [X] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ]

CASING INSTALLED:

6" Diam. from 0 ft. to 80 ft. Gage 17# Threaded [ ] Welded [X]

PERFORATIONS:

Perforated? [ ] Yes [X] No. Type of perforator used Size of perforations in. by in. perforations from ft. to ft.

(7) SCREENS:

Well screen installed? [ ] Yes [X] No Manufacturer's Name Type Model No. Diam. Slot size Set from ft. to ft.

(8) WATER LEVEL: Completed well.

Static level 42 ft. below land surface Date 3-21-70 Artesian pressure lbs. per square inch Date

(9) WELL TESTS:

Drawdown is amount water level is lowered below static level Was a pump test made? [ ] Yes [X] No If yes, by whom? Yield: gal./min. with ft. drawdown after hrs. Baller test 20 gal./min. with 14 ft. drawdown after 1 1/2 hrs.

(10) CONSTRUCTION:

Well seal—Material used Bentonite Depth of seal 18 ft. Diameter of well bore to bottom of seal 10 in. Were any loose strata cemented off? [ ] Yes [X] No Depth Was a drive shoe used? [X] Yes [ ] No Did any strata contain unusable water? [ ] Yes [X] No Type of water? depth of strata Method of sealing strata off Was well gravel packed? [ ] Yes [X] No Size of gravel: Gravel placed from ft. to ft.

(11) LOCATION OF WELL:

County Col Driller's well number 123 1/4 Section 13 T. 3N R. 2W W.M. Bearing and distance from section or subdivision corner

(12) WELL LOG:

Diameter of well below casing Depth drilled 80 ft. Depth of completed well 80 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level as drilling proceeds. Note drilling rates.

Table with columns: MATERIAL, From, To, SWL. Rows include: St. Br soil (0-2), Clay (2-12), med + large gravel (12-17), med + fine gravel + coarse gray sand (17-32), Fine Gravel + coarse gray sand (32-60) SWL 50, Coarse gray sand (60-72), Coarse gray sand + fine med gravel (72-80) SWL 42.

Work started 2-22-70 Completed 3-21-70 Date well drilling machine moved off of well 3-24-70

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.

[Signed] Svenda A. Held Date 3-24, 1970 (Drilling Machine Operator)

Drilling Machine Operator's License No. 144

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Svenda A. Held (Person, firm or corporation) (Type or print)

Address Box 1267 St. Helens Ore

[Signed] Svenda A. Held (Water Well Contractor)

Contractor's License No. 261 Date 3-24-70

NOTICE TO WATER WELL CONTRACTOR

The original and first copy of this report are to be filed with the

RECEIVED WATER WELL REPORT APR 20 1971 STATE OF OREGON STATE ENGINEER SALEM, OREGON

COLU 3091

State Well No. 3N/2W-13 State Permit No.

STATE ENGINEER, SALEM, OREGON 97310

within 30 days from the date of well completion.

(1) OWNER:

Name Don A. Fisher Address Rte 1 Box 39 Scappoose, Oregon 97050

(2) TYPE OF WORK (check):

New Well [x] Deepening [ ] Reconditioning [ ] Abandon [ ]

If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary [x] Cable [ ] Dug [ ] Driven [ ] Jetted [ ] Bored [ ]

(4) PROPOSED USE (check):

Domestic [x] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ]

CASING INSTALLED:

6" Diam. from 0 ft. to 98 ft. Gage 1/4 wall

PERFORATIONS:

Perforated? [ ] Yes [x] No

Type of perforator used

Size of perforations in. by in. perforations from ft. to ft.

(7) SCREENS:

Well screen installed? [ ] Yes [x] No

Manufacturer's Name Type Model No. Diam. Slot size Set from ft. to ft.

(8) WELL TESTS:

Drawdown is amount water level is lowered below static level

Was a pump test made? [ ] Yes [x] No If yes, by whom? Yield: gal./min. with ft. drawdown after hrs.

(9) CONSTRUCTION:

Well seal-Material used bentonite Well sealed from land surface to 45 ft. Diameter of well bore to bottom of seal 9 in. Diameter of well bore below seal 6 in. Number of sacks of cement used in well seal sacks Number of sacks of bentonite used in well seal 2 sacks Brand name of bentonite National Number of pounds of bentonite per 100 gallons of water 50 lbs./100 gals. Was a drive shoe used? [ ] Yes [ ] No Plugs Size: location ft. Did any strata contain unusable water? [ ] Yes [x] No Type of water? depth of strata Method of sealing strata off Was well gravel packed? [ ] Yes [x] No Size of gravel: Gravel placed from ft. to ft.

(10) LOCATION OF WELL:

County Columbia Driller's well number 1/4 1/4 Section 13 T. 3-N R. 2-III W.M. Bearing and distance from section or subdivision corner

(11) WATER LEVEL: Completed well.

Depth at which water was first found 38 ft. Static level 50 ft. below land surface. Date 4-12-71 Artesian pressure lbs. per square inch. Date

(12) WELL LOG:

Diameter of well below casing 6" Depth drilled 100 ft. Depth of completed well 98 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

Table with columns: MATERIAL, From, To, SWL. Rows: Top soil (0-3), Yellow fine sand (3-38), Blue sand and wood (38-50), Blue fine sand (50-85), Brown clay (85-90), River rock and fine sand br. (90-98)

Work started 4-10-71 19 Completed 4-12-71 19 Date well drilling machine moved off of well 4-13-71 19

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief. [Signed] Ralph Turner Date 4-18-71, 19

Drilling Machine Operator's License No. 254

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief. Name Ralph Turner Drilling Co. (Person, firm or corporation) (Type or print)

Address Rte 1 Box 141 Hillsboro, Oregon 9712 [Signed] Ralph Turner (Water Well Contractor)

Contractor's License No. 247 Date 4-18-71, 19

NOTICE TO WATER WELL CONTRACTOR

The original and first copy of this report are to be filed with the

COOLU

WATER WELL REPORT RECEIVED

STATE OF OREGON

State Well No.

STATE ENGINEER, SALEM, OREGON 97310 within 30 days from the date of well completion.

3089

(Please type or print) JUL 6 - 1976

State Permit No. 3N/2W-73

(Do not write above this line)

WATER RESOURCES DEPT.

(1) OWNER:

Name Joseph Ekau Address P.O. Box 445 Scappoose, Oregon 97056

(10) LOCATION OF WELL:

County Columbia Driller's well number 056 1/4 Section 13 T. 3-N R. 2-W W.M. Bearing and distance from section or subdivision corner

(2) TYPE OF WORK (check):

New Well [X] Deepening [ ] Reconditioning [ ] Abandon [ ] If abandonment, describe material and procedure in item 12.

(3) TYPE OF WELL:

Rotary [X] Cable [ ] Jettied [ ] Bored [ ]

(4) PROPOSED USE (check):

Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [X] Test Well [ ] Other [ ]

(6) CASING INSTALLED:

8" Diam. from 0 ft. to 70 ft. Gage .250

PERFORATIONS:

Perforated? [ ] Yes [X] No

Type of perforator used

Size of perforations in. by in. perforations from ft. to ft.

(7) SCREENS:

Well screen installed? [ ] Yes [X] No

Manufacturer's Name Type Model No. diam. Slot size Set from ft. to ft.

(8) WELL TESTS:

Drawdown is amount water level is lowered below static level

Was a pump test made? [ ] Yes [X] No If yes, by whom? Field: gal./min. with ft. drawdown after hrs.

(9) CONSTRUCTION:

Well seal—Material used Cement and Bentonite Well sealed from land surface to 18 ft. Diameter of well bore to bottom of seal 12 in.

(11) WATER LEVEL: Completed well.

Depth at which water was first found 28 ft. Static level 10 ft. below land surface. Date 6-20-76 Artesian pressure lbs. per square inch. Date

(12) WELL LOG:

Diameter of well below casing 8

Depth drilled 95 ft. Depth of completed well 70 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

Table with columns: MATERIAL, From, To, SWL. Rows include Top soil, Brown clay, Gravel, Blue clay, Gravel, Gravel sand and water, Brown sand.

Work started 6-18-76 19 Completed 6-20-76 19

Date well drilling machine moved off of well 6-20-76 19

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.

[Signed] David Donnelly Date 6-28-76 19 (Drilling Machine Operator)

Drilling Machine Operator's License No. 883

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Name Ralph Turner Drilling Co. (Person, firm or corporation) (Type or print)

Address Rte 1 Box 141 Hillsboro, Oregon

[Signed] Ralph Turner (Water Well Contractor)

Contractor's License No. 247 Date 6-28-76 19

NOTICE TO WATER WELL CONTRACTOR

The original and first copy of this report are to be filed with the

STATE ENGINEER, SALEM, OREGON 97310  
within 30 days from the date of well completion.

WATER WELL REPORT

STATE OF OREGON

(Please type or print)

(Do not write above this line)

RECEIVED

State Well No.

SEP 1 1976

State Permit No.

30/2W73

(1) OWNER:

Name Joseph Intek  
Address 9171 Box 310 Scappoose Ore 97051

(2) TYPE OF WORK (check):

New Well  Deepening  Reconditioning  Abandon

If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary  Driven   
Cable  Jetted   
Bored

(4) PROPOSED USE (check):

Domestic  Industrial  Municipal   
Irrigation  Test Well  Other

(5) CASING INSTALLED:

6" Diam. from 0 ft. to 89 ft. Gage 250  
" Diam. from ft. to ft. Gage  
" Diam. from ft. to ft. Gage

(6) PERFORATIONS:

Perforated?  Yes  No

Type of perforator used

Size of perforations in. by in.  
perforations from ft. to ft.  
perforations from ft. to ft.  
perforations from ft. to ft.

(7) SCREENS:

Well screen installed?  Yes  No

Manufacturer's Name  
Type Model No.  
Diam. Slot size Set from ft. to ft.  
Diam. Slot size Set from ft. to ft.

(8) WELL TESTS:

Drawdown is amount water level is lowered below static level

Was a pump test made?  Yes  No If yes, by whom?

Yield: gal./min. with ft. drawdown after hrs.

Baller test 20 gal./min. with 8 ft. drawdown after 1 hrs.

Artesian flow g.p.m.

Temperature of water Depth artesian flow encountered ft.

(9) CONSTRUCTION:

Well seal—Material used Bentonite + Cement

Well sealed from land surface to 19' ft.

Diameter of well bore to bottom of seal 10 in.

Diameter of well bore below seal 6 in.

Number of sacks of cement used in well seal 1 sacks

Number of sacks of bentonite used in well seal 100# sacks

Brand name of bentonite International Well

Number of pounds of bentonite per 100 gallons of water approx. 4.5 gal. per 100# lbs./100 gals.

Was a drive shoe used?  Yes  No Plugs Size: location ft.

Did any strata contain unusable water?  Yes  No

Type of water? depth of strata

Method of sealing strata off

Was well gravel packed?  Yes  No Size of gravel:

Gravel placed from ft. to ft.

(10) LOCATION OF WELL:

County Col. Driller's well number  
1/4 Section 13 T. 3N R. 2W W.M.

Bearing and distance from section or subdivision corner on Highway 30 approx 1-mile South of Scappoose

(11) WATER LEVEL: Completed well.

Depth at which water was first found 55 ft.

Static level 40 ft. below land surface. Date Aug 23, 76

Artesian pressure lbs. per square inch. Date

(12) WELL LOG:

Diameter of well below casing

Depth drilled 89 ft. Depth of completed well 89 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
St. Be. soil	0	2	
" " Clay	2	17	
Grey sand & med. gravel	17	50	
Grey sand med.	50	70	40
A. Br. Sand	70	82	
Course grey sand			
Fine gravel	82	89	40

Work started Aug 11 1976 Completed Aug 23 1976

Date well drilling machine moved off of well Aug 23 1976

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.

[Signed] Srenda A. Nald Date Aug 23 1976  
(Drilling Machine Operator)

Drilling Machine Operator's License No. 144

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Name Srenda A. Nald (Type or print)  
(Person, firm or corporation)

Address Box 1112 St Helens Ore

[Signed] Srenda A. Nald  
(Water Well Contractor)

Contractor's License No. 241 Date Aug 23 1976

NOTICE TO WATER WELL CONTRACTOR  
The original and first copy of this report  
are to be filed with the

WATER RESOURCES DEPARTMENT  
SALEM, OREGON 97310  
within 30 days from the date  
of well completion.

WATER WELL REPORT

**RECEIVED** STATE OF OREGON  
(Please type or print)

APR 11 1979 (Do not write above this line)

State Well No. 3N/2W-13

State Permit No. \_\_\_\_\_

**COLU**  
**3085**

**(1) OWNER:** WATER RESOURCES DEPT.  
SALEM, OREGON

Name Russell Olney  
Address Route 1, Box 461A  
Scappoose, Oregon 97056

**(2) TYPE OF WORK (check):**  
New Well  Deepening  Reconditioning  Abandon   
If abandonment, describe material and procedure in Item 12.

**(3) TYPE OF WELL:** Rotary  Cable  Dug   
Driven  Jetted  Bored   
**(4) PROPOSED USE (check):** Domestic  Industrial  Municipal   
Irrigation  Test Well  Other

**CASING INSTALLED:**  
6-3/8" Diam. from plus 1 ft. to 69 ft. Threaded  Welded   
Gage 250  
" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_  
" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_

**PERFORATIONS:** Perforated?  Yes  No.  
Type of perforator used \_\_\_\_\_  
Size of perforations \_\_\_\_\_ in. by \_\_\_\_\_ in.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

**(7) SCREENS:** Well screen installed?  Yes  No  
Manufacturer's Name \_\_\_\_\_  
Type \_\_\_\_\_ Model No. \_\_\_\_\_  
\_\_\_\_\_ lam. Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ Diam. Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

**(8) WELL TESTS:** Drawdown is amount water level is lowered below static level  
Was a pump test made?  Yes  No If yes, by whom?  
airlift  
Yield: 25 gal./min. with 14 ft. drawdown after 2 hrs.  
" " " " " "  
" " " " " "  
Baller test \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
Artesian flow \_\_\_\_\_ g.p.m.  
Temperature of water \_\_\_\_\_ Depth artesian flow encountered \_\_\_\_\_ ft.

**(9) CONSTRUCTION:**  
Well seal—Material used Cement  
Well sealed from land surface to 69 ft.  
Diameter of well bore to bottom of seal 10 in.  
Diameter of well bore below seal \_\_\_\_\_ in.  
Number of sacks of cement used in well seal 8 sacks  
How was cement grout placed? Tremied to bottom and  
pressured into annular bore from 69' to 0'  
Was a drive shoe used?  Yes  No Plugs \_\_\_\_\_ Size: location \_\_\_\_\_ ft.  
Did any strata contain unusable water?  Yes  No  
Type of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
Method of sealing strata off \_\_\_\_\_  
Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

**(10) LOCATION OF WELL:**  
County Columbia Driller's well number \_\_\_\_\_  
1/4 Section 13 T. 3 N. R. 2 W. W.M.  
Bearing and distance from section or subdivision corner \_\_\_\_\_

**(11) WATER LEVEL: Completed well.**  
Depth at which water was first found 68 ft.  
Static level 8 ft. below land surface. Date 4/6/79  
Artesian pressure \_\_\_\_\_ lbs. per square inch. Date \_\_\_\_\_

**(12) WELL LOG:** Diameter of well below casing \_\_\_\_\_  
Depth drilled 70 ft. Depth of completed well 69 ft.  
Formation: Describe color, texture, grain size and structure of materials;  
and show thickness and nature of each stratum and aquifer penetrated,  
with at least one entry for each change of formation. Report each change in  
position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Topsoil	0	1	
Soft brown silty clay	1	3	
Soft brown sandy clay	3	6	
Conglomerate-brown clay w/ gravel & cobble	6	13	
Brown clay	13	15	
Med. to coarse gravel w/cobble	15	27	
Fine brown sand w/some gravel	27	30	
Fine to med. gravel w/brown sand & occ. coarse gravel	30	70	
WELL COMPLETED TO 69'			

Work started 4/3/79 19 \_\_\_\_\_ Completed 4/6/79 19 \_\_\_\_\_  
Date well drilling machine moved off of well 4/6/79 19 \_\_\_\_\_

**Drilling Machine Operator's Certification:**  
This well was constructed under my direct supervision.  
Materials used and information reported above are true to my  
best knowledge and belief.  
[Signed] [Signature] Date 4/9/79, 19\_\_\_\_\_  
(Drilling Machine Operator)  
Drilling Machine Operator's License No. 751

**Water Well Contractor's Certification:**  
This well was drilled under my jurisdiction and this report is  
true to the best of my knowledge and belief.  
Name A. M. JANNSEN WELL DRILLING CO. INC.  
(Person, firm or corporation) (Type or print)  
Address 21075 SW Tualatin Valley Hwy. Aloha, Or.  
[Signed] [Signature]  
(Water Well Contractor)  
Contractor's License No. 79 Date 4/9/79, 19\_\_\_\_\_  
\_\_\_\_\_





RECEIVED

N/2?

604 W  
3083

3n/2w-13  
ABANDON

STATE OF OREGON  
WATER WELL REPORT  
(as required by ORS 637.765)

MAY 22 1987

(1) OWNER:  
Name Northwest Earth Movers  
Address 8101 S.W. Nyberg Road  
City Tualatin State OR Zip

(2) TYPE OF WORK:  
 New Well  Deepen  Recondition  Abandon

(3) DRILL METHOD  
 Rotary Air  Rotary Mud  Cable  
 Other

(4) PROPOSED USE:  
 Domestic  Community  Industrial  Irrigation  
 Thermal  Injection  Other

(5) BORE HOLE CONSTRUCTION:  
Construction approval Yes No Depth of Completed Well ft.  
Explosives used Yes No Type Amount

Table with columns: HOLE Diameter, SEAL From, To, Material, Amount sacks or pounds

How was seal placed: Method  A  B  C  D  E  
Backfill placed from ft. to ft. Material  
Gravel placed from ft. to ft. Size of gravel

(6) CASING/LINER: Table with columns: Diameter, From, To, Gauge, Steel, Plastic, Welded, Threaded

Final location of shoe(s)

PERFORATIONS/SCREENS:  
 Perforations Method  
 Screens Type Material

Table with columns: From, To, Slot size, Number, Diameter, Tele/pipe size, Casing, Liner

(8) WELL TESTS: Minimum testing time is 1 hour  
 Pump  Bailer  Air  Flowing Artesian  
Yield gal/min Drawdown Drill stem at Time

Temperature of water Depth Artesian Flow Found  
a water analysis done?  Yes By whom  
any strata contain water not suitable for intended use?  Too little  
 Salty  Murky  Odor  Colored  Other  
Depth of strata:

(9) LOCATION OF WELL by legal description:  
County Columbia Latitude Longitude  
Township 3N N or S, Range 2W E or W, WM.  
Section 13 1/4 1/4  
Tax Lot Lot Block Subdivision  
Street Address of Well (or nearest address) Intersection of Old Portland Rd. & Hwy. 30, Scappoose

(10) STATIC WATER LEVEL:  
41'6" ft. below land surface. Date  
Artesian pressure lb. per square inch. Date

(11) WATER BEARING ZONES:  
Depth at which water was first found

Table with columns: From, To, Estimated Flow Rate, SWL

(12) WELL LOG: Ground elevation

Table with columns: Material, From, To, SWL  
Well was a 24" hand dug well cased with red clay tile to a depth of 42 feet. Static level in well was 41'6".  
Six yards of concrete were placed in well by means of a 6" tremie pipe.  
Work was performed by Northwest Earth Movers personnel under the supervision of the undersigned.

Date started 5-1-87 Completed 5-1-87

(unbonded) Water Well Constructor Certification:  
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.  
Signed \_\_\_\_\_ WWC Number \_\_\_\_\_ Date \_\_\_\_\_

(bonded) Water Well Constructor Certification:  
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.  
Signed Don Fisher WWC Number 715 Date 5-21-87

TO WATER WELL CONTRACTOR  
The original and first copy  
of this report are to be  
filed with the  
ENGINEER, SALEM, OREGON 97310  
Within 30 days from the date  
of well completion.

**RECEIVED**  
STATE OF OREGON  
WATER RESOURCES DEPT.  
SALEM, OREGON  
State Well No. SA-RW-13  
State Permit No. cb  
JUN 30 1976  
3106

**(1) OWNER:**

Name Maurice O. White  
Address Rt. 1, Box 112  
Scappoose, Oregon, 97056

**(2) TYPE OF WORK (check):**

New Well  Deepening  Reconditioning  Abandon   
If abandonment, describe material and procedure in Item 12.

**(3) TYPE OF WELL:**

Rotary  Driven   
Cable  Jetted   
Dug  Bored

**(4) PROPOSED USE (check):**

Domestic  Industrial  Municipal   
Irrigation  Test Well  Other

**CASING INSTALLED:**

Threaded  Welded   
6" Diam. from 0 ft. to 120 ft. Gage .250  
" Diam. from ft. to ft. Gage  
" Diam. from ft. to ft. Gage

**PERFORATIONS:**

Perforated?  Yes  No.

Type of perforator used  
Size of perforations in. by in.  
perforations from ft. to ft.  
perforations from ft. to ft.  
perforations from ft. to ft.

**(7) SCREENS:**

Well screen installed?  Yes  No

Manufacturer's Name \_\_\_\_\_  
Type \_\_\_\_\_ Model No. \_\_\_\_\_  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

**(8) WELL TESTS:**

Drawdown is amount water level is lowered below static level

Was a pump test made?  Yes  No If yes, by whom?  
Yield: 10 gal./min. with Total drawdown after 1 hrs.  
" " " " "  
" " " " "  
Barrier test gal./min. with ft. drawdown after hrs.  
Artesian flow g.p.m.  
Temperature of water Depth artesian flow encountered \_\_\_\_\_ ft.

**(9) CONSTRUCTION:**

Well seal—Material used Cement  
Well sealed from land surface to 18 ft.  
Diameter of well bore to bottom of seal 9 in.  
Diameter of well bore below seal 6 in.  
Number of sacks of cement used in well seal 3 sacks  
Number of sacks of bentonite used in well seal \_\_\_\_\_ sacks  
Brand name of bentonite \_\_\_\_\_  
Number of pounds of bentonite per 100 gallons  
of water \_\_\_\_\_ lbs./100 gals.  
Was a drive shoe used?  Yes  No Plugs \_\_\_\_\_ Size: location \_\_\_\_\_ ft.  
Did any strata contain unusable water?  Yes  No  
Type of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
Method of sealing strata off \_\_\_\_\_  
Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

**(10) LOCATION OF WELL:**

County Columbia Driller's well number  
NW 1/4 SW 1/4 Section 13 3N T. 2W R. W.M.  
Bearing and distance from section or subdivision corner

**(11) WATER LEVEL: Completed well.**

Depth at which water was first found 26 ft.  
Static level 84 ft. below land surface. Date 6-22-76  
Artesian pressure \_\_\_\_\_ lbs. per square inch. Date

**(12) WELL LOG:**

Diameter of well below casing 6  
Depth drilled 120 ft. Depth of completed well 120 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Top Soil	0	3	
Brown ?	3	25	
Sandy, brown clay	25	66	
Blue clay	66	95	
Gravel water	95	120	84

Work started 6-22 19 76 Completed 6-22 19 76  
Date well drilling machine moved off of well 6-22 19 76

**Drilling Machine Operator's Certification:**

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.

[Signed] David J. Jandly Date 6-25, 1976.  
(Drilling Machine Operator)

Drilling Machine Operator's License No. 883

**Water Well Contractor's Certification:**

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Name S. & M. Drilling & Supply, Inc.  
(Person, firm or corporation) (Type or print)

Address 399 S.E. Walnut St. Canby, Ore. 97013

[Signed] Walter M...  
(Water Well Contractor)

Contractor's License No. 497 Date 6-25, 1976

NOTICE TO WATER WELL CONTRACTOR

The original and first copy of this report are to be filed with the

STATE ENGINEER, SALEM, OREGON 97310 within 30 days from the date of well completion.

CGADU

WATER WELL REPORT

RECEIVED

STATE OF OREGON (Please type or print)

JUL 25 1973

(Do not write above this line)

STATE ENGINEER SALEM OREGON

Well No. 3N/2W-1 State Permit No. 10438

(1) OWNER:

Name Robert Thomas Address Columbus Ave. Hwy 19 RR 2

(2) TYPE OF WORK (check):

New Well [X] Deepening [ ] Reconditioning [ ] Abandon [ ]

(3) TYPE OF WELL:

Rotary [ ] Driven [ ] Cable [X] Jetted [ ] Dug [ ] Bored [ ]

(4) PROPOSED USE (check):

Domestic [X] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ]

(5) CASING INSTALLED:

Threaded [ ] Welded [X] 6" Diam. from 0 ft. to 65 ft. Gage 250

PERFORATIONS:

Type of perforator used Size of perforations in. by in. perforations from ft. to ft.

(7) SCREENS:

Well screen installed? [ ] Yes [X] No Manufacturer's Name Type Model No. Diam. Slot size Set from ft. to ft.

(8) WELL TESTS:

Drawdown is amount water level is lowered below static level Was a pump test made? [ ] Yes [ ] No Yield: gal./min. with ft. drawdown after hrs. Bailer test 15 gal./min. with no ft. drawdown after 1 hrs.

(9) CONSTRUCTION:

Well seal-Material used Bentonite Well sealed from land surface to 28 ft. Diameter of well bore to bottom of seal 9 in. Diameter of well bore below seal 6 in. Number of sacks of cement used in well seal sacks Number of sacks of bentonite used in well seal 7 sacks Brand name of bentonite National Number of pounds of bentonite per 100 gallons of water 75 lbs./100 gals. Was a drive shoe used? [X] Yes [ ] No Plugs Size: location ft. Did any strata contain unusable water? [ ] Yes [X] No Type of water? depth of strata Method of sealing strata off Was well gravel packed? [ ] Yes [ ] No Size of gravel: Gravel placed from ft. to ft.

(10) LOCATION OF WELL:

County Clatsop Driller's well number 1/4 1/4 Section 13 T. 3N R. 2W W.M. Bearing and distance from section or subdivision corner

(11) WATER LEVEL: Completed well.

Depth at which water was first found 60 ft. Static level 47 ft. below land surface. Date 6-28-73 Artesian pressure lbs. per square inch. Date

(12) WELL LOG:

Diameter of well below casing Depth drilled ft. Depth of completed well ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

Table with columns: MATERIAL, From, To, SWL. Rows include Top Soil, Yellow Clay, Gravel Cemented, Large Gravel.

Work started 28 June 1973 Completed 6-29 19 73 Date well drilling machine moved off of well 6-29 19 73

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.

[Signed] [Signature] Date 6-29, 19 73 (Drilling Machine Operator)

Drilling Machine Operator's License No. 808

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Name F.F. Mc Knight (Person, firm or corporation) (Type or print)

Address 840 West St. St. Helens, Or

[Signed] [Signature] (Water Well Contractor)

Contractor's License No. 420 Date 6-29, 19 73

RECEIVED

N 1/2?

STATE OF OREGON  
WATER WELL REPORT  
(as required by ORS 537.785)

MAY 22 1987

COLU  
3083

3N/2W-13  
ABANDON

(1) OWNER:  
Name Northwest Earth Movers  
Address 8101 S.W. Nyberg Road  
City Tualatin State OR Zip \_\_\_\_\_

(2) TYPE OF WORK:  
 New Well  Deepen  Recondition  Abandon

(3) DRILL METHOD  
 Rotary Air  Rotary Mud  Cable  
 Other \_\_\_\_\_

(4) PROPOSED USE:  
 Domestic  Community  Industrial  Irrigation  
 Thermal  Injection  Other \_\_\_\_\_

(5) BORE HOLE CONSTRUCTION:  
Special Construction approval Yes  No  Depth of Completed Well \_\_\_\_\_ ft.  
Explosives used  Yes  No  Type \_\_\_\_\_ Amount \_\_\_\_\_

HOLE SEAL Amount  
Diameter From To Material From To sacks or pounds

HOLE		SEAL		Amount	
Diameter	From To	Material	From To	sacks or pounds	

How was seal placed: Method  A  B  C  D  E  
 Other \_\_\_\_\_  
Backfill placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Size of gravel \_\_\_\_\_

(6) CASING/LINER:

Casing/Liner	Diameter	From To	Gauge	Material			
				Steel	Plastic	Welded	Threaded
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Final location of shoe(s) \_\_\_\_\_

(7) PERFORATIONS/SCREENS:

From To	Slot size	Number	Diameter	Tele/pipe size	Casing/Liner	
					Casing	Liner
					<input type="checkbox"/>	<input type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour  
 Pump  Bailer  Air  Flowing Artesian  
Yield gal/min \_\_\_\_\_ Drawdown \_\_\_\_\_ Drill stem at \_\_\_\_\_ Time \_\_\_\_\_ 1 hr.

Temperature of water \_\_\_\_\_ Depth Artesian Flow Found \_\_\_\_\_  
"as a water analysis done?  Yes By whom \_\_\_\_\_  
any strata contain water not suitable for intended use?  Too little  
 Salty  Muddy  Odor  Colored  Other \_\_\_\_\_  
Depth of strata: \_\_\_\_\_

(9) LOCATION OF WELL by legal description:  
County Columbia Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
Township 3N N or S, Range 2W E or W, WM.  
Section 13 1/4 \_\_\_\_\_ 1/4 \_\_\_\_\_  
Tax Lot \_\_\_\_\_ Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
Street Address of Well (or nearest address) Intersection of Old Portland Rd. & Hwy. 30, Scappoose

(10) STATIC WATER LEVEL:  
41'6" ft. below land surface. Date \_\_\_\_\_  
Artesian pressure \_\_\_\_\_ lb. per square inch. Date \_\_\_\_\_

(11) WATER BEARING ZONES:

Depth at which water was first found \_\_\_\_\_

From	To	Estimated Flow Rate	SWL

(12) WELL LOG: Ground elevation \_\_\_\_\_

Material	From	To	SWL
Well was a 24" Hand dug well cased with red clay tile to a depth of 42 feet. Static level in well was 41'6".			
Six yards of concrete were placed in well by means of a 6" tremie pipe.			
Work was performed by Northwest Earth Movers personnel under the supervision of the undersigned.			

Date started 1-5-1-87 Completed 5-1-87

(unbonded) Water Well Constructor Certification:  
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.  
Signed \_\_\_\_\_ WWC Number \_\_\_\_\_ Date \_\_\_\_\_

(bonded) Water Well Constructor Certification:  
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.  
Signed Don Fraker WWC Number 715 Date 5-21-87

TO WATER WELL CONTRACTOR  
 The original and first copy  
 of this report are to be  
 filed with the

ENGINEER, SALEM, OREGON 97310  
 Within 30 days from the date  
 of well completion.

3106  
 WATER WELL REPORT  
 STATE OF OREGON  
 (Please type or print)

**RECEIVED**

JUN 30 1976

State Well No. SW-92-13

State Permit No. cb

(Do not write above WATER RESOURCES DEPT.)

SALEM, OREGON

(10) LOCATION OF WELL:

County Columbia Driller's well number  
 NW ¼ SW ¼ Section 13 T. 2W R. W.M.  
 Bearing and distance from section or subdivision corner

(11) WATER LEVEL: Completed well.

Depth at which water was first found 26 ft.  
 Static level 84 ft. below land surface. Date 6-22-76  
 Artesian pressure \_\_\_\_\_ lbs. per square inch. Date

(12) WELL LOG: Diameter of well below casing \_\_\_\_\_ 6 \_\_\_\_\_

Depth drilled 120 ft. Depth of completed well 120 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Top Soil	0	3	
Brown ?	3	25	
Sandy, brown clay	25	66	
Blue clay	66	95	
Gravel water	95	120	84

Work started 6-22 19 76 Completed 6-22 19 76  
 Date well drilling machine moved off of well 6-22 19 76

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.

[Signed] Darrel Donnelly Date 6-25, 1976.  
 (Drilling Machine Operator)

Drilling Machine Operator's License No. 883

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Name S. & M. Drilling & Supply, Inc.  
 (Person, firm or corporation) (Type or print)

Address 399 S. E. Walnut St. Canby, Ore  
97013

[Signed] Walter M... ..  
 (Water Well Contractor)

Contractor's License No. 497. Date 6-25, 19 76

(1) OWNER:

Name Maurice O. White  
 Address Rt. 1, Box 112  
Scappoose, Oregon, 97056

(2) TYPE OF WORK (check):

New Well  Deepening  Reconditioning  Abandon

If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

(4) PROPOSED USE (check):

Rotary  Driven   
 Cable  Jetted   
 Dug  Bored

Domestic  Industrial  Municipal   
 Irrigation  Test Well  Other

CASING INSTALLED:

Threaded  Welded

6" Diam. from 0 ft. to 120 ft. Gage .250  
 \_\_\_\_\_" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_  
 \_\_\_\_\_" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_

PERFORATIONS:

Perforated?  Yes  No.

Type of perforator used \_\_\_\_\_

Size of perforations \_\_\_\_\_ in. by \_\_\_\_\_ in.  
 \_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 \_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 \_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(7) SCREENS:

Well screen installed?  Yes  No

Manufacturer's Name \_\_\_\_\_ Model No. \_\_\_\_\_  
 \_\_\_\_\_ pe \_\_\_\_\_  
 Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(8) WELL TESTS:

Drawdown is amount water level is lowered below static level

Was a pump test made?  Yes  No If yes, by whom?

Yield: 10 gal./min. with Total drawdown after 1 hrs.  
 " " " " "  
 " " " " "

Baller test \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.

Artesian flow \_\_\_\_\_ g.p.m.

Temperature of water \_\_\_\_\_ Depth artesian flow encountered \_\_\_\_\_ ft.

(9) CONSTRUCTION:

Well seal—Material used Cement

Well sealed from land surface to 18 ft.

Diameter of well bore to bottom of seal 9 in.

Diameter of well bore below seal 6 in.

Number of sacks of cement used in well seal 3 sacks

Number of sacks of bentonite used in well seal \_\_\_\_\_ sacks

Brand name of bentonite \_\_\_\_\_

Number of pounds of bentonite per 100 gallons

of water \_\_\_\_\_ lbs./100 gals.

Was a drive shoe used?  Yes  No Plugs \_\_\_\_\_ Size: location \_\_\_\_\_ ft.

Did any strata contain unusable water?  Yes  No

Type of water? \_\_\_\_\_ depth of strata

Method of sealing strata off \_\_\_\_\_

Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_

Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

RECEIVED

Address does not correlate to SW-SW Sec. 13 3N/2W-13cc

STATE OF OREGON WATER WELL REPORT (as required by ORS 637.765)

COLU

JUN 06 1988

(1) OWNER: Name Peter McHugh, Address 52371 SW Keys Pl., City Scappoose, OR, Zip 97056

(2) TYPE OF WORK: [X] New Well, [ ] Deepen, [ ] Recondition, [ ] Abandon

(3) DRILL METHOD: [X] Rotary Air, [ ] Rotary Mud, [ ] Cable, [ ] Other

(4) PROPOSED USE: [X] Domestic, [ ] Community, [ ] Industrial, [ ] Irrigation, [ ] Thermal, [ ] Injection, [ ] Other

(5) BORE HOLE CONSTRUCTION: Special Construction approval Yes No, Depth of Completed Well 120 ft., Explosives used [ ] Type Amount

Table with columns: HOLE Diameter, SEAL Material, Amount sacks or pounds. Row 1: 6, 22, Bentonite, 0, 22, 10

How was seal placed: Method [ ] A [ ] B [ ] C [ ] D [ ] E, [X] Other poured. Backfill placed from ft. to ft. Material. Gravel placed from ft. to ft. Size of gravel.

(6) CASING/LINER: Diameter, From, To, Gauge, Steel, Plastic, Welded, Threaded. Casing: 6, 71, 79, 250, [X] Steel, [ ] Plastic, [X] Welded, [ ] Threaded. Liner: none

Location of shoe(s) none

(7) PERFORATIONS/SCREENS: [ ] Perforations Method, [ ] Screens Type Material

Table with columns: From, To, Slot size, Number, Diameter, Tele/pipe size, Casing, Liner. All cells empty.

(8) WELL TESTS: Minimum testing time is 1 hour. [ ] Pump, [ ] Bailer, [X] Air, [ ] Flowing Artesian. Yield gal/min 16, Drawdown, Drill stem at 100, Time 1 hr.

Temperature of water, Depth Artesian Flow Found, Was a water analysis done? [ ] Yes By whom, Did any strata contain water not suitable for intended use? [ ] Too little, [ ] Salty, [ ] Muddy, [ ] Odor, [ ] Colored, [ ] Other, Depth of strata:

(9) LOCATION OF WELL by legal description: County Columbia, Township 3N, Range 2W, Section 13 SW 1/4 SW 1/4

(10) STATIC WATER LEVEL: 55 ft. below land surface, Date 5-27-88, Artesian pressure lb. per square inch, Date

(11) WATER BEARING ZONES: Depth at which water was first found 88. Table with columns: From, To, Estimated Flow Rate, SWL. Row 1: 88, 100, 16, 55

(12) WELL LOG: Ground elevation. Table with columns: Material, From, To, SWL. Rows: BRN Silty Clay (0-17), Blue Clay (17-26), BRN SAND + GRAVEL (26-57), Cemented GRAVEL (57-78), Weathered Rock (78-86), DRK Blue Sandstone (86-120)

Date started 5-27-88, Completed 5-27-88

(unbonded) Water Well Constructor Certification: I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. WWC Number, Signed, Date

(bonded) Water Well Constructor Certification: I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. WWC Number 215, Signed Don Fealin, Date 6-3-88

RECEIVED  
JUN 2 1988

RECEIVED

UJ09

No 3060

WATER RESOURCES DEPT.  
SALEM, OREGON

"START CARD"

NOTICE OF BEGINNING OF WELL CONSTRUCTION  
(as required by ORS 537.762)

This form must be completed, signed by both the owner (or authorized agent) and constructor, and the original delivered to the Water Resources Department prior to commencement of construction, alteration or abandonment of each well.

Owner's Name and Mailing Address

Peter McHugh

52371 SW Keys Rd

Scappoose, OR 97056

Proposed Commencement Date

May 27 1988

Proposed Well Depth

150

Diameter

6 1/2

and Use:

Domestic

Thermal

Community

Injection

Industrial

Other

Irrigation

Proposed Well Location:

County

Columbia

Township

3 N

(N or S)

Range

2 W

(E or W)

Section

13 (NW)

1. SW 1/4 of SW 1/4 of above section

2. street address of well location

3. tax lot number of well location

4. attach approved map with location identified.  
(see reverse of this form for approved maps)

At least 2 of these must be provided

We hereby certify that we have read the back of this form, and that to the best of our knowledge the information provided herein is accurate and the well is being properly located from septic tanks and septic drain fields.

x Peter McHugh  
Owner's Signature

x Don Feehie  
Bonded Water Well Constructor

Title

License No.

715

Date

Company

TURNER DRILLING CO

Note: This is not a Water Right application. The owner is responsible for obtaining a Water Right through the Water Resources Department if required.

RECEIVED MAY 31 1988



NOTICE TO WATER WELL CONTRACTOR

The original and first copy of this report are to be filed with the

WATER WELL REPORT

11

STATE ENGINEER, SALEM, OREGON 97310 within 30 days from the date of well completion.

STATE OF OREGON (Please type or print) Do not write above this line

3005 State Well No. 3N/2W-13 State Permit No. 5 1/2 of SW 1/4

(1) OWNER:

Name Ross Carter Address 3020 S.E. Franklin

(2) TYPE OF WORK (check):

New Well [x] Deepening [ ] Reconditioning [ ] Abandon [ ]

(3) TYPE OF WELL:

Rotary [ ] Driven [ ] Cable [x] Jetted [ ] Dug [ ] Bored [ ]

(4) PROPOSED USE (check):

Domestic [x] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ]

(5) CASING INSTALLED:

6" Diam. from 0 ft. to 108 ft. Gage 250

(6) PERFORATIONS:

Perforated? [ ] Yes [x] No Type of perforator used Size of perforations in. by in.

(7) SCREENS:

Well screen installed? [ ] Yes [x] No Manufacturer's Name Type Model No. Diam. Slot size Set from ft. to ft.

(8) WATER LEVEL: Completed well.

Static level 90 ft. below land surface Date 3/24/68 Artesian pressure lbs. per square inch Date

(9) WELL TESTS:

Drawdown is amount water level is lowered below static level Was a pump test made? [ ] Yes [x] No If yes, by whom? Yield: gal./min. with ft. drawdown after hrs.

(10) CONSTRUCTION:

Well seal-Material used BENTONITE - CLAY Depth of seal 18' Diameter of well bore to bottom of seal 11 in.

(11) LOCATION OF WELL:

County Col. Driller's well number 83 1/4 Section 13 T. 3N R. 2W W.M. Bearing and distance from section or subdivision corner ON Callahan Road

(12) WELL LOG:

Diameter of well below casing Depth drilled 108 ft. Depth of completed well 108 ft. Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level as drilling proceeds. Note drilling rates.

Table with 4 columns: MATERIAL, From, To, SWL. Rows include Soil, Brown clay, Brown sandy clay, Gray clay + Fine Gravel, Brown sandy clay, Lt. Gray sandy clay, Med. coarse Gravel + Med. sand.

Work started 3/5/68 19 Completed 3/24 1968 Date well drilling machine moved off of well 3/30 1968

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief. [Signed] Fred Lane Date 3/26 1968

Drilling Machine Operator's License No. 499

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief. NAME Svend A. Hold Address Box 1267 St. Helens Ore. [Signed] Svend A. Hold Contractor's License No. 261 Date 3-31 1968

NOTICE TO WATER WELL CONTRACTOR  
The original and first copy of this report  
are to be filed with the

WATER RESOURCES DEPARTMENT  
SALEM, OREGON 97310  
within 30 days from the date  
of well completion.

WATER WELL REPORT

STATE OF OREGON  
(Please type or print)

(Do not write above this line)

RECEIVED

FEB 27 1978

State Well No. 3N/2W-13

State Permit No.

3086

1) OWNER:

Name Rudy Swendsen  
Address CALLAHAN RD. SCAPPOGE, ORE.

(2) TYPE OF WORK (check):

New Well  Deepening  Reconditioning  Abandon   
If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary  Driven   
Cable  Jetted   
Dug  Bored

(4) PROPOSED USE (check):

Domestic  Industrial  Municipal   
Irrigation  Test Well  Other

(5) CASING INSTALLED:

Threaded  Welded   
6" Diam. from 0 ft. to 89 ft. Gage 250  
" Diam. from " ft. to " ft. Gage  
" Diam. from " ft. to " ft. Gage

(6) PERFORATIONS:

Perforated?  Yes  No.

Type of perforator used

Size of perforations in. by in.  
perforations from " ft. to " ft.  
perforations from " ft. to " ft.  
perforations from " ft. to " ft.

(7) SCREENS:

Well screen installed?  Yes  No

Manufacturer's Name  
Type Model No.  
Diam. Slot size Set from " ft. to " ft.  
Diam. Slot size Set from " ft. to " ft.

(8) WELL TESTS:

Drawdown is amount water level is  
lowered below static level

Was a pump test made?  Yes  No If yes, by whom?  
Yield: gal./min. with ft. drawdown after hrs.  
" " " " " "  
" " " " " "  
Ballor test 30 gal./min. with 38 ft. drawdown after 1 1/2 hrs.  
Artesian flow g.p.m.

(9) CONSTRUCTION:

Well seal—Material used CEMENT  
Well sealed from land surface to 20 ft.  
Diameter of well bore to bottom of seal 10 in.  
Diameter of well bore below seal 6 in.  
Number of sacks of cement used in well seal 6 sacks  
How was cement grout placed? Poured  
Was a drive shoe used?  Yes  No Plugs Size: location ft.  
Did any strata contain unusable water?  Yes  No  
Type of water? depth of strata  
Rod of sealing strata off  
Was well gravel packed?  Yes  No Size of gravel:  
Gravel placed from " ft. to " ft.

(10) LOCATION OF WELL:

County COLANGIA Driller's well number  
1/4 Section 13 T. 3N R. 2W W.M.  
Bearing and distance from section or subdivision corner

(11) WATER LEVEL: Completed well.

Depth at which water was first found 90 ft.  
Static level 25 ft. below land surface. Date 1/18/78  
Artesian pressure lbs. per square inch. Date

(12) WELL LOG:

Diameter of well below casing 6"  
Depth drilled 92 ft. Depth of completed well 92 ft.

Formation: Describe color, texture, grain size and structure of materials;  
and show thickness and nature of each stratum and aquifer penetrated,  
with at least one entry for each change of formation. Report each change in  
position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
SOIL BROWN	0	2	
CLAY BROWN	2	20	
CLAY FINE SAND YELLOW	20	70	
CLAY BLUE	70	87	
GRAVEL MED.	87	92	25

Work started 1/13/ 1978 Completed 1/18/ 1978  
Date well drilling machine moved off of well 1/18/ 1978

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision.  
Materials used and information reported above are true to my  
best knowledge and belief.

[Signed] Bayant C. Luttrell Date 1/18/1978  
(Drilling Machine Operator)

Drilling Machine Operator's License No. 1074

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is  
true to the best of my knowledge and belief.

Name Guy A. Luttrell Well Drilling  
(Person, firm or corporation) (Type or print)

Address Rt. 1 Box 1630 St. Helens, ORE.

[Signed] GA Luttrell  
(Water Well Contractor)

Contractor's License No. 238 Date 1/18/ 1978

NOTICE TO WATER WELL CONTRACTOR

The original and first copy of this report are to be filed with the

WATER WELL REPORT

STATE OF OREGON

(Please type or print)

STATE ENGINEER, SALEM, OREGON 97310 within 30 days from the date of well completion.

RECEIVED

DEC 28 1976

State Well No.

SE-SW 9 3N12W-13 Cd

State Permit No.

3087 WATER RESOURCES DEPT. SALEM, OREGON

(1) OWNER:

Name GEORGE S. POOLEY Address RT. 1 BOX 34 SCAMPOOSE, OR. 97056

(2) TYPE OF WORK (check):

New Well X Deepening Reconditioning Abandon

If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary Cable Dug Driven Jetted Bored

(4) PROPOSED USE (check):

Domestic Industrial Municipal Irrigation Test Well Other

CASING INSTALLED:

Threaded Welded X

Diam. from 0 ft. to 9.5 ft. Gage 2.50

PERFORATIONS:

Perforated? Yes No X

Type of perforator used Size of perforations in. by in. perforations from ft. to ft.

(7) SCREENS:

Well screen installed? Yes No X

Manufacturer's Name Type Model No. Diam. Slot size Set from ft. to ft.

(8) WELL TESTS:

Drawdown is amount water level is lowered below static level

Was a pump test made? Yes No X Yield: gal./min. with ft. drawdown after hrs. Bailer test 15 gal./min. with 33 ft. drawdown after 1 hrs.

(9) CONSTRUCTION:

Well seal—Material used BENTONITE Well sealed from land surface to 2.2 ft. Diameter of well bore to bottom of seal 10 in. Number of sacks of cement used in well seal sacks Number of sacks of bentonite used in well seal 2 sacks Brand name of bentonite INTERNATIONAL Number of pounds of bentonite per 100 gallons of water 100 lbs./100 gals. Was a drive shoe used? Yes X No Plugs Size: location ft. Did any strata contain unusable water? Yes No X Type of water? depth of strata Method of sealing strata off Was well gravel packed? Yes No X Size of gravel: Gravel placed from ft. to ft.

(10) LOCATION OF WELL:

County COLUMBIA Driller's well number SE 1/4 SW 1/4 Section 13 T. 3N R. 2W W.M. Bearing and distance from section or subdivision corner

(11) WATER LEVEL: Completed well.

Depth at which water was first found 58 ft. Static level 42 ft. below land surface. Date 12-9-76 Artesian pressure lbs. per square inch. Date

(12) WELL LOG:

Diameter of well below casing 6

Depth drilled 93 ft. Depth of completed well 93 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

Table with columns: MATERIAL, From, To, SWL. Entries include: TOP SOIL (0-1), CLAY BROWN (1-25), BOUNDERS W/CLAY (25-28), GRAVEL W/CLAY BROWN (28-58), SAND W/CLAY BROWN (58-81), SAND + GRAVEL-WATER (81-93). SWL values: 42, 42.

Work started 12-6-1976 Completed 12-9-1976

Date well drilling machine moved off of well 12-10-1976

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.

[Signed] R. Ed Bell (Drilling Machine Operator) Date 12-12-1976

Drilling Machine Operator's License No. 587

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Name RAY ED BELL MINNIEWELL DRILLING (Person, firm or corporation) (Type or print) 98611

Address P.O. BOX 695 CASTLE ROCK, W.A.

[Signed] R. Ed Bell (Water Well Contractor)

Contractor's License No. 5155 Date 12-12-1976

TO WATER WELL CONTRACTOR  
 original and first copy of this report  
 are to be filed with the  
 WATER RESOURCES DEPARTMENT.  
 SALEM, OREGON 97300  
 within 30 days from the date  
 of well completion.

**WATER WELL REPORT**

**RECEIVED**

**COLU**  
**3084**

STATE OF OREGON  
 (Please type or print)

State Well No. 3N/2W-13 cd

(Do not write above this line) WATER RESOURCES DEPT  
 STATE OF OREGON

State Permit No. deepened

**(1) OWNER:**

Name GEORGE S. POOLEY  
 Address RT. 1 BOX 34 SCAPPOOSE, OR. 97056

**(2) TYPE OF WORK (check):**

New Well  Deepening  Reconditioning  Abandon   
 If abandonment, describe material and procedure in Item 12.

**(3) TYPE OF WELL:**

Rotary  Driven   
 Cable  Jetted   
 Dug  Bored

**(4) PROPOSED USE (check):**

Domestic  Industrial  Municipal   
 Irrigation  Test Well  Other

**(5) CASING INSTALLED:**

Threaded  Welded   
6" Diam. from 76" ft. to 111" ft. Gage 250  
 " Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_  
 " Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_

**(6) PERFORATIONS:**

Perforated?  Yes  No.

Type of perforator used \_\_\_\_\_  
 Size of perforations \_\_\_\_\_ in. by \_\_\_\_\_ in.  
 \_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 \_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 \_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

**(7) SCREENS:**

Well screen installed?  Yes  No

Manufacturer's Name \_\_\_\_\_  
 Type \_\_\_\_\_ Model No. \_\_\_\_\_  
 Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

**(8) WELL TESTS:**

Drawdown is amount water level is lowered below static level

Was a pump test made?  Yes  No If yes, by whom? DRILLER  
 Yield: 30 gal./min. with 67 ft. drawdown after 1 hrs.  
 " " " " " "  
 " " " " " "  
 Bailer test \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
 Artesian flow \_\_\_\_\_ g.p.m.  
 Temperature of water 51 Depth artesian flow encountered \_\_\_\_\_ ft.

**(9) CONSTRUCTION:**

Well seal—Material used \_\_\_\_\_  
 Well sealed from land surface to \_\_\_\_\_ ft.  
 Diameter of well bore to bottom of seal \_\_\_\_\_ in.  
 Diameter of well bore below seal \_\_\_\_\_ in.  
 Number of sacks of cement used in well seal \_\_\_\_\_ sacks  
 How was cement grout placed? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 Was a drive shoe used?  Yes  No Plugs \_\_\_\_\_ Size: location \_\_\_\_\_ ft.  
 Did any strata contain unusable water?  Yes  No  
 Name of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
 Method of sealing strata off \_\_\_\_\_  
 Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
 Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

**(10) LOCATION OF WELL:**

County COLUMBIA Driller's well number \_\_\_\_\_  
SE 1/4 SW 1/4 Section 13 T. 3N R. 2W W.M. \_\_\_\_\_  
 Bearing and distance from section or subdivision corner \_\_\_\_\_

**(11) WATER LEVEL: Completed well.**

Depth at which water was first found 93 ft.  
 Static level 35 ft. below land surface. Date 2-22-82  
 Artesian pressure \_\_\_\_\_ lbs. per square inch. Date \_\_\_\_\_

**(12) WELL LOG:**

Diameter of well below casing 6"

Depth drilled 122 ft. Depth of completed well 122 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
<u>OLD WELL 93 FT. DEEP</u>			
<u>SAND W/ GRAVEL BROWN</u>	<u>93</u>	<u>95</u>	<u>42</u>
<u>SAND FINE BROWN</u>	<u>95</u>	<u>104</u>	<u>42</u>
<u>SAND + GRAVEL GRAY</u>	<u>104</u>	<u>108</u>	<u>42</u>
<u>SAND W/ WOOD</u>	<u>108</u>	<u>110</u>	<u>42</u>
<u>WOOD LOG</u>	<u>110</u>	<u>113 1/2</u>	<u>42</u>
<u>GRAVEL W/ SAND WATER</u>	<u>113 1/2</u>	<u>122</u>	<u>35</u>

Work started 2-22-1982 Completed 2-22-1982  
 Date well drilling machine moved off of well 2-24-1982

**Drilling Machine Operator's Certification:**

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.

[Signed] Ron Edgell Date 2-24, 1982  
 (Drilling Machine Operator)

Drilling Machine Operator's License No. 589

**Water Well Contractor's Certification:**

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Name RON EDGELL, PUMP & WELL DRILLING  
 (Person, firm or corporation) (Type or print)

Address P.O. BOX 695 CASTLE ROCK, WA. 98611

[Signed] Ron Edgell  
 (Water Well Contractor)

Contractor's License No. 515 Date 2, 24, 1982

NOTICE TO WATER WELL CONTRACTOR

The original and first copy of this report are to be filed with the

STATE ENGINEER, SALEM, OREGON 97310 within 30 days from the date of well completion.

WATER WELL REPORT

STATE OF OREGON (Please type or print)

(Do not write above this line)

RECEIVED

NOV 2 1976

State Well No.

State Permit No.

SALEM, OREGON

300 Maybe SE-SW 3W/2W-13

88LU 3107

(1) OWNER:

Name JOHN C. BEAVERS  
Address 101 GALLAHAN RD. SCAMPOOSE, OR.  
33391 Callahan Rd 97256

(2) TYPE OF WORK (check):

New Well  Deepening  Reconditioning  Abandon   
If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary  Driven   
Cable  Jetted   
Dug  Bored

(4) PROPOSED USE (check):

Domestic  Industrial  Municipal   
Irrigation  Test Well  Other

CASING INSTALLED:

Threaded  Welded

6" Diam. from 1.6" ft. to 9.3" ft. Gage 25.76  
" Diam. from " ft. to " ft. Gage  
" Diam. from " ft. to " ft. Gage

PERFORATIONS:

Perforated?  Yes  No.

Type of perforator used

Size of perforations in. by in.  
perforations from " ft. to " ft.  
perforations from " ft. to " ft.  
perforations from " ft. to " ft.

(7) SCREENS:

Well screen installed?  Yes  No

Manufacturer's Name  
Type Model No.  
Diam. Slot size Set from " ft. to " ft.  
Diam. Slot size Set from " ft. to " ft.

(8) WELL TESTS:

Drawdown is amount water level is lowered below static level

Was a pump test made?  Yes  No If yes, by whom?  
ld: gal./min. with ft. drawdown after hrs.  
" " " " " "  
" " " " " "  
Bailer test 15 gal./min. with 19 ft. drawdown after 1 hrs.  
Artesian flow g.p.m.  
Temperature of water 57° Depth artesian flow encountered " ft.

(9) CONSTRUCTION:

Well seal—Material used BENTONITE  
Well sealed from land surface to 22 ft.  
Diameter of well bore to bottom of seal 10 in.  
Diameter of well bore below seal 6 in.  
Number of sacks of cement used in well seal \_\_\_\_\_ sacks  
Number of sacks of bentonite used in well seal 2 sacks  
Brand name of bentonite INTERNATIONAL  
Number of pounds of bentonite per 100 gallons of water 100 lbs./100 gals.  
Was a drive shoe used?  Yes  No Plugs \_\_\_\_\_ Size: location \_\_\_\_\_ ft.  
Did any strata contain unusable water?  Yes  No  
Type of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
Method of sealing strata off \_\_\_\_\_  
Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(10) LOCATION OF WELL:

County COLUMBIA Driller's well number  
SE 1/4 SE 1/4 Section 13 T. 3N R. 2W W.M.  
Bearing and distance from section or subdivision corner

(11) WATER LEVEL: Completed well.

Depth at which water was first found 20 ft.  
Static level 59 ft. below land surface. Date 10-24-76  
Artesian pressure lbs. per square inch. Date

(12) WELL LOG:

Diameter of well below casing 6"

Depth drilled 93 1/2 ft. Depth of completed well 93 1/2 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To
TOP SOIL	0	11/2
CLAY BROWN	11/2	17
CLAY BROWN WITH GRAVEL	17	49
CLAY YELLOW W/ SAND & GRAVEL	49	64
CLAY BROWN W/ GRAVEL & SAND	64	75
CLAY GRAY W/ SOME GRAVEL	75	87
SAND GRAY	87	87
GRAVEL USED WITH SAND	87	93 1/2
WATER-BEARING		

Work started 10-22-1976 Completed 10-24-1976  
Date well drilling machine moved off of well 10-24-1976

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.

[Signed] Paul Edgell Date 10-24-1976  
(Drilling Machine Operator)

Drilling Machine Operator's License No. 589

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Name RON EDGELL PUMP & WELL DRILLING  
(Person, firm or corporation) (Type or print)

Address P.O. BOX 685 CASTLE ROCK, WA 98641

[Signed] Paul Edgell  
(Water Well Contractor)

Contractor's License No. 515 Date 10-24, 1976

STATE ENGINEER  
Salem, Oregon

**COLO**

# Well Record

STATE WELL NO. 3N/2W-130  
COUNTY Columbia  
APPLICATION NO. GR-679

3110

GR- 1544

OWNER: Martin J. Irtek

MAILING ADDRESS:

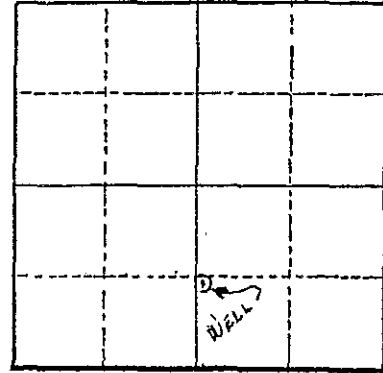
LOCATION OF WELL: Owner's No.

CITY AND STATE:

Scappoose, Oregon

SW 1/4 SE 1/4 Sec. 13 T. 3 N. 34 R. 2 E. W.M.

Bearing and distance from section or subdivision corner 100' E. & 1200' N. from S 1/4 cor. Sec. 13



Section 13

Altitude at well

TYPE OF WELL: Drilled Date Constructed 1952

Depth drilled 170' Depth cased 170'

### CASING RECORD:

6"

### FINISH:

### AQUIFERS:

### WATER LEVEL:

47'

PUMPING EQUIPMENT: Type Pacific deep well turbine H.P. 3  
Capacity 45 G.P.M.

### WELL TESTS:

Drawdown 53 ft. after 45 hours G.P.M.

Drawdown \_\_\_\_\_ ft. after \_\_\_\_\_ hours G.P.M.

USE OF WATER Irrigation Temp. \_\_\_\_\_ °F. \_\_\_\_\_, 19

SOURCE OF INFORMATION GR Record

DRILLER or DIGGER \_\_\_\_\_

### ADDITIONAL DATA:

Log \_\_\_\_\_ Water Level Measurements \_\_\_\_\_ Chemical Analysis \_\_\_\_\_ Aquifer Test \_\_\_\_\_

### REMARKS:

Log: Soil 0 to 14 ft.  
Rock 14 to 20 ft.  
Quick sand 20 to 170 ft.

Irrigation of 3.5 acres

RECEIVED

MAR 20 1998

(N 1/2 SE - NW 1/4)  
(Columbia Rv. Hwy is in E 1/2, so cannot be in NW 1/4. Maybe NW 1/4 of SE 1/4)

STATE OF OREGON  
WATER SUPPLY WELL REPORT  
(as required by ORS 537.765)

WATER RESOURCES DEPT. WELL I.D. # L 23620  
SALEM, OREGON START CARD # 110277

Instructions for completing this report are on the last page of this form.

*Colo 50690*

(1) OWNER: Well Number \_\_\_\_\_  
Name TED WHITE

Address 51583 COLUMBIA RIVER HWY.  
City SCAPOOSE State OR Zip 97056

(2) TYPE OF WORK  
 New Well  Deepening  Alteration (repair/recondition)  Abandonment

(3) DRILL METHOD:  
 Rotary Air  Rotary Mud  Cable  Auger  
 Other

(4) PROPOSED USE:  
 Domestic  Community  Industrial  Irrigation  
 Thermal  Injection  Livestock  Other

(5) BORE HOLE CONSTRUCTION:  
Special Construction approval  Yes  No Depth of Completed Well 187 ft.  
Explosives used  Yes  No Type \_\_\_\_\_ Amount \_\_\_\_\_

HOLE			SEAL			Sacks or pounds
Diameter	From	To	Material	From	To	
13	0	20	Bentonite	0	20	27 SKS
8	20	187				

How was seal placed: Method  A  B  C  D  E  
 Other Poured into dry annular  
Backfill placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Size of gravel \_\_\_\_\_

(6) CASING/LINER:

Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing: 8"	+2	176	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Liner: 6"	167	177	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6"	183	187	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Final location of shoe(s) Fig. K Packer @ 167', Shoe @ 176'

(7) PERFORATIONS/SCREENS:

Perforations Method Johnson Sand Screen  
 Screens Type Pipe Size Material Galv. Steel

From	To	Slot size	Number	Diameter	Tube/pipe size	Casing	Liner
177	183	.020		6"	pipe	<input type="checkbox"/>	<input checked="" type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour

Yield gal/min	Drawdown	Drill stem at	Flowing Time
80-90		165	1 hr.
40-45		100	2-3 hrs.

Temperature of water 52° F Depth Artesian Flow Found \_\_\_\_\_  
Was a water analysis done?  Yes By whom \_\_\_\_\_  
Did any strata contain water not suitable for intended use?  Too little  
 Salty  Muddy  Odor  Colored  Other iron  
Depth of strata: 97-158

(9) LOCATION OF WELL by legal description:  
County COLUMBIA Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
Township 3N N or S Range 2W E or W. WM.  
Section 13 SE 1/4 NW 1/4  
Tax Lot 12000 Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
Street Address of Well (or nearest address) 51577 COLUMBIA RIVER HWY., SCAPOOSE, OR

(10) STATIC WATER LEVEL:  
43 ft. below land surface. Date 03/16/98  
Artesian pressure \_\_\_\_\_ lb. per square inch. Date \_\_\_\_\_

(11) WATER BEARING ZONES:

Depth at which water was first found 97

From	To	Estimated Flow Rate	SWL
177	183	80-90 GPM	43

(12) WELL LOG:

Ground Elevation \_\_\_\_\_

Material	From	To	SWL
Brown silty clay occ. boulder	0	12	
Brown gravel & sand, tight boulders	12	97	
Brown sand w/some gravel	97	111	43
Brown sand & gravel	111	135	"
Gray-black sand & gravel	135	146	"
Brown sand w/gravel	146	158	"
Gray-black sand w/gravel	158	162	"
Gray-black gravel w/course sand	162	187	43

Date started 02/24/98 Completed 03/16/98  
(unbonded) Water Well Constructor Certification:  
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.  
WWC Number \_\_\_\_\_  
Signed \_\_\_\_\_ Date \_\_\_\_\_

(bonded) Water Well Constructor Certification:  
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.  
WWC Number 573  
Signed [Signature] Date 03/18/98



**NOTICE TO WATER WELL CONTRACTOR**

The original and first copy of this report are to be filed with the

STATE ENGINEER, SALEM, OREGON 97310  
within 30 days from the date of well completion.

**WATER WELL RECEIVED**  
STATE OF OREGON

(Please type or print)

JUN 30 1976

State Well No. 3A 24-73-9C

(Do not write above) WATER RESOURCES DEPT Permit No. \_\_\_\_\_  
SALEM, OREGON

**(1) OWNER:**

Name Phillip Holsheimer Jr.  
Address Rt. 1, Box 132  
Scappoose, Ore., 97056

**(2) TYPE OF WORK (check):**

New Well  Deepening  Reconditioning  Abandon   
If abandonment, describe material and procedure in Item 12.

**(3) TYPE OF WELL:**

Rotary  Driven   
Cable  Jetted   
Dig  Bored

**(4) PROPOSED USE (check):**

Domestic  Industrial  Municipal   
Irrigation  Test Well  Other

**CASING INSTALLED:**

Threaded  Welded   
6" Diam. from 0 ft. to 95 ft. Gage 250  
" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_  
" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_

**PERFORATIONS:**

Perforated?  Yes  No.

Type of perforator used \_\_\_\_\_  
Size of perforations in. by in.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

**(7) SCREENS:**

Well screen installed?  Yes  No

Manufacturer's Name \_\_\_\_\_  
Type \_\_\_\_\_ Model No. \_\_\_\_\_  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

**(8) WELL TESTS:**

Drawdown is amount water level is lowered below static level

Was a pump test made?  Yes  No If yes, by whom?  
Pump: 20 gal./min. with Total drawdown after 1 hrs.  
" " " " " " "  
" " " " " " "  
Ballor test gal./min. with ft. drawdown after hrs.  
Artesian flow g.p.m.  
Temperature of water Depth artesian flow encountered \_\_\_\_\_ ft.

**(9) CONSTRUCTION:**

Well seal—Material used Cement  
Well sealed from land surface to 8 ft.  
Diameter of well bore to bottom of seal 9 in.  
Diameter of well bore below seal 6 in.  
Number of sacks of cement used in well seal 3 sacks  
Number of sacks of bentonite used in well seal \_\_\_\_\_ sacks  
Brand name of bentonite \_\_\_\_\_  
Number of pounds of bentonite per 100 gallons of water \_\_\_\_\_ lbs./100 gals.  
Was a drive shoe used?  Yes  No Plugs \_\_\_\_\_ Size: location \_\_\_\_\_ ft.  
Did any strata contain unusable water?  Yes  No  
Type of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
Method of sealing strata off \_\_\_\_\_  
Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

**(10) LOCATION OF WELL:**

County Columbia Driller's well number \_\_\_\_\_  
SW ¼ NE ¼ Section 13 T. 3N R. 2W W.M.  
Bearing and distance from section or subdivision corner \_\_\_\_\_

**(11) WATER LEVEL: Completed well.**

Depth at which water was first found 45 ft.  
Static level 76 ft. below land surface. Date 6-24-76  
Artesian pressure \_\_\_\_\_ lbs. per square inch. Date \_\_\_\_\_

**(12) WELL LOG:**

Diameter of well below casing 6  
Depth drilled 95 ft. Depth of completed well 95 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Top soil	0	3	
Brown Clay	3	25	
Gravel	25	45	
Brown clay, gravel	45	65	
Gravel, water	65	95	76

Work started 6-23 19 76 Completed 6-24-76 19  
Date well drilling machine moved off of well 6-24-76 19

**Drilling Machine Operator's Certification:**  
This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.  
[Signed] [Signature] Date 6-24-76 19.....  
(Drilling Machine Operator)  
Drilling Machine Operator's License No. 883

**Water Well Contractor's Certification:**  
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
Name S&M Drilling & Supply, Inc.  
(Person, firm or corporation) (Type or print)  
Address 399 S.E. Walnut, Canby, Ore.  
[Signed] [Signature]  
(Water Well Contractor)  
Contractor's License No. 497 Date 6-24-76, 19.....



TO WATER WELL CONTRACTOR  
The original and first copy  
of this report are to be  
filed with the

**COLU**  
3201

STATE ENGINEER, SALEM, OREGON 97310  
within 30 days from the date  
of well completion.

WATER WELL REPORT

STATE OF OREGON  
(Please type or print)

(Do not write above this line)

RECEIVED

SEP 21 1976

State Well No. 3N/2W-120c

State Permit No. \_\_\_\_\_

SALEM, OREGON

(1) OWNER:

Name Phillip Holsheimer, Jr.  
Address Rt. 1, Box 132, Scappoose, Ore. 97056

(2) TYPE OF WORK (check):

New Well  Deepening  Reconditioning  Abandon

If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary  Driven   
Cable  Jetted   
Dug  Bored

(4) PROPOSED USE (check):

Domestic  Industrial  Municipal   
Irrigation  Test Well  Other

CASING INSTALLED:

Threaded  Welded   
6" Diam. from 95 ft. to 116 ft. Gage 250  
" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_  
" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_

PERFORATIONS:

Perforated?  Yes  No.

Type of perforator used \_\_\_\_\_

Size of perforations in. by in.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(7) SCREENS:

Well screen installed?  Yes  No

Manufacturer's Name \_\_\_\_\_  
Type \_\_\_\_\_ Model No. \_\_\_\_\_  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(8) WELL TESTS:

Drawdown is amount water level is lowered below static level

Was a pump test made?  Yes  No If yes, by whom?  
Yield: 40 gal./min. with total 1 ft. drawdown after \_\_\_\_\_ hrs.  
" " " " " " " "  
" " " " " " " "  
Baller test \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
Artesian flow \_\_\_\_\_ g.p.m.  
Temperature of water \_\_\_\_\_ Depth artesian flow encountered \_\_\_\_\_ ft.

(9) CONSTRUCTION:

Well seal—Material used \_\_\_\_\_  
Well sealed from land surface to \_\_\_\_\_ ft.  
Diameter of well bore to bottom of seal \_\_\_\_\_ in.  
Diameter of well bore below seal \_\_\_\_\_ in.  
Number of sacks of cement used in well seal \_\_\_\_\_ sacks  
Number of sacks of bentonite used in well seal \_\_\_\_\_ sacks  
Brand name of bentonite \_\_\_\_\_  
Number of pounds of bentonite per 100 gallons of water \_\_\_\_\_ lbs./100 gals.  
Was a drive shoe used?  Yes  No Plugs \_\_\_\_\_ Size: location \_\_\_\_\_ ft.  
Did any strata contain unusable water?  Yes  No  
Type of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
Method of sealing strata off \_\_\_\_\_  
Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(10) LOCATION OF WELL:

County Columbia Driller's well number \_\_\_\_\_  
SW 1/4 NE 1/4 Section 13 T. 3N R. 2W W.M.  
Bearing and distance from section or subdivision corner \_\_\_\_\_

(11) WATER LEVEL: Completed well.

Depth at which water was first found 45 ft.  
Static level 76 ft. below land surface. Date 9-14-76  
Artesian pressure \_\_\_\_\_ lbs. per square inch. Date \_\_\_\_\_

(12) WELL LOG:

Diameter of well below casing 6"  
Depth drilled 120 ft. Depth of completed well 120 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Gravel Sand Water	95	118	76
Blue Clay	118	120	

Work started Sept. 14 19 76 Completed Sept. 14 19 76  
Date well drilling machine moved off of well Sept. 14 19 76

Drilling Machine Operator's Certification:  
This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.  
[Signed] Dwight D. Daulton Date 9-16, 1976  
(Drilling Machine Operator)  
Drilling Machine Operator's License No. 883

Water Well Contractor's Certification:  
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
Name S. & M. Drilling & Supply, Inc.  
(Person, firm or corporation) (Type or print)  
Address 399 S. E. Walnut, Canby, Ore. 97013  
[Signed] Walter Mc...  
(Water Well Contractor)  
Contractor's License No. 497 Date 9-16, 1976

*COLD*  
*MAG*  
*maybe SE-SW-NW*  
*30/2w/130*

**(1) OWNER:** Russ Tylander  
Name: RUSS TYLANDER  
Address: OAK RIDGE DRIVE 6TH ST  
City: SCAPPOOSE State: OR Zip: 97056  
Well Number: W-1

**(2) TYPE OF WORK:**  
 New Well  Deepen  Recondition  Abandon

**(3) DRILL METHOD:**  
 Rotary Air  Rotary Mud  Cable  
 Other

**(4) PROPOSED USE:**  
 Domestic  Community  Industrial  Irrigation  
 Thermal  Injection  Other

**(5) BORE HOLE CONSTRUCTION:**  
Special Construction approval  Yes  No Depth of Completed Well: 50 ft.  
Explosives used  Yes  No Type: Amount:

HOLE			SEAL			Amount sacks or pounds
Diameter	From	To	Material	From	To	
10	0	20	CEMENT	0	20	10 SACKS
6	20	60				

How was seal placed: Method  A  B  C  D  E  
 Other

Backfill placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Size of gravel \_\_\_\_\_

**(6) CASING/LINER:**

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	6	+1	50	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Liner:					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Final location of shoe(s) 50 FT

**(7) PERFORATIONS/SCREENS:**

Perforations Method \_\_\_\_\_  
 Screens Type PVC SCH-40 Material \_\_\_\_\_

From	To	Slot size	Number	Diameter	Tel/pipe size	Casing	Liner
60	55	8		4	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**(8) WELL TESTS: Minimum testing time is 1 hour**

Pump  Bailer  Air  Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
20		50	1 hr.

Temperature of Water 52 Depth Artesian Flow Found \_\_\_\_\_  
Was a water analysis done?  Yes By whom \_\_\_\_\_  
Did any strata contain water not suitable for intended use?  Too little  
 Salty  Muddy  Odor  Colored  Other \_\_\_\_\_  
Depth of strata: \_\_\_\_\_

**(9) LOCATION OF WELL by legal description:**  
County: COLUMBIA Latitude: x' " Longitude: x' "  
Township: 3 N N. or S. Range: 2 W E. or W. WM.  
Section: 13 NW 1/4 SW 1/4  
Tax Lot \_\_\_\_\_ Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
Street Address of Well (or nearest address): 6TH STREET SCAPPOOSE, OR 97056

**(10) STATIC WATER LEVEL:**  
10 ft. below land surface. Date: 09/01/93  
Artesian pressure \_\_\_\_\_ lb. per square inch. Date: \_\_\_\_\_

**(11) WATER BEARING ZONES:**  
Depth at which water was first found 10

From	To	Estimated Flow Rate	SWL
10	60	20 GPM	10

**(12) WELL LOG:** Ground elevation \_\_\_\_\_

Material	From	To	SWL
SILT CLAY	0	10	
SILT	10	18	
SILT GRAVEL	18	40	
GRAVEL, SAND	40	55	
SAND	55	60	

Date started 09/01/93 Completed 09/03/93  
**(unbonded) Water Well Constructor Certification:**  
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.

WWC Number \_\_\_\_\_  
Signed \_\_\_\_\_ Date \_\_\_\_\_

**(bonded) Water Well Constructor Certification:**  
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.  
WWC Number 1480  
Signed \_\_\_\_\_ Date 9/8/93

*Colu  
100*

**RECEIVED**

1) OWNER:  
 City of Scapoose

Address  
 Scapoose Oregon 97056

2) TYPE OF WORK (check):  
 New Well  Deepening  Reconditioning  Abandon   
 abandonment, describe material and procedure in Item 12.

3) TYPE OF WELL: (4) PROPOSED USE (check):  
 Rotary  Driven  Domestic  Industrial  Municipal   
 Jetted  Irrigation  Test Well  Other   
 Bored

5) CASING INSTALLED: Threaded  Welded   
 12" - Diam. from 0 ft. to 186 ft. Casing 375  
 10" - Diam. from 185 ft. to 1869 ft. Casing 250  
 - Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Casing \_\_\_\_\_

6) PERFORATIONS: Perforated?  Yes  No.  
 Type of perforator used \_\_\_\_\_  
 Size of perforations in. by in.  
 \_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 \_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 \_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

7) SCREENS: Well screen installed?  Yes  No  
 Manufacturer's Name Johnson Co.  
 Stainless Steel Model No. \_\_\_\_\_  
 12 slot size 50 Set from 186'9 ft. to 206'9" ft.  
 12 Slot size 60 Set from 206'9 ft. to 216'9 ft.  
 12 80 216'9 226'9

8) WELL TESTS: Drawdown is amount water level is lowered below static level  
 Is a pump test made?  Yes  No If yes, by whom? Driller  
 Yield: 500 gal./min. with 72 ft. drawdown after 48 hrs.  
 \_\_\_\_\_  
 \_\_\_\_\_  
 Per test gal./min. with ft. drawdown after hrs.  
 Artesian flow g.p.m.  
 Temperature of water Depth artesian flow encountered \_\_\_\_\_ ft.

9) CONSTRUCTION:  
 Seal Material used cement  
 Well sealed from land surface to 45 ft.  
 Diameter of well bore to bottom of seal 16 in.  
 Diameter of well bore below seal 12 in.  
 Number of sacks of cement used in well seal 36 sacks  
 Was cement grout placed? pressure pumped

10) DRIVE SHOE USED?  Yes  No Plugs \_\_\_\_\_ Size: location \_\_\_\_\_ ft.  
 Do strata contain unusable water?  Yes  No  
 Depth of water? depth of strata \_\_\_\_\_  
 Method of sealing strata off \_\_\_\_\_  
 Is well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
 Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(10) LOCATION OF WELL:  
 County Columbia Driller's well number JUN 21 1978  
 Section 13 T. 3N R. 2W W.M.

Bearing and distance from section or subdivision corner  
 Dutch Canyon Rd. #2

(11) WATER LEVEL: Completed well  
 Depth at which water was first found \_\_\_\_\_ ft.  
 Static level 61 ft. below ground surface Date 11/2/78  
 Artesian pressure 228 lbs. per square foot Date 11/2/78

(12) WELL LOG: Diameter of well flow casing \_\_\_\_\_  
 Depth drilled 228 ft. Depth of completed well 227 ft.

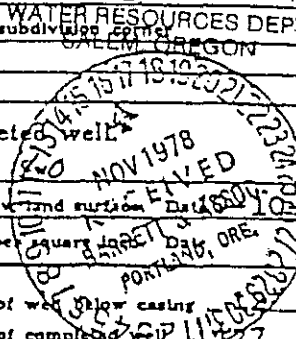
Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Top soil	0	3	
Clay Brwn. sandy	3	11	
Clay brwn.	11	22	
Clay Br. w/gravel	22	60	
Gravel & Sand cemented	60	123	
Sand w/ trace gravel	123	158	
Gravel med sand fine water	158	180	
Gravel w/med sand water	180	227	
Clay Blue	227	228	

Work started Sept. 7 1978 Completed Oct. 10 1978  
 Date well drilling machine moved off of well 9/25/ 1978

Drilling Machine Operator's Certification:  
 This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.  
 (Signed) *David D. ...* Date 11/2, 1978  
 (Drilling Machine Operator)  
 Drilling Machine Operator's License No. 888

Water Well Contractor's Certification:  
 This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
 Name S. & M. Drilling & Supply, Inc.  
 (Person, firm or corporation) (Type or print)  
 Address 399 se Walnut St. Canby, Oregon 9701  
 (Signed) *Walter ...*  
 (Water Well Contractor)  
 Contractor's License No. 497 Date 11/2, 1978



NOTICE TO WATER WELL CONTRACTOR  
The original and first copy  
of this report are to be  
filed with the

WATER WELL REPORT

N<sup>1</sup>/<sub>2</sub> - SW<sup>1</sup>/<sub>4</sub>

RECEIVED

STATE ENGINEER, SALEM, OREGON 97310  
within 30 days from the date  
of well completion.

**3050**

STATE OF OREGON  
(Please type or print)  
(Do not write above this line)

State Well No. \_\_\_\_\_

JUN 23 1976

State Permit No. **3N/2W-13**  
**SW<sup>1</sup>/<sub>4</sub>**

WATER RESOURCES DEPT.

(1) OWNER:

Name W.M. Beaston  
Address Dutch Canyon Rd. Scappoose  
ORE

(2) TYPE OF WORK (check):

New Well  Deepening  Reconditioning  Abandon   
If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary  Driven   
Cable  Jetted   
Dug  Bored

(4) PROPOSED USE (check):

Domestic  Industrial  Municipal   
Irrigation  Test Well  Other

CASING INSTALLED:

Threaded  Welded   
6" Diam. from 0 ft. to 41 ft. Gage 250.  
" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_  
" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_

PERFORATIONS:

Perforated?  Yes  No.

Type of perforator used \_\_\_\_\_  
Size of perforations \_\_\_\_\_ in. by \_\_\_\_\_ in.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(7) SCREENS:

Well screen installed?  Yes  No

Manufacturer's Name \_\_\_\_\_  
Type \_\_\_\_\_ Model No. \_\_\_\_\_  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(8) WELL TESTS:

Drawdown is amount water level is  
lowered below static level

Was a pump test made?  Yes  No If yes, by whom?  
Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
" " " " " " " " " " " "  
" " " " " " " " " " " "  
Baller test 40 gal./min. with 0 ft. drawdown after 2 hrs.  
Artesian flow \_\_\_\_\_ g.p.m.  
Temperature of water 49 Depth artesian flow encountered \_\_\_\_\_ ft.

(9) CONSTRUCTION:

Well seal—Material used CEMENT  
Well sealed from land surface to 18 ft.  
Diameter of well bore to bottom of seal 8 in.  
Diameter of well bore below seal 6 in.  
Number of sacks of cement used in well seal 4 sacks  
Number of sacks of bentonite used in well seal \_\_\_\_\_ sacks  
Brand name of bentonite \_\_\_\_\_  
Number of pounds of bentonite per 100 gallons  
of water \_\_\_\_\_ lbs./100 gals.  
Was a drive shoe used?  Yes  No Plugs \_\_\_\_\_ Size: location \_\_\_\_\_ ft.  
Did any strata contain unusable water?  Yes  No  
Type of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
Method of sealing strata off \_\_\_\_\_  
Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(10) LOCATION OF WELL:

County Columbia Driller's well number \_\_\_\_\_  
\_\_\_\_\_ 1/4 \_\_\_\_\_ 1/4 Section 17 T. 3 R. 2 W.M. \_\_\_\_\_  
Bearing and distance from section or subdivision corner \_\_\_\_\_

(11) WATER LEVEL: Completed well.

Depth at which water was first found 77 ft.  
Static level 20 ft. below land surface. Date 5-15-76  
Artesian pressure \_\_\_\_\_ lbs. per square inch. Date \_\_\_\_\_

(12) WELL LOG:

Diameter of well below casing 6"  
Depth drilled 83 ft. Depth of completed well 83 ft.

Formation: Describe color, texture, grain size and structure of materials;  
and show thickness and nature of each stratum and aquifer penetrated,  
with at least one entry for each change of formation. Report each change in  
position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
SOIL BROWN	0	2	0
CLAY RED	2	30	0
GRAVEL SMALL	30	37	0
SANDSTONE BLUE	37	83	20

Work started 5-12-1976 Completed 5-15-1976  
Date well drilling machine moved off of well 5-15-1976

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision.  
Materials used and information reported above are true to my  
best knowledge and belief  
[Signed] W.A. Luttrell Date 5-15-1976  
(Drilling Machine Operator)

Drilling Machine Operator's License No. 198

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is  
true to the best of my knowledge and belief.  
Name Guy A. Luttrell well Drilling  
(Person, firm or corporation) (Type or print)  
Address Rt. 1 Box 732 St. Helens, Oreg.  
[Signed] W.A. Luttrell  
(Water Well Contractor)

Contractor's License No. 238 Date 5-15-1976

**NOTICE TO WATER WELL CONTRACTOR**  
The original and first copy of this report are to be filed with the

WATER RESOURCES DEPARTMENT  
SALEM, OREGON 97310  
within 30 days from the date  
of well completion.

**WATER WELL REPORT**

STATE OF OREGON  
(Please type or print)  
(Do not write above this line)

**RECEIVED**

FEB - 8 1978

State Well No. 3N/2W-13

State Permit No. \_\_\_\_\_

WATER RESOURCES DEPT.  
SALEM, OREGON

SWY4

**(1) OWNER:**

Name Albert Haulick HAVLIK  
Address Rt 1 Box 395H  
Scappoose, Oregon 97056

**(2) TYPE OF WORK (check):**

New Well  Deepening  Reconditioning  Abandon   
If abandonment, describe material and procedure in Item 12.

**(3) TYPE OF WELL:**

**(4) PROPOSED USE (check):**

Rotary  Driven  Domestic  Industrial  Municipal   
Cable  Jetted  Irrigation  Test Well  Other   
Dug  Bored

**(5) CASING INSTALLED:**

Threaded  Welded

....." Diam. from ..... ft. to ..... ft. Gage .....  
6 " Diam. from 0 ft. to 340 ft. Gage 250  
....." Diam. from ..... ft. to ..... ft. Gage .....

**(6) PERFORATIONS:**

Perforated?  Yes  No.

Type of perforator used Mills Knife  
Size of perforations 1/4 in. by 2 in.  
110 perforations from 157 ft. to 172 ft.  
138 perforations from 195 ft. to 210 ft.  
..... perforations from ..... ft. to ..... ft.

**(7) SCREENS:**

Well screen installed?  Yes  No

Manufacturer's Name .....

**(8) WELL TESTS:**

Drawdown is amount water level is lowered below static level

Was a pump test made?  Yes  No If yes, by whom? Aqua Pump

Yield: 200 gal./min. with 46.6 ft. drawdown after 48 hrs.  
.....  
.....  
Bailer test ..... gal./min. with ..... ft. drawdown after ..... hrs.  
Artesian flow ..... g.p.m.  
..... temperature of water ..... Depth artesian flow encountered ..... ft.

**(9) CONSTRUCTION:**

Well seal--Material used Cement  
Well sealed from land surface to 46 ft.  
Diameter of well bore to bottom of seal 10 in.  
Diameter of well bore below seal 6 in.  
Number of sacks of cement used in well seal 24 sacks  
How was cement grout placed? pumped

Was a drive shoe used?  Yes  No Plugs ..... Size: location ..... ft.  
Did any strata contain unusable water?  Yes  No

Type of water? ..... depth of strata .....  
Method of sealing strata off .....  
Was well gravel packed?  Yes  No Size of gravel: .....  
Gravel placed from ..... ft. to ..... ft.

**(10) LOCATION OF WELL:**

County Columbia Driller's well number D-87-78  
..... Section 13 T. 3N R. 2W W.M. ....  
Bearing and distance from section or subdivision corner .....

Dutch Canyon Road # 1

**(11) WATER LEVEL: Completed well.**

Depth at which water was first found 52 ft.  
Static level 56 ft. below land surface. Date 1/25/78  
Artesian pressure ..... lbs. per square inch. Date .....

**(12) WELL LOG:**

Diameter of well below casing 6

Depth drilled 350 ft. Depth of completed well 350 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Clay brwn	0	11	
Clay sandy w/grvl brn	11	40	
Clay sandy w/grvl gray	40	52	
Gravel/sand cemented	52	80	
Sand w/some gravel	80	135	
Sand w/trace gravel	135	155	
Gravel	155	175	56
Sand blk w/trace grvl	175	210	56
Clay blue	210	212	
Clay br, seam of sndstn	212	225	
Clay brn	225	316	
Sandstone Brn	316	350	

Work started Jan 19 19 78 Completed Jan 25 19 78

Date well drilling machine moved off of well Jan 25 19 78

**Drilling Machine Operator's Certification:**

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.

[Signed] [Signature] Date 2/6 19 78  
(Drilling Machine Operator)

Drilling Machine Operator's License No. 883

**Water Well Contractor's Certification:**

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Name S & M Drilling & Supply, Inc  
(Person, firm or corporation) (Type or print)  
Address 399 S.E. Walnut, Canby, Ore 97013

[Signed] [Signature]  
(Water Well Contractor)

Contractor's License No. 497 Date 2/6 19 78

STATE ENGINEER  
Salem, Oregon

# Well Record

STATE WELL NO. 3N/2W-13F(1)  
COUNTY Columbia  
APPLICATION NO. GR-625

OWNER: Henry G. & Laura R. Roza

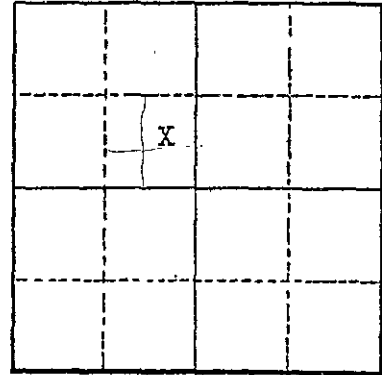
MAILING ADDRESS: Rt. 1, Box 11

LOCATION OF WELL: Owner's No. 1

CITY AND STATE: Scappoose, Oregon

SE  $\frac{1}{4}$  NW  $\frac{1}{4}$  Sec. 13 T. 3 N. R. 2 W., W.M.

Bearing and distance from section or subdivision  
corner 1870' S. & 2500' E. from NW Cor. Sec. 13.



Altitude at well 62 ft. Interpolated

TYPE OF WELL: Drilled Date Constructed 8/16/46

Depth drilled 133 ft. Depth cased 133 ft.

CASING RECORD: 6 inch

Section 13

FINISH:

AQUIFERS:

WATER LEVEL: 40 ft.

PUMPING EQUIPMENT: Type Berkeley jet H.P. 3  
Capacity 20 G.P.M.

WELL TESTS:

Drawdown ..... ft. after ..... hours ..... G.P.M.

Drawdown ..... ft. after ..... hours ..... G.P.M.

USE OF WATER dom. stk. & irrigation Temp. .... °F. ...., 19....

SOURCE OF INFORMATION GR-625

DRILLER or DIGGER owner

ADDITIONAL DATA:

Log X Water Level Measurements ..... Chemical Analysis ..... Aquifer Test .....

REMARKS:



STATE OF OREGON  
WATER WELL REPORT  
(as required by ORS 537.765)

COLY  
849

RECEIVED

30/20/13  
Address is  
in SW-SW-NE

JUN - 8 1994

(START CARD) # 54402

Page 1 of 1

WATER RESOURCES DEPT.

(1) OWNER:

Well Number: W-1

Name DAVID SCHAFF  
Address oak ridge drive  
City SCAPPOOSE State OR Zip 97056

(2) TYPE OF WORK:

New Well  Deepen  Recondition  Abandon

(3) DRILL METHOD:

Rotary Air  Rotary Mud  Cable  
 Other

(4) PROPOSED USE:

Domestic  Community  Industrial  Irrigation  
 Thermal  Injection  Other

(5) BORE HOLE CONSTRUCTION:

Special Construction approval  Yes  No Depth of Completed Well 100 ft.  
Explosives used  Yes  No Type \_\_\_\_\_ Amount \_\_\_\_\_

HOLE Diameter	From		To	Material	SEAL From		To	Amount sacks or pounds
	ft.	ft.			ft.	ft.		
10	0	18	RENTAMITE	0	18	9 SACKS		
6	18	100						

How was seal placed: Method  A  B  C  D  E  
 Other

Backfill placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Size of gravel \_\_\_\_\_

(6) CASING/LINER:

Diameter	From	To	Gauge	Material			
				Steel	Plastic	Welded	Threaded
Casing: 6	+2	100		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Liner:				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Final location of shoe(s) 100 FT

(7) PERFORATIONS/SCREENS:

Perforations Method \_\_\_\_\_  
 Screens Type \_\_\_\_\_ Material \_\_\_\_\_

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
						<input type="checkbox"/>	<input type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour

Pump  Bailor  Air  Flowing  Artesian

Yield gal/min	Drawdown	Drill stem at	Time
50		100	1 hr.

Temperature of Water 52 Depth Artesian Flow Found \_\_\_\_\_

Was a water analysis done?  Yes By whom \_\_\_\_\_

Did any strata contain water not suitable for intended use?  Too little

Salty  Muddy  Odor  Colored  Other \_\_\_\_\_

Depth of strata: \_\_\_\_\_

(9) LOCATION OF WELL by legal description:

County COLUMBIA Latitude x' " Longitude y' "  
Township 3 N N or S, Range 2 W E or W. WM.  
Section 13 NW 1/4 SW 1/4  
Tax Lot \_\_\_\_\_ Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
Street Address of Well (or nearest address) \_\_\_\_\_  
oak ridge drive scapoose, OR 97056

(10) STATIC WATER LEVEL:

12 ft. below land surface. Date 05/26/94  
Artesian pressure \_\_\_\_\_ lb. per square inch. Date \_\_\_\_\_

(11) WATER BEARING ZONES:

Depth at which water was first found 12

From	To	Estimated Flow Rate	SWL
12	100	50GPM	12

(12) WELL LOG:

Ground elevation \_\_\_\_\_

Material	From	To	SWL
CLAY, GRAVEL	0	12	
GRAVEL, SAND	12	100	50

Date started 05/24/94 Completed 05/25/94

(unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Material used and information reported above are true to my best knowledge and belief.

WWC Number \_\_\_\_\_  
Signed \_\_\_\_\_ Date \_\_\_\_\_

(bonded) Water Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

WWC Number 1490  
Signed David Schaff Date 6/20/94





# Oregon

John A. Kitzhaber, M.D., Governor

Department of Environmental Quality

811 SW Sixth Avenue  
Portland, OR 97204-1390  
(503) 229-5696  
TTY (503) 229-6993

June 27, 2001

Environmental Quality Commission  
c/o Mikell O'Mealy, Assistant to the Director  
811 S.W. 6<sup>th</sup> Avenue  
Portland OR 97204


State of Oregon  
Department of Environmental Quality  
**Received**  
JUN 26 2001  
OFFICE OF THE DIRECTOR

Dear Ms. O'Mealy:

Attached you will find the Department's Brief in response to Petitioner, Reggie Huff's Petition for Review, Exceptions and Brief which was filed on May 29, 2001. It is my understanding that Mr. Huff does not wish to schedule oral arguments before the Commission and as such, this matter can be scheduled for the first available Commission meeting. It is my understanding that the agenda for the September 20-21, 2001 meeting, which is to take place in Ashland Oregon, can accommodate this item. If the Commission should decide that they wish to have oral argument on this matter, I am not available on either of those dates.

Thank you for your consideration.

Sincerely,

  
Susan M. Greco  
Environmental Law Specialist

Enclosure

cc: Reggie Huff, 51377 S.W. Old Portland Road, Scappoose, Oregon 97056

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

IN THE MATTER OF: REGGIE HUFF,  <p style="text-align: center;">PETITIONER</p>	) ) ) ) ) ) ) ) ) ) )	RESPONDENT'S BRIEF  NO. WQ/I-NWR-00-125 COLUMBIA COUNTY
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Respondent, Department of Environmental Quality (the Department), submits this Brief to the Environmental Quality Commission (Commission) for its consideration in the appeal of the Hearing Officer's Proposed Order in Notice of Assessment of Civil Penalty No. WQ/I-NWR-00-125, filed by Reggie Huff, Petitioner.

I. CASE HISTORY

On October 30, 2000, the Department assessed Petitioner a \$1,400 penalty for allegedly placing wastes in a location where such wastes are likely to escape or be carried into waters of the state. Petitioner appealed and a contested case hearing was held on February 27, 2001. On April 27, 2001, the Hearing Officer issued a Proposed Order finding that Mr. Huff had placed wastes where the wastes were likely to escape or be carried into waters of the state, but reducing the civil penalty to \$1,200.

II. COMMISSION ACTION REQUESTED

The Department requests that the Commission deny Mr. Huff's petition and issue a Final Order upholding the Hearing Officer's Proposed Order.

III. FINDINGS OF FACT

The basic facts in this case are not in dispute. The Hearing Officer found that: Petitioner operates Acro-Tech, Inc., from a building located at 51377 S.W. Old Portland Road in Scappoose, Oregon. In this building was a 2000-gallon tank, which in 1999, contained approximately 450-500 gallons of water and 55 gallons of ethylene glycol. The solution was used to cool engines used in research. In the spring of 1999, Petitioner disposed of the approximately 500 gallons of cooling solution into a storm drain located in the property's parking lot. The storm drain consists of a sump

1 from which fluids flow into a drywell under the parking lot. Fluids then drain or seep into the  
2 surrounding ground. The ground in the area is generally well drained and includes deposits of clay  
3 or clay mixed with other soil types from the surface to depths ranging from 11 to 30 feet.

4 In numerous places throughout Mr. Huff's Brief he relies on facts which are either not in the  
5 record or are not in the Hearing Officer's Findings of Fact. This Brief addresses each of these  
6 issues below.

7 **A. Introduction of New Facts Not in the Record:** Throughout Mr. Huff's Brief, he  
8 relies on facts that are not in the hearing record. The Commission cannot consider this new or  
9 additional evidence unless the hearing is reopened and remanded to the hearing officer. Oregon  
10 Administrative Rule (OAR) 340-011-0132(4). For example, Mr. Huff claims that "an earlier  
11 comment from Ms. Greco indicating that she was poised to argue that because an engine was  
12 cooled by the solution these compounds [referring to volatile organics] could be present."  
13 Petitioner's Brief, page 11, lines 30 through 32. There is no evidence of such statement in the  
14 record.

15 The Department has attached to its Brief as Attachment A, a complete listing of all the facts  
16 asserted by Mr. Huff in his Brief for which there is no evidence in the record. A request to present  
17 additional evidence must be made by motion to the Commission and be accompanied by a  
18 statement of the reason why the person failed to present the evidence at the hearing. Mr. Huff has  
19 not filed a motion with the Commission requesting the admittance of additional evidence into the  
20 hearing record, thus the Commission cannot rely on this evidence.

21 **B. Modification of the Findings of Fact:** Throughout Mr. Huff's Brief, he relies on  
22 facts that are not included the Hearing Officer's findings of fact as the basis for his arguments. For  
23 example, on page 5, line 14, Mr. Huff states that the groundwater is protected by 30 to 35 feet layer  
24 of hard-packed clay. The findings of fact in the Proposed Order state that there are numerous types  
25 of soil present in the area which includes **deposits** of clay or clay mixed with other soil in layers  
26 from the surface to depths between 11-30 feet (emphasis added). Mr. Huff did present evidence  
27 that he believed a layer of clay existed throughout the area (although Exhibit 5 states that the layer

1 is between 3 to 12 feet and not 30 to 35 feet). The hearing officer must have found the documents  
2 contained in Exhibit 9 and the Department's witness more persuasive.

3 The Department has attached to its Brief as Attachment B, a complete listing of all facts  
4 stated by Mr. Huff which are not included in the findings of fact of the Proposed Order. In these  
5 instances, the Department can only presume that Mr. Huff is arguing that the findings of fact should  
6 be reversed or modified by the Commission. While the Commission may reverse or modify a  
7 Hearing Officer's finding of fact, it can do so only if it finds that the finding is not supported by a  
8 preponderance of the evidence in the hearing record. OAR 137-003-0665(4). Findings of fact are  
9 often best determined by the Hearing Officer, especially when there is conflicting evidence in the  
10 record. These findings are often based on the demeanor or credibility of the witness which is  
11 difficult to evaluate when reviewing the record.

### 12 III. ARGUMENTS

13 In his Petition, Mr. Huff made four exceptions to the Hearing Officer's Proposed Order: (1)  
14 That the wastes were not likely to enter waters of the state, (2) That the Hearing Officer erred by  
15 replacing 'likely' with 'may' in the Proposed Order, (3) That the wastes must still be wastes by  
16 definition when it enters waters of the state, and (4) That the wastewater disposed of by Mr. Huff  
17 was not wastes.

18 Regarding Petitioner's first exception, Mr. Huff claims that to prove that the wastes were  
19 likely to enter waters of the state, the Department must provide statistical evidence of this fact. Mr.  
20 Huff also argues that the term 'likely' means "something with more than 50% probability, such as  
21 probable or reasonably certain." Petitioner's Brief, page 6, lines 3-8. He also argues that the  
22 Department must meet a "reasonably certain" standard. Petitioner's Brief, page 6, lines 9-11. Mr.  
23 Huff misconstrues the plain meaning of the law. ORS 468B.025 does not state 'more likely than  
24 not' as would be expected if a greater than 50% chance needed to be proven. Nor, as Mr. Huff  
25 claims on page 6 of his Brief, must the Department prove that it is 'reasonably certain' that Mr.  
26 Huff's placement of the waste will cause the waste to enter waters of the state.

27 ////

1 Mr. Huff relied on two court decisions to make the argument that ‘likely’, as used in ORS  
2 468B.025 means ‘reasonably certain’. Petitioner’s Brief, page 6, line 3-11. Copies of each of the  
3 decisions are attached to this Brief for the Commission’s reference. Neither case supports Mr.  
4 Huff’s argument, is binding on the Commission, nor addresses the law at issue in this case.

5 In Crenshaw v. Pendleton Manufacturing Co., the South Carolina Supreme Court addressed  
6 an interpretation of workmen’s compensation law and whether testimony which stated ‘more likely  
7 than not’ met the evidence requirements of that law. As previously stated, ORS 468B.025 does not  
8 contain the phrase ‘more likely than not’ but instead requires that an event must be likely to occur.  
9 Additionally, this case does not address the law at issue in this case or even environmental law.  
10 Nor is a South Carolina Supreme Court decision binding on the Commission or, for that matter,  
11 Oregon courts.

12 In Sierra Club v. Marsh, the First Circuit Court of Appeals reviewed the adequacy of an  
13 environmental impact statement for a proposed project. Once again, this case does not address the  
14 law at issue nor is a First Circuit Court of Appeals decision binding on either the Commission or  
15 Oregon courts. The court, in its discussion of the types of impacts that an environmental impact  
16 statement must consider, does give a brief discussion of the term ‘likely’ as used in that context.  
17 The Court defines ‘likely’ or ‘foreseeable’ depending on which term is used, “as meaning that the  
18 impact is sufficiently likely to occur that a person of ordinary prudence would take it into account in  
19 reaching a decision.” 976 F.2d 763 at 767. The Court does not conclude that the term ‘reasonably  
20 certain’ is the equivalent of the term ‘likely’.

21 The Department believes that the term ‘likely’ as used in ORS 468B.025, requires that the  
22 event be probable or possible, using an objective standard i.e. an ordinary person would find the  
23 event possible. But even if the Commission should decide to define ‘likely’ as used in ORS  
24 468B.025, as ‘reasonably certain’ or ‘more likely than not’ as Mr. Huff argues, the Department has  
25 still met its burden of proof in this case. Based on the facts in this case, the Department also does  
26 not need to provide statistical evidence that placing the wastes into the storm drain would likely  
27 cause the waste to enter waters of the state. The very purpose of the storm drain dry well is to

1 allow storm water to percolate through the subsurface soils to groundwater. Logic requires that if  
2 a system is designed to distribute fluids to groundwater, that by placing wastes in that system, the  
3 wastes are likely to escape or be carried into the groundwater. Mr. Huff argues that there is a  
4 layer of clay protecting the groundwater in the area so regardless of the design of the system, his  
5 placement of the wastes into the storm drain would not likely cause the wastes to enter waters of  
6 the state. As previously stated, the Hearing Officer reviewed all the evidence in the record and  
7 concluded that there are deposits of clay in the area, not a solid clay layer. The wastes, similarly  
8 to storm water which replenishes the groundwater in the area, would likely percolate through the  
9 subsurface and enter waters of the state.

10           Regarding Petitioner's second exception, Mr. Huff argues that the Hearing Officer  
11 erred by using the word 'may' instead of 'likely' under the Conclusions and Reasons in the  
12 Proposed Order. The Department agrees that the term used in the statute and rule is 'likely' and not  
13 'may' but believes this is harmless error. The Department met its burden of proof that Mr. Huff's  
14 placement of wastes would **likely** cause or allow the wastes to enter waters of the state. Mr. Huff  
15 also argues that 'likely' has a more restrictive meaning than 'may'. This is not accurate. The  
16 American Heritage Dictionary of the English Language defines likely as "having, expressing or  
17 exhibiting an inclination or probability; plausible." May is defined as "possibility; capable of  
18 happening." Probable is defined as "relatively likely but not certain; plausible." Possible is  
19 defined as "of uncertain likelihood." While each of these definitions uses slightly different  
20 language, each means that the occurrence of the event is likely or the event may occur but there is  
21 no definitive possibility that it will occur.

22           Regarding Petitioner's third exception, Mr. Huff argues that for a violation to have  
23 occurred, the Department must prove that the wastes still meet the definition of wastes when it  
24 reaches waters of the state. This argument is flawed for two reasons. First, the Department, at no  
25 time, has argued that the wastes did or will enter waters of the state. If the Department could prove  
26 that the wastes entered waters of the state, it would have alleged a violation for either causing  
27 pollution of waters of the state, discharging wastes into waters of the state which reduces the quality

1 of such waters, or discharging wastes to public waters without a permit authorizing the discharge.

2 Mr. Huff violated ORS 468B.025(1)(a) which states a person shall not “cause pollution of  
3 any waters of the state or place or cause to be placed any wastes in a location where such wastes are  
4 likely to escape or be carried into the waters of the state by any means”. It is apparent that the  
5 legislature intended that this section delineate two separate violations. To prove the first violation,  
6 there must be evidence that the wastes actually enter waters of the state as a waste. To prove the  
7 second violation, there must be evidence that the substance is a waste when it is placed in a specific  
8 type of location. No evidence that the wastes ever reached waters of the state or that if it does, that  
9 it meet the definition of wastes at that point, is required. Mr. Huff’s reading of the statute renders  
10 the second violation (placing wastes) redundant of the first violation (causing pollution). The  
11 Commission, if possible, must avoid construing statutes in a way that renders a portion of the  
12 statute meaningless.

13 Regarding Petitioner’s final exception, Mr. Huff argues that the wastewater was not wastes.  
14 Mr. Huff argues that the wastewater did not meet the definition of wastes because (a) the  
15 wastewater no longer contained ethylene glycol when disposed of, (b) the wastewater did not  
16 contain metal leaching, (c) the discharge had no environmental impact, and (d) the wastewater was  
17 not toxic. ORS 468B.005(7) defines wastes as ”sewage, industrial wastes, and all other liquid,  
18 gaseous, solid, radioactive or other substances which will or may cause pollution or tend to cause  
19 pollution of any waters of the state.”

20 The Department argued at the hearing that the wastewater met the definition of wastes in  
21 three ways. One, that the wastewater was wastes since it was industrial waste. Mr. Huff stated,  
22 under oath, that the wastewater was generated by an industrial process. *See* ORS 468B.005(2).  
23 Alternatively, the Department argued that the wastewater met the definition of wastes by tending to  
24 cause pollution in two different manners. ORS 468B.005(3) defines pollution as “alteration of the  
25 physical ... properties ... including changes in ... color[.]” Additionally it defines pollution as  
26 “discharge ... which ... tends to render such waters harmful, detrimental or injurious to the public  
27 health, safety or welfare[.]” The Department argued that the wastewater was wine-colored and

1 thus would alter the physical properties by changing the color of waters of the state. Additionally,  
2 the Department argued that the wastewater, by virtue of containing ethylene glycol and possible  
3 metal leaching, would tend to render waters of the state harmful, detrimental or injurious to the  
4 public health.

5 Mr. Huff's first two arguments are that the wastewater did not contain either ethylene glycol  
6 or metal leaching and thus was not wastes. The Hearing Officer, after reviewing all the evidence  
7 presented in the case, determined that the wastewater did contain ethylene glycol and metal  
8 leaching, and thus, met the definition of wastes under ORS 468B.005(7). The Department  
9 presumes that Mr. Huff is arguing that the Commission modify or reverse the Hearing Officer's  
10 findings of fact. As previously stated, the Commission can modify or reverse the findings of fact  
11 but only if there is a preponderance of the evidence in the record to support the modification. If the  
12 Commission chooses to modify or reverse the finding of fact, the Department continues to argue  
13 that the wastewater still met the definition of wastes in that it was industrial waste.

14 Finally, Mr. Huff argues that the wastewater is not wastes since it was not toxic and since it  
15 had no environmental impact. The definition of wastes does not require a finding of environmental  
16 impact or a finding that the wastes were toxic. Additionally, the Department has not argued that  
17 the placement of the wastes caused any environmental impact or that the wastes were toxic. The  
18 Department did present evidence that the wastewater did 'tend to render waters harmful,  
19 detrimental or injurious to the public health, safety or welfare.'" ORS 468B.005(3). If the violation  
20 had caused environmental harm or posed a significant threat to public health, the Department would  
21 have increased the magnitude of the violation to major under OAR 340-012-0045(1)(a)(B)(i).

22  
23 6/27/01  
24 Date

23 Susan M. Greco  
24 Susan M. Greco  
25 Environmental Law Specialist  
26  
27



**ATTACHMENT A  
FACTS NOT IN THE RECORD**

1. Page 3, line 38-39 – A ¼” thickness of clay has been used to create ‘water tight vessels for literally thousands of years.’
2. Page 4, line 2 - The wastewater must travel laterally approximately 2500 feet above the clay layer into the nearest wetland to reach waters of the state.
3. Page 8, line 10 – The wastewater was “no more toxic than water.”
4. Page 8, lines 32-33 – The discharge had no environmental impact.
5. Page 9, lines 16-20 – The tank could not be drained to the bottom so any metal leaching would not have been drained from the tank.
6. Page 9, lines 21-22 – “the discharge results in no disturbance of the solution.”
7. Page 9, lines 32-33; page 10, lines 6-9 and page 12, line 8, also Respondent Affidavit – Mr. Huff offered to allow the Department to take samples of the wastewater.
8. Page 9, lines 34-35 – Witness stated that there was little chance that any metal leaching would reach the ground.
9. Page 11, lines 30-32 - see Respondent’s Brief, page 2, lines 10-14.
10. Page 11, lines 44-46 – Anne Cox was “incensed that respondent did not commit perjury at trial.”
11. Respondent’s Affidavit, page 14.

**ATTACHMENT B**  
**FACTS NOT IN THE FINDINGS OF FACT**

1. Page 3, lines 36-38 – There is a hard packed clay layer in the area.
2. Page 3, lines 36-38; page 12, line 12 and other numerous places throughout Petitioner’s Brief – There is 30 to 35 feet of hard clay in the area.
3. Page 6, lines 32-33; page 7, lines 3-4 and other numerous places throughout Petitioner’s Brief – The discharge contained no ethylene glycol or metal leaching.
4. Page 6, line 36 – The ethylene glycol had completely broken down by the time of the discharge.
5. Page 8, lines 21-25 – City of Scappoose uses 700,000 gallons of water per day so the aquifer contains tens of millions or hundreds of millions of gallons of water. (Mr. Huff refers to the attachments to Exhibit 31 as evidence. In fact, this document was submitted after the evidentiary record had closed and could not be relied upon by the Hearing Officer or the Commission without reopening the record or allowing the Department to rebut this evidence.)

**C**

Supreme Court of South Carolina.

CRENSHAW

v.

PENDLETON MFG. CO. et al.

No. 16179.

Feb. 4, 1949.

Appeal from Common Pleas Circuit Court of Anderson County; G. B. Greene, Judge.

Proceeding under the Workmen's Compensation Act by Ovid T. Crenshaw, claimant, opposed by the Pendleton Manufacturing Company, and the Maryland Casualty Company, insurance carrier, wherein claimant was awarded compensation. Thereafter the claimant applied for further compensation on grounds of change of condition. An award of additional compensation by a single commissioner of the Industrial Commission was sustained by the whole commission. From a judgment of the circuit court, affirming the award, the employer and the insurance carrier appeal.

Judgment affirmed.

West Headnotes

[1] Administrative Law and Procedure 789  
15Ak789

[1] Workers' Compensation 1939.7  
413k1939.7

(Formerly 413k1939)

In workmen's compensation cases, court can only review the facts to determine whether there is any competent evidence to support the findings of the Industrial Commission, and, if the facts are capable of sustaining the inference of fact drawn from them by commission, findings are conclusive in absence of fraud.

[2] Workers' Compensation 2028  
413k2028

On application by claimant for further compensation on grounds of a change of condition, testimony of claimant, his wife, and daughter to effect that he had

undergone a change of condition for the worse since original compensation proceedings was evidence to be considered by Industrial Commission in rendering its award.

[3] Workers' Compensation 1420  
413k1420

Where medical testimony is relied on to sustain an award, it is not sufficient to say that condition of claimant could possibly have arisen or that it would be possible to have resulted from the injury, but it is necessary that the condition most probably came from the injury.

[4] Workers' Compensation 2030  
413k2030

Testimony of physician that it was "more than likely" that claimant's injuries aggravated a pre-existing condition meant that injuries probably aggravated pre-existing condition, and authorized award of additional compensation.

\*62 Watkins & Watkins, Anderson, for appellants.

W. K. Charles, Greenwood, for respondent.

TAYLOR, Justice.

On November 7, 1944 respondent while employed by the Pendleton Manufacturing Company suffered injuries arising out of and in the course of his employment for which on May 14, 1946 the South Carolina Industrial Commission made an award which was paid in full. Within the statutory period respondent made application for further compensation on the grounds of a change of condition. Pursuant to a hearing on such application an award was made granting claimant compensation as being totally and permanently disabled. A review was had before the whole commission which sustained the findings of the single commissioner. An appeal was taken to the Circuit Court which resulted in an order by the Honorable G. B. Greene affirming the award from which the appellant, Pendleton Manufacturing Company and its insurance carrier, Maryland Casualty Company appeals to this court upon exceptions which pose the question of whether or not there is any testimony to support the findings of the Industrial Commission that respondent has undergone a change of condition and such is the result of the injury sustained by him on

November 7, 1944.

[1] It is a well established rule of law that in Workman's Compensation Cases, the court can only review the facts to determine whether there is any competent evidence to support the findings of the Commission, and, if the facts are capable of sustaining the inference of fact drawn from them by the Commission, the findings are conclusive in the absence of fraud. Shehane v. Springs Cotton Mills, 206 S.C. 334, 34 S.E.2d 180; Elrod v. Union Bleachery, 204 S.C. 481, 30 S.E.2d 73. The award will be upheld if there is a scintilla of evidence supporting the award. In re Crawford, 205 S.C. 72, 30 S.E.2d 841.

\*63 Respondent testified that the injury was sustained to the left shoulder but the condition has become progressively worse until 'pretty well every joint in me is sore except my elbow.'

Mrs. Foster who is claimant's daughter and lives next door testified as follows:

'Q. Are you frequently over at your father's? A. Every day.

'Q. Mrs. Foster, state whether or not, in your opinion, your father is in worse condition now than he was in August of 1945 when we had a hearing before. A. He certainly is.

'Q. From your observation, to what extent is his condition worse, his physical condition? A. Well, he's not able to do anything. The only thing he does is sit around the house. There's nothing much to do but bring in a little water and he may bring in a bucket or two of water a day, and then he has to go to bed.

'Q. Is he able to walk with ease? A. No. I can see him from my house toddling down to the barn, and he will stop maybe before he gets to the barn.

'Q. State whether or not he can dress himself? A. No, sir. I have had to help put his clothes on when I am there.

'Q. How about his shoes? A. I think he goes with them untied most of the time.

'Q. Prior to that first injury he had was his health good; was he able to perform his usual activities and duties and work regularly? A. Yes, sir. I worked with him and we went back and forth together every

day.

'Q. Has he been able to work since 1945? A. Nothing only here a few months ago he tried it and he fell out. The fact of the business, I thought he was gone.

'Q. Will you state for the benefit of the Commissioner here Mr. Crenshaw's present physical condition? A. Well, he's a good deal worse now than he was at the first hearing.

'Q. To what extent is he worse, in what way; what parts of the body are involved now that weren't involved then? A. It seems like he's worse in his shoulders, right arm, leg, foot, all over seems like.'

[2] The testimony of claimant, his wife and daughter to the effect that claimant has undergone a change of condition for the worse since the hearing is evidence to be considered by the Commission in rendering its award.

Dr. L. E. Mays witness for the claimant testified as follows:

'Q. State whether or not his condition has progressed, gotten better or worse since then? A. I would say he has a somewhat worse condition than he did then because, to begin with, his trouble was mainly in one shoulder, the left shoulder, and it has involved other joints since I have been taking care of him.

'Q. State whether or not this condition could be attributed to an injury that he received in November, 1944, when he received an injury to his shoulder. A. It would be possible. Do you want me to make a statement along that line or just answer your question?

'Q. Yes, sir. A. I would say more than likely the injury aggravated the preexisting condition, and since that time it has spread to involve other joints.

'Q. Then the aggravation could progress right on to the extent it has now, involving other joints? A. In my opinion, I think it could have.' \* \* \*

'Q. And that could be traceable to the injury, from an aggravation standpoint? I mean the progressing condition of the arthritis could be the outgrowth of an injury aggravating a preexisting arthritis? A. Could I qualify that?

'Q. Yes, sure. A. In this sense it possibly could: We know arthritis is aggravated by inactivity. One important thing is to keep the joints working, and when a person is hurt they are more likely to be inactive for a while; and due to inactivity, yes.'

[3] Where medical testimony is relied upon to sustain an award of the Industrial Commission it is not sufficient to say that the condition of claimant could possibly have arisen or it would be possible to have resulted from the injury. This court has gone so far as to hold in cases where medical testimony is relied upon that testimony \*64 to the effect that it is the witness opinion that such ailment most probably came from the cause alleged was sufficient to sustain an award by the Industrial Commission. Ashley v. South Carolina Highway Dept., 213 S.C. 354, 49 S.E.2d 505; Mack v. Branch No. 12, Post Exchange, 207 S.C. 258, 35 S.E.2d 838; Rivers v. V. P. Loftis Co. et al., 1949, 214 S.C. 162, 51 S.E.2d 510.

A study of the testimony presented by Dr. Mays shows that he stated that 'more than likely' claimants injuries aggravated a preexisting condition which since that time has spread to involve other joints.

Volume 25, pages 286, 287, of Words and Phrases, Perm.Ed., defines the words 'probably' and 'likely' as follows:

'The term 'likely' means probable or reasonably to be expected. Vohs v. A. E. Shorthill & Co., 130 Iowa 538, 107 N.W. 417, 419, citing Webst. Dict.; Cent. Dict.

'Likely,' as used in instructions relative to preponderance of evidence, is not a proper synonym of 'probable.' Howard v. State, 108 Ala. 571, 18 So. 813, 816.

'Words 'probably' and 'likely' are used synonymously in indicating consequences likely to flow from an existing condition of an injured person. Barron v. Duke, 120 Or. 181, 250 P. 628, 632.

'The word 'likely' means 'probable,' and is equivalent to that word as used in a question to a physician, in an action for personal injuries, as to what, in his opinion, would be the 'probable' effects of the wounds on the future health of the injured party. O'Brien v. New York, N. H. & H. R. Co., 59 Hun. 623, 13 N.Y.S. 305.

'The word 'likely' is not synonymous with the word 'probable', but has practically the same meaning in a

question to a witness as to whether personal injuries are 'likely' to be reduced or increased as the injured person grows older. Knoll v. Third Ave. R. Co., 46 App.Div. 527, 62 N.Y.S. 16, 19. \* \* \*

'While the term 'likely' has in it to a certain extent an element of probability, it is not strong enough to make proper evidence facts which are likely to occur. In an action for injuries, a medical expert cannot be asked as to whether an injury such as the plaintiff received would be 'likely' to produce the condition related to the witness. Higgins v. United Traction Co., 96 App.Div. 69, 89 N.Y.S. 76, 77.

'The word 'probable' does not mean free from doubt, but carries with it the idea that the contingency is more likely to happen than otherwise. It is said to be synonymous with the word 'likely.' \* \* \* Willard Oil Co. v. Riley, 29 Okl. 19, 115 P. 1103, 1105.

'The words 'probable,' 'likely,' and 'liable' are synonymous when applied to the effects of a personal injury, each dealing with reasonable probability, not with possibility, and what may probably, or is likely or liable to, be the future result of a personal injury, is competent evidence to prove what is reasonably certain in the matter. Hallum v. Village of Omro, 122 Wis. 337, 99 N.W. 1051, 1054.

In Volume 27, Words and Phrases, Perm.Ed., page 567 we find that the word 'more' is usually defined as 'to a greater extent or degree; in a larger quantity; in addition.' Ciotti v. Jarecki Manufacturing Co., 128 Pa.Super. 233, 193 A. 323-324. On page 569 of the same volume we find that an act providing compensation for loss of more 'than one phalange' as for the loss of the entire finger, covers the case of loss of an entire phalange and a substantial portion of the second phalange amputated from surgical necessity from the initial injury; the word 'more' being used as an adverb and not as an adjective. Brugioni v. Saylor Coal Co., 198 Iowa 135, 197 N.W. 470.

'An instruction was correct, which, construed as a whole, told the jury that, after rejecting the testimony of witnesses discredited by them, their verdict should be for claimant, if there was more testimony--that is, a preponderance of testimony--tending to establish the validity of her claim, and, if there was not, their verdict should be for the estate.' Taylor v. Taylor's Estate, 138 Mich. 658, 101 N.W. 832, 835.

In the case of Utah Fuel Company v. Industrial Commission, 1942, 102 Utah 26, 126 P.2d 1070,

1072, where medical testimony was weak, the words 'possibly' or 'might' being used, but it was clear from the time the employee received his injury until his \*65 death that he grew progressively worse, an award was sustained stating that 'even doctors have no television of the pathological history of the inside of a man.' Horovitz on Workman's Compensation P. 151.

[4] For the foregoing reasons, although the medical testimony in this case is very weak, this court is of the opinion that the words 'more than likely' are sufficient to sustain the award of the Industrial Commission by reason of its previous holdings in Ashley v. South Carolina Highway Dept.; Mack v. Branch No. 12, Post Exchange and Rivers v. V. P. Loftis Co., et al., supra.

Judgment affirmed.

BAKER, C. J., and FISHBURNE, STUKES and OXNER, JJ., concur.

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**H**

United States Court of Appeals,  
First Circuit.

SIERRA CLUB and William O'Neil, Plaintiffs,  
Appellants,

v.

John O. MARSH, Jr., et al., Defendants, Appellees.


No. 92-1312.

Heard July 29, 1992.  
Decided Sept. 30, 1992.


Environmental group brought suit challenging adequacy of environmental impact statement for proposed marine port project. The United States District Court for the District of Maine, Morton A. Brody, J., entered summary judgment in favor of defendant. Appeal was taken. The Court of Appeals, Keeton, District Judge, sitting by designation, held that decision to restrict environmental impact statement analysis of secondary impacts to four light-dry industries was not arbitrary or capricious.

Affirmed.

West Headnotes


**[1] Health and Environment**  **25.10(2.1)**  
199k25.10(2.1)  
(Formerly 199k25.10(2))


"Likely" and "foreseeable" environmental impact, for which National Environmental Policy Act requires federal agencies to prepare environmental impact statement, is impact that is sufficiently likely to occur that person of ordinary prudence would take it into account when reaching decision. National Environmental Policy Act of 1969, § 102, 42 U.S.C.A. § 4332.

**[2] Health and Environment**  **25.10(6.1)**  
199k25.10(6.1)  
(Formerly 199k25.10(6))


Environmental impact statement prepared under National Environmental Policy Act must discuss both direct effects and indirect effects that are reasonably foreseeable from proposed project. National Environmental Policy Act of 1969, § 2 et seq., 42


U.S.C.A. § 4321 et seq.

**[3] Administrative Law and Procedure**  **763**  
15Ak763


**[3] Health and Environment**  **25.15(10)**  
199k25.15(10)

Court reviewing agency's compliance with National Environmental Policy Act must hold unlawful any agency action, findings, and conclusions that are arbitrary, capricious, abuse of discretion, or otherwise not in accordance with law. 5 U.S.C.A. § § 701 et seq., 706(2)(A); National Environmental Policy Act of 1969, § 2 et seq., 42 U.S.C.A. § 4321 et seq.


**[4] Administrative Law and Procedure**  **499**  
15Ak499

**[4] Health and Environment**  **25.15(10)**  
199k25.15(10)


Court presumes that agency action is valid when reviewing agency's compliance with National Environmental Policy Act. National Environmental Policy Act of 1969, § 2 et seq., 42 U.S.C.A. § 4321 et seq.

**[5] Health and Environment**  **25.15(10)**  
199k25.15(10)

Court reviewing agency's compliance with National Environmental Policy Act should not defer to agency without carefully reviewing record and satisfying itself that agency has made reasoned decision based on its evaluation of available information. National Environmental Policy Act of 1969, § 2 et seq., 42 U.S.C.A. § 4321 et seq.

**[6] Administrative Law and Procedure**  **683**  
15Ak683

Court of Appeals hesitates to overturn district court's judgment as to reasonableness of agency decision where district court's judgment turns on matters of fact that it has determined, upon evidence presented by witnesses in court, or even upon lengthy district court proceedings in which knowledgeable counsel explain agency's decision-making process in detail.

**[7] Administrative Law and Procedure**  **683**  
15Ak683

Court of Appeals exercises considerable degree of

independence in reviewing administrative record to determine whether district court's decision is correct where district court made no findings of fact and heard no witnesses.

**[8] Administrative Law and Procedure** 676  
15Ak676

**[8] Health and Environment** 25.15(10)  
199k25.15(10)

Reviewing court may not rely on information and analysis in administrative record in National Environmental Policy Act case to cure inadequate environmental impact statement, but must review administrative record to determine whether environmental impact statement is inadequate in first place. National Environmental Policy Act of 1969, § 102, 42 U.S.C.A. § 4332.

**[9] Administrative Law and Procedure** 676  
15Ak676

**[9] Health and Environment** 25.15(3.3)  
199k25.15(3.3)

Administrative record, including supplemental affidavits, could be considered by reviewing court when determining whether agencies were reasonable in concluding that four light-dry industries evaluated in secondary impact analysis of environmental impact statement were only industries that were reasonably likely to develop as result of marine port project. National Environmental Policy Act of 1969, § 2 et seq., 42 U.S.C.A. § 4321 et seq.

**[10] Administrative Law and Procedure** 676  
15Ak676

**[10] Health and Environment** 25.15(3.3)  
199k25.15(3.3)

Administrative record in National Environmental Policy Act case may be supplemented if necessary to explain decision-makers' action at time it occurred, but no new rationalizations for agency's decision should be included. National Environmental Policy Act of 1969, § 2 et seq., 42 U.S.C.A. § 4321 et seq.

**[11] Administrative Law and Procedure** 746  
15Ak746

**[11] Health and Environment** 25.15(3.3)

199k25.15(3.3)

Supplemental affidavits were properly considered in National Environmental Policy Act case to explain agencies' decision to restrict secondary impact analysis of environmental impact statement to light-dry industries that were reasonably foreseeable secondary industrial effects of proposed marine port project. National Environmental Policy Act of 1969, § 2 et seq., 42 U.S.C.A. § 4321 et seq.

**[12] Health and Environment** 25.10(6.5)  
199k25.10(6.5)

Limiting environmental impact statement discussion of secondary impact of marine port project to four light-dry industries targeted in owner's land use plan and town's report was not arbitrary and capricious; specified industries were acceptable to local population and targets of marketing efforts and inducements by owner. National Environmental Policy Act of 1969, § 101 et seq., 42 U.S.C.A. § 4331 et seq.

**[13] Health and Environment** 25.10(6.5)  
199k25.10(6.5)

Environmental impact statement for marine port project was not required to consider development of heavy industry under secondary impact analysis since site of proposed project had limited water and sewer capabilities and marketing efforts were being directed toward light-dry industries. National Environmental Policy Act of 1969, § 101 et seq., 42 U.S.C.A. § 4331 et seq.

**[14] Health and Environment** 25.10(6.5)  
199k25.10(6.5)

Impact of forest product and food industries on port project was not required to be considered in secondary impact analysis of environmental impact statement since primary manufacturing production facilities of those industries were close to raw material, making likelihood of those industries developing was too speculative to be reasonably foreseeable. National Environmental Policy Act of 1969, § 101 et seq., 42 U.S.C.A. § 4331 et seq.

\*765 Edward F. Lawson, with whom Weston, Patrick, Willard & Redding, Boston, Mass., was on brief, for appellants.

Anthony C. Roth, with whom John Quarles, Morgan, Lewis & Bockius, Washington, D.C., and Thomas G.



Reeves, Chief Counsel, Legal Div., Maine Dept. of Transp., Augusta, Me., were on joint brief of appellees, for appellee Maine Dept. of Transp.

David C. Shilton, Atty., Environment and Natural Resources Div., U.S. Dept. of Justice, with whom Barry M. Hartman, Acting Asst. Atty. Gen., and Robert L. Klarquist, Atty., Environment and Natural Resources Div., U.S. Dept. of Justice, Washington, D.C., were on joint brief of appellees, for Federal appellees.

Before TORRUELLA and BOUDIN, Circuit Judges, and KEETON, [FN\*] District Judge.

[FN\*] Of the District of Massachusetts, sitting by designation.

KEETON, District Judge.

Sierra Club and two of its members ("Sierra Club"), challenging the adequacy of an Environmental Impact Statement ("EIS"), appeal from a summary judgment entered by the United States District Court for the District of Maine in favor of appellees Maine Department of Transportation, Federal Highway Administration, Army Corps of Engineers, and United States Coast Guard ("agencies") on Sierra Club's National Environmental Policy Act ("NEPA") claims arising out of a port project in Searsport, Maine. Although it appears that the Federal Highway Administration is ultimately responsible for the preparation of the final EIS, see Sierra Club v. Marsh, 701 F.Supp. 886, 916-18 (D.Me.1988) and Supplemental Affidavit of William Richardson at § 1, all of the defendant agencies were involved in the preparation of the EIS. As a matter of convenience, we will refer to the "agencies" when discussing the EIS.

Sierra Club challenges the district court's conclusion that the analysis of secondary impacts in the agencies' final EIS satisfies NEPA. We affirm.

#### I. Background

More than ten years ago, Maine Department of Transportation decided to build a modern port facility on Sears Island in Searsport, Maine. The port project includes construction of a marine dry cargo

terminal and the building of a causeway and highways to provide full rail and road access to the port facility. A more detailed description of the project appears in \*766 Sierra Club v. Marsh, 769 F.2d 868, 872-73 (1st Cir.1985).

In three separate cases filed in the United States District Court for the District of Maine, Sierra Club has initiated several legal challenges to the construction of the port facility. Rulings of the district court in the first two cases have been the subject of three appeals to this court. See Sierra Club v. Marsh, 769 F.2d 868 (1st Cir.1985) ("Sierra Club I") (holding that NEPA requires the federal agencies to prepare an EIS); Sierra Club v. Secretary of Transp., 779 F.2d 776 (1st Cir.1985) ("Sierra Club II") (affirming the district court's decision that the Coast Guard had unlawfully issued a permit for the proposed causeway under the General Bridge Act); Sierra Club v. Secretary of the Army, 820 F.2d 513 (1st Cir.1987) ("Sierra Club III") (affirming the district court's award of attorney's fees to Sierra Club).

The present appeal is from a final judgment in the third case, which was commenced by a complaint filed on May 19, 1988. In this complaint Sierra Club requests declaratory and injunctive relief halting construction of the marine dry cargo terminal on Sears Island. The complaint alleges that construction permits issued by the federal agency defendants must be suspended due to failure to comply with the Clean Water Act, 33 U.S.C. § 1344, section 9 of the Rivers and Harbors Act, 33 U.S.C. § 401, and NEPA, 42 U.S.C. § 4331, *et seq.*

Some of the issues raised in the complaint have been dispositively resolved and are not before us. In particular, the district court entered two separate final judgments for the agencies--on the Clean Water Act claims on January 30, 1990 and on the Harbor Act claims on March 29, 1991--from which Sierra Club did not appeal. These claims are not at issue in this appeal. The procedural history that follows, therefore, is concerned only with the issues that Sierra Club seeks to pursue on this appeal.

Sierra Club moved for a preliminary injunction on August 12, 1988. The district court denied Sierra Club's motion on the ground that Sierra Club had failed to establish that it would be irreparably harmed if an injunction was not issued. See Sierra Club v. Marsh, 701 F.Supp. 886 (D.Me.1988) ("Sierra Club IV-A"). On appeal, this court vacated the district court's decision and remanded. See Sierra Club v.

Marsh, 872 F.2d 497 (1st Cir.1989) ("Sierra Club IV-B"). Upon remand, the district court (Cyr, J.) reconsidered the issue of irreparable harm and issued a preliminary injunction. See Sierra Club v. Marsh, 714 F.Supp. 539 (D.Me.1989) ("Sierra Club IV-C"). The district court concluded that Sierra Club had shown a likelihood of success on the merits of its NEPA claims, and in particular on its claim that the EIS discussion of the port project's secondary impacts was inadequate. See id. at 564.

Approximately two months after entering the preliminary injunction, the district court allowed, over opposition by Sierra Club, a defense motion for leave to make a supplemental filing. The agencies filed four affidavits to explain the administrative record, and all parties filed additional memoranda. After reviewing the administrative record, affidavits, and additional memoranda from the parties, the district court (Cyr, J.) granted summary judgment for the agencies on Sierra Club's NEPA secondary impacts claim and denied Sierra Club's cross-motion for summary judgment. See Sierra Club v. Marsh, 744 F.Supp. 352 (D.Me.1989) ("Sierra Club IV-D"). The court concluded, *inter alia*, that the final EIS analysis of secondary impacts satisfies NEPA. See id. at 359-60.

Sierra Club appealed immediately from the summary judgment order. This court concluded that the district court's decision on summary judgment was interlocutory rather than final, that it had not amended the preliminary injunction within the meaning of 28 U.S.C. § 1292(a)(1), and that no appealable order had been entered. It dismissed the appeal for want of jurisdiction. See Sierra Club v. Marsh, 907 F.2d 210 (1st Cir.1990) ("Sierra Club IV-E").

By Order of January 23, 1992, as amended February 12, 1992, the district court (Brody, J.) entered final judgment for the agencies, incorporating, *inter alia*, the earlier \*767 summary judgment for the agencies on Sierra Club's NEPA secondary impact claim. This appeal followed.

In Sierra Club IV-C, the district court concluded also that Sierra Club had demonstrated a likelihood of success on the merits of its claim that the agencies violated NEPA by not preparing a supplemental EIS to evaluate new information on the acreage of the project. See Sierra Club IV-C, 714 F.Supp. at 565-72. In its Memorandum on the parties' cross-motions for summary judgment, the district court again concluded that Sierra Club had demonstrated a

likelihood of success on its supplemental EIS claim, but the court deferred making a judgment on the merits in light of the agencies' proposal to retain a consultant to study whether the increased acreage requirements of the project warrant the preparation of a supplemental EIS. See Sierra Club IV-D, 744 F.Supp. at 365-68. As a result of further consideration by the agencies, agency announcements were made on July 15 and July 25, 1991, that a supplemental EIS was to be prepared. Accordingly, in its Final Judgment of January 23, 1992, as amended February 12, 1992, the district court dismissed Sierra Club's supplemental EIS claim as moot. Thus, our affirmance may not bring an end to litigation over the Searsport project as Sierra Club may challenge the adequacy of the supplemental EIS. This matter, however, has no effect on the present appeal.

## II.

### Legal Requirements Regarding EIS Secondary Impacts Analysis

[1] NEPA requires federal agencies to prepare "a detailed statement ... on the environmental impact" of any proposed federal project "significantly affecting the quality of the human environment." 42 U.S.C. § 4332(2)(C)(i). Not all impacts need be discussed in exhaustive detail. First, only those effects that are "likely" (or "foreseeable" or "reasonably foreseeable") need be discussed, see Sierra Club I, 769 F.2d at 875, and, as in other legal contexts, the terms "likely" and "foreseeable," as applied to a type of environmental impact, are properly interpreted as meaning that the impact is sufficiently likely to occur that a person of ordinary prudence would take it into account in reaching a decision. Cf. Barber Lines A/S v. M/V Donau Maru, 764 F.2d 50 (1st Cir.1985) (explaining the meaning of "likely" and "foreseeable" as applied to tort liability for "financial losses" not associated with physical harm). Thus, "duty" to discuss in the EIS particular ones among all the types of potential impacts is not an "absolute" or "strict" duty but one measured by an objective standard. That is, a likelihood of occurrence, which gives rise to the duty, is determined from the perspective of the person of ordinary prudence in the position of the decisionmaker at the time the decision is made about what to include in the EIS. Second, even as to those effects sufficiently likely to occur to merit inclusion, the EIS need only "furnish such information as appears to be reasonably necessary under the circumstances for evaluation of the project." Britt v. United States Army Corps of Engineers, 769 F.2d 84, 91 (2d Cir.1985); accord Concerned Citizens on I-

190 v. Secretary of Transp., 641 F.2d 1, 5 (1st Cir.1981) (stating that the issue is whether the "EIS can be said to constitute a statement which enable[d] those who did not have a part in its compilation to understand and consider meaningfully the factors involved" ") (quoting Cumington Preservation Comm. v. Federal Aviation Admin., 524 F.2d 241, 244 (1st Cir.1975)).

In the interest of clarity, we elaborate immediately below on the first of these two points and on its applicability to this case. More on the second point appears in Part V, *infra*.

[2] The federal Council on Environmental Quality has issued regulations that inform federal agencies of what must be included in the EIS. See 40 C.F.R. § 1500, *et seq.* (1991); Sierra Club I, 769 F.2d at 870. These regulations mandate that the EIS discuss the direct and indirect effects (secondary impacts) of a proposed project. See 40 C.F.R. § 1502.16. Indirect effects (or secondary impacts) are those effects,

\*768 which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.

40 C.F.R. § 1508.8.

Agencies must consider only those indirect effects that are "reasonably foreseeable." They need not consider potential effects that are highly speculative or indefinite. See Kleppe v. Sierra Club, 427 U.S. 390, 402, 96 S.Ct. 2718, 2726, 49 L.Ed.2d 576 (1976); Sierra Club I, 769 F.2d at 878. As this court has explained:

Whether a particular set of impacts is definite enough to take into account, or too speculative to warrant consideration, reflects several different factors. With what confidence can one say that the impacts are likely to occur? Can one describe them 'now' with sufficient specificity to make their consideration useful? If the decisionmaker does not take them into account 'now,' will the decisionmaker be able to take account of them before the agency is so firmly committed to the project that further environmental knowledge, as a practical matter, will prove irrelevant to the government's decision?

Sierra Club I, 769 F.2d at 878 (citing

Massachusetts v. Watt, 716 F.2d 946, 952-53 (1st Cir.1983)).

### III.

#### The Challenged EIS Analysis of Secondary Impacts

The EIS at issue in this case defines secondary impacts as "impacts induced by and attributable to the [cargo] terminal and its operation." Final EIS, Vol. I, 4-108 (Appendix ("App.") 117).

The EIS analysis of secondary impacts devotes 47 pages to a discussion of a proposed industrial park on Sears Island. See Sierra Club IV-A, 701 F.Supp. at 918. The discussion assumes that the industry types likely to develop in the proposed park are (1) fabricated metal products; (2) non-electrical machinery and equipment; (3) electrical and electronic machinery and equipment; and (4) transportation equipment. See *id.* This type of industry is known as "light-dry." The EIS does not discuss the development of any other type of industry as an indirect effect of the port project.

In its Memorandum on Sierra Club's motion for a preliminary injunction, the district court determined that the agencies' decision to include the four light-dry industries in the EIS evaluation of secondary impacts was reasonable. See Sierra Club IV-C, 714 F.Supp. at 564. The court concluded also, however, that the information before the agencies suggested that it was reasonably foreseeable that heavy industry, as well as food processing and forest product industries, were likely to develop on Sears Island as a result of the port project. The district court concluded that it was unable to determine whether the agencies' decision not to include these industries in the EIS discussion of secondary impacts was reasonable because

there is nothing in the record, except *ipse dixit*, to demonstrate an actual agency decision to restrict the secondary impact analysis to these four types of potential industrial development, much less the rationale for such a decision.

*Id.* The court added that judicial review is rendered utterly infeasible where the administrative record fails even to disclose whether information seemingly relevant to a rational secondary impact analysis was ever considered by the agency or, if so, how it was considered.

*Id.* at 565 (emphasis added). Accordingly, the court concluded that Sierra Club had exhibited a

likelihood of success on the merits of its claim that the EIS analysis of secondary impacts was inadequate and entered a preliminary injunction.

In the filings submitted after the preliminary injunction was issued, the agencies offered four affidavits to supplement and \*769 explain the administrative record. See Supplemental Affidavit of Francis Mahady ("Mahady Supplemental Affidavit"); Supplemental Affidavit of William Richardson ("Richardson Supplemental Affidavit"); Supplemental Affidavit of Robert Hunter; Affidavit of Leslie Stevens. Sierra Club moved to strike the affidavits. The district court, citing Camp v. Pitts, 411 U.S. 138, 142, 93 S.Ct. 1241, 1244, 36 L.Ed.2d 106 (1973) (per curiam), concluded that the affidavits could properly be and were received by the court to explain apparent gaps in, and otherwise to clarify, the administrative record. See Sierra Club IV-D, 744 F.Supp. at 356 n. 7. After reviewing the affidavits, the court ruled that the supplemental affidavits remedied the deficiencies in the administrative record because they demonstrated that there was an actual agency decision to restrict the secondary impact analysis to light-dry industries and they explained the rationale for that decision. See *id.* at 359 & n. 11. The court concluded further that the basis for the agencies' decision was rational and supported by credible evidence. See *id.* at 359.

In the present appeal, following further proceedings and the entry of Final Judgment, Sierra Club contends (1) that the district court erred in admitting and considering the agencies' supplemental affidavits to determine whether the EIS discussion of secondary impacts is adequate and (2) that the district court erred in concluding that the final EIS adequately considers the secondary impacts of the port project.

#### IV. Standards of Review

[3][4][5] Judicial review of an agency's compliance with NEPA is governed by section 10 of the Administrative Procedure Act, 5 U.S.C. § 701, *et seq.* See Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 375, 109 S.Ct. 1851, 1860, 104 L.Ed.2d 377 (1989). A reviewing court must hold unlawful any agency action, findings and conclusions that are "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law..." " Conservation Law Foundation, Inc. v. Secretary of the Interior, 864 F.2d 954, 957 (1st

Cir.1989) (quoting 5 U.S.C. § 706(2)(A)); accord Sierra Club I, 769 F.2d at 870; Concerned Citizens, 641 F.2d at 3; Silva v. Lynn, 482 F.2d 1282, 1283 (1st Cir.1973). This standard of review is highly deferential; the court must presume the agency action to be valid. See Citizens To Preserve Overton Park, Inc. v. Volpe, 401 U.S. 402, 415, 91 S.Ct. 814, 823, 28 L.Ed.2d 136 (1971); Conservation Law Foundation, Inc., 864 F.2d at 957-58. The reviewing court should not defer to the agency, however, "without carefully reviewing the record and satisfying [itself] that the agency has made a reasoned decision based on its evaluation" of the available information. Oregon Natural Resources Council, 490 U.S. at 378, 109 S.Ct. at 1861; see also Grazing Fields Farm v. Goldschmidt, 626 F.2d 1068, 1072 (1st Cir.1980) ("The court should only assure itself that the agency has given good faith consideration to the environmental consequences of its actions"). That is, the court must "look to see if the agency decision, in the context of the record, is too 'unreasonable' (given its statutory and factual context) for the law to permit it to stand." Sierra Club I, 769 F.2d at 871 (emphasis added).

The district court, applying this standard of review, concluded that the agencies' decision to restrict the EIS secondary impacts analysis to light-dry industries was rational and supportable on the record. See Sierra Club IV-D, 744 F.Supp. at 359.

[6][7] In Sierra Club I, we stated that we will take a practical approach to deciding what standard of review to apply to our review of a district court's review of an agency decision.

We should be more willing, or be less willing, to differ with a district court about the 'reasonableness' or 'arbitrariness' of any agency decision, depending on the particular features of the particular case that seem to make a more independent, or less independent, appellate court scrutiny of the administrative record appropriate.

\*770 Sierra Club I, 769 F.2d at 871-72. We should show proper hesitation to overturn a district court's judgment as to the reasonableness of an agency decision where, for example, the "court's judgment turns on matters of fact that it has determined, or upon evidence presented by witnesses in court, or even upon lengthy district court proceedings in which knowledgeable counsel explain the agency's decision-making process in detail." *Id.* at 872. Where, however, we are to apply the same legal standard to the agency decision as did the district court and where the

district court made no findings of fact and heard no witnesses we will "exercise a considerable degree of independence in reviewing the administrative record" to determine whether the district court's decision is correct. *Id.*

The agencies argue, unsurprisingly, that the circumstances of this case at this point in the litigation require us to apply the "hesitate-to-overturn" standard in our review of the district court's decision. Sierra Club, also unsurprisingly, contends that the circumstances of this case mandate that we apply the "considerable-degree-of-independence" standard. We need not resolve this dispute. We conclude that even if we apply the less deferential "considerable-degree-of-independence" standard, the district court's decision must be affirmed.

#### V. The Affidavits

Sierra Club argues that the district court erred in admitting and considering the agencies' supplemental affidavits to determine the adequacy of the EIS evaluation of secondary impacts.

#### A.

As stated in Part II, *supra*, NEPA requires an agency to prepare a "detailed statement" discussing, *inter alia*, the indirect effects of a proposed project. See 40 C.F.R. § 1502.16. This requirement serves many purposes. "The detailed statement aids a reviewing court to ascertain whether the agency has given [ ] good faith consideration to environmental concerns ..., provides environmental information to the public and interested departments of government, and prevents stubborn problems or significant criticism from being shielded from internal and external scrutiny." *Grazing Fields Farm*, 626 F.2d at 1072 (citing *Silva*, 482 F.2d at 1284-85).

Because public disclosure is a central purpose of NEPA, an EIS that does not include all that is required by NEPA may not be cured by memoranda or reports that are included in the administrative record but are not incorporated into the EIS itself. See *id.* at 1073; see also *Watt*, 716 F.2d at 951 ("unless a document has been publicly circulated and available for public comment, it does not satisfy NEPA's EIS requirements"); *Natural Resources Defense Council, Inc. v. Morton*, 458 F.2d 827, 836 (D.C.Cir.1972) (holding that the EIS "must set forth the material contemplated by Congress in form

suitable for the enlightenment of the others concerned"); *Appalachian Mountain Club v. Brinegar*, 394 F.Supp. 105, 122 (D.N.H.1975) (holding that a deficient EIS cannot be resurrected by supplemental information not processed in the same manner as a draft EIS because it denies the public "the opportunity to test, assess, and evaluate the data and make an informed judgment as to the validity of the conclusions to be drawn therefrom").

Sierra Club argues that "[h]aving concluded on May 30, 1989, *Sierra Club IV-C*, 714 F.Supp. at 565, that the EIS did not properly explain why the secondary impacts analysis of the EIS considered only four light-dry industries, the District Court erred by allowing the use of affidavits to provide the missing explanation." Appellants' Brief at p. 29. Such an approach, the argument goes, violates NEPA by allowing an otherwise defective EIS to be cured by documentation not circulated to the public. Sierra Club's challenge fails for two reasons.

First, the district court did not conclude that the EIS was inadequate because it (the EIS) did not explain how the agencies determined the scope of the EIS secondary impacts analysis. Instead, the court concluded \*771 that it could find nothing in the *administrative record* that evidenced that the agencies had ever made a decision on what secondary impacts to include in the EIS, let alone any evidence of the rationale for that decision. See Part III, *supra*; *Sierra Club IV-C*, 714 F.Supp. at 565.

Second, and more important, Sierra Club's contention suffers from a false premise. The implied premise of its position is that NEPA requires the EIS to explain how the agencies determined the scope of the EIS—that, for example, NEPA requires the EIS to include a discussion of why the agency determined that certain indirect effects of a proposed project are not reasonably foreseeable and therefore are not discussed in the EIS. It is true that NEPA requires an EIS to analyze the environmental effects of what the agency decisionmakers determine to be the secondary industrial effects of a proposed project. In the statute and its concomitant regulations, however, there is nothing that requires an EIS to explain how an agency determined the scope of an EIS, including, for example, why it excluded from the EIS each alleged impact that the agencies determined did not in fact qualify as a secondary impact. See *Piedmont Heights Civic Club, Inc. v. Moreland*, 637 F.2d 430, 440 (5th Cir.1981) (holding that it (the court) could not find "any authority, requiring an EIS to explicitly discuss the factors that determine the scope of the

EIS").

Our decision in *Grazing Fields Farm* illustrates this distinction. NEPA requires an EIS to include an evaluation of alternatives to the proposed agency action. See 42 U.S.C. § 4332(2)(C)(iii). The plaintiff in *Grazing Fields Farm* challenged the adequacy of an EIS prepared for a highway project on the ground that it did not adequately discuss a suggested alternative to the proposed route of the highway. After reviewing the administrative record, the district court concluded that the federal agency had carefully and thoroughly evaluated the alternative in compliance with NEPA, even though that evaluation and the information it was based upon was not included in the EIS. See *Grazing Fields Farm*, 626 F.2d at 1071. This court reversed, holding that an administrative record cannot satisfy NEPA's requirement for a detailed statement evaluating alternatives to a proposed project. See *id.* at 1072. The opinion cautioned, however, that "our holding does not mean that the administrative record should play no part in the evaluation of the adequacy of the discussion of alternatives in an [EIS]." *Id.* at 1074.

Study of the administrative record by the court helps to assess the degree of discussion any particular alternative deserves, based on the alternative's feasibility and the stage in the decision-making process it is brought to the attention of the agency.... This use of the record to inform a court's judgment about the adequacy of an EIS must be distinguished from our holding today that agency consideration of alternatives evidenced by the record cannot replace the NEPA mandated discussion of alternatives in the [EIS] itself. In other words, the district court can use the administrative record to set the standard for how much discussion within the EIS a particular alternative merits, but cannot deem the unincorporated record to satisfy that standard.

*Id.* (footnotes omitted); see also *Valley Citizens For a Safe Env't v. Aldridge*, 886 F.2d 458, 460 (1st Cir.1989) (stating that in a NEPA case "[t]he relevant legal question ... is normally whether the Statement is 'adequate' in light of the information and comments before the agency at the time it produced the Statement").

[8] Another way of explaining when it is appropriate for a court to go beyond examining the EIS itself and review the administrative record in a NEPA case is to say that a reviewing court may not rely on information and analysis in an

administrative record to cure an inadequate EIS, but it may, and indeed must, review the administrative record to determine whether the EIS is inadequate in the first place. See *Sierra Club IV-D*, 744 F.Supp. at 359 n. 11. In *Conservation Law Foundation, Inc. v. Andrus*, 617 F.2d 296 (1st Cir.1979), for example, the plaintiff claimed that an \*772 EIS did not adequately discuss an alternative to the proposed project. After reviewing information in the administrative record that revealed that the alternative was largely hypothetical, we concluded that the "pedestrian" analysis of the alternative in the EIS was adequate. See *id.* at 299. "Thus, our examination of the administrative record informed our judgment as to how extensively the proposed alternative had to be discussed within the EIS itself." *Grazing Fields Farm*, 626 F.2d at 1074 n. 4 (discussing *Andrus*).

[9] In this case the district court similarly examined the administrative record, including the supplementary affidavits, to determine whether the EIS secondary impact analysis was adequate. After reviewing the record, the court concluded that it was reasonable for the agencies to conclude that the four light-dry industries evaluated in the EIS are the only industries that are reasonably likely to develop on Sears Island as a result of the port project. If, in contrast, the district court had concluded, for example, that it was unreasonable for the agencies to decide that heavy industry was not a reasonably foreseeable secondary impact of the port project, therefore making the EIS analysis of secondary impacts inadequate (because the EIS did not discuss all reasonably foreseeable indirect effects), that inadequacy could not be cured by information and analysis that is in the administrative record but not incorporated into the EIS. See *Grazing Fields Farm*, 626 F.2d at 1072. That is, the court could not look to evidence in the administrative record or in supplementary affidavits that suggested that the agencies had made an informed, good faith decision to go forward with the project after informing themselves of the environmental effects of heavy industry because that approach would defeat NEPA's goal of informing the public of the likely environmental consequences of the proposed project.

B.

Having determined that a reviewing court may turn to the administrative record to decide whether an agency's decision on the scope of an EIS is

reasonable, we must address whether the district court erred in permitting supplementation of the administrative record by considering the agencies' affidavits submitted after entry of the preliminary injunction.

The focal point for a court's review of an agency's decision is the administrative record. *See, e.g., Florida Power & Light Co. v. Lorion*, 470 U.S. 729, 743, 105 S.Ct. 1598, 1606, 84 L.Ed.2d 643 (1985); *Camp*, 411 U.S. at 142, 93 S.Ct. at 1244; *Valley Citizens For a Safe Env't*, 886 F.2d at 460. "The fact that review sometimes or often focuses on the initial record does not mean that it must, or always, will do so." *Valley Citizens For a Safe Env't*, 886 F.2d at 460.

Where there was a failure to explain administrative action so as to frustrate effective judicial review, ... the remedy is to obtain from the agency, either through affidavits or testimony, such additional explanation of the reasons for the agency decision as may prove necessary.

*Camp*, 411 U.S. at 143, 93 S.Ct. at 1244; *see also Overton Park*, 401 U.S. at 420, 91 S.Ct. at 825 (stating that where there are no formal findings, examining the decisionmakers themselves may be the only way there can be effective judicial review); *Manhattan Tankers, Inc. v. Dole*, 787 F.2d 667, 672 n. 6 (D.C.Cir.1986) (holding that the court "may properly uphold the Coast Guard's decision on the basis of affidavits or testimony by the administrator who made the decision concerning his reasoning at the time of the decision").

[10] The administrative record may be "supplemented, if necessary, by affidavits, depositions, or other proof of an explanatory nature." *Arkla Exploration Co. v. Texas Oil & Gas Corp.*, 734 F.2d 347, 357 (8th Cir.1984) (quoting *Independent Meat Packers Ass'n v. Butz*, 526 F.2d 228, 239 (8th Cir.1975) (citations omitted)), *cert. denied*, 469 U.S. 1158, 105 S.Ct. 905, 83 L.Ed.2d 920 (1985). The new material, however, should be explanatory of the decisionmakers' action at the time it occurred. No new rationalizations for the agency's decision \*773 should be included, *see, e.g., Sierra Club v. United States Army Corps of Engineers*, 771 F.2d 409, 413 (8th Cir.1985); *Environmental Defense Fund, Inc. v. Costle*, 657 F.2d 275, 285 (D.C.Cir.1981); *Asarco, Inc. v. United States Env'tl. Protection Agency*, 616 F.2d 1153, 1159 (9th Cir.1980), and if included should be disregarded. "If the agency action, once

explained by the proper agency official, is not sustainable on the record itself, the proper judicial approach has been to vacate the action and to remand ... to the agency for further consideration." *Costle*, 657 F.2d at 285; *accord Camp*, 411 U.S. at 143, 93 S.Ct. at 1244; *Asarco, Inc.*, 616 F.2d at 1159.

The district court concluded initially that the administrative record did not contain evidence that the agencies considered the prospect that industries other than light-dry industries might locate on Sears Island. The court explained that [a]lthough it is conceivable that a careful consideration of all available information could have enabled the [agencies] rationally to conclude that the Mallar Report presented a logical basis for determining which industries were "reasonably foreseeable" and could be attributable to the Sears Island port project, the court cannot determine from the record that any such ... decision was "founded on a reasoned evaluation of the relevant information."

*Sierra Club IV-C*, 714 F.Supp. at 565 (citation omitted). After reviewing the supplemental affidavits, the court decided that its initial conclusion about the completeness or incompleteness of the administrative record was no longer warranted. *See Sierra Club IV-D*, 744 F.Supp. at 359.

One reason the court could not initially determine whether the agencies had properly considered all the information before them was that the administrative record reflected that a special report on secondary impacts ("ERA Special Report") was to be prepared, yet the special report was not included in the record and there was nothing in the record to indicate that the proper decisionmakers had ever reviewed that report. *See Sierra Club IV-C*, 714 F.Supp. at 563-64. The court later concluded, however, that the supplemental affidavits satisfactorily explained why the administrative record did not include the ERA Special Report--no separate report was ever prepared. Instead, the report was prepared in "camera ready" form to allow direct incorporation into the EIS. *See Mahady Supplemental Affidavit at § 6*; Richardson Supplemental Affidavit at § 10.

[11] The affidavits demonstrate that there was an actual agency decision on the scope of the EIS secondary impact analysis. Francis Mahady (Vice-President of Economics Research

Associates, the company responsible for preparing the written analysis of the reasonably foreseeable secondary impacts of the port project) attests that he explained his rationale for restricting the analysis to the four light-dry industries, as well as his other conclusions as to secondary impacts, to the appropriate agency decisionmakers. Mahady Supplemental Affidavit at § 14. William Richardson (the Division Administrator of the Department of Transportation, Federal Highway Administration, and the person responsible for the administration of the Federal-aid Highway Program in Maine, including compliance with all applicable laws, see Richardson Supplemental Affidavit at § 1) explains that he made a deliberate decision to restrict the secondary impact analysis to light-dry industry:

Based upon my previous participation in meetings on this issue, upon my review of the Municipal Response Plan, upon Mahady's February 12, 1986 presentation and upon the ensuing discussion among attendees at that February 12 meeting, I thought the choice to be reasonable and sensible. The light, dry industries identified and discussed in the Final EIS (Final EIS at 4-109 to 4-111) appeared to me to be the most probable types of users in light of the various physical and environmental limitations which have to be taken into account in developing Sears Island.

Richardson Supplemental Affidavit at § 6.

The affidavits also provide an explanation for the agencies' decision to restrict \*774 the secondary impact analysis to light-dry industries. Mahady describes the "target market analysis" method used to determine the types of industries selected for analysis in the EIS and explains how that method selected the four light-dry industries as likely tenants and eliminated heavy industry as a reasonably foreseeable tenant of Sears Island. Mahady Supplemental Affidavit at § § 11, 12. Mahady also explains why the agencies no longer consider the development of food and forest product manufacturing as a likely consequence of the port project, *id.* at § 13, and he explains how information on the limited sewer and water capabilities of Sears Island led the agencies to conclude that heavy industry would not develop on Sears Island as a result of the port project, *id.* at § 10.

Based on these affidavits, the district court concluded that its questions about whether the agencies' decisionmakers had considered all

available information and had made an actual decision to restrict the EIS to light-dry industry had been answered. See Sierra Club IV-D, 744 F.Supp. at 359. The court further concluded that the agencies' explanation for their decision on the scope of the EIS discussion of secondary impacts was reasonable and supported by credible evidence in the administrative record. See *id.*

We are satisfied that the affidavits explain the agencies' decision in the manner contemplated by Camp v. Pitts. The affidavits do not contain any "facts" about the proposed project that are not also included in the EIS and administrative record. Rather, the affidavits simply explain why, based upon the information in the administrative record and the EIS, the agencies concluded that the four light-dry industries were the only reasonably foreseeable secondary industrial effects of the proposed port project.

Sierra Club argues that Camp v. Pitts does not apply to a court's review of an agency decision under NEPA because to allow explanatory affidavits would violate NEPA's goal of public disclosure. As stated in Part V(A), *supra*, however, NEPA does not require an EIS to discuss how the agency determined the scope of the EIS. Thus, NEPA is not violated when a court relies upon affidavits to explain an agency's rationale for its decision that a certain possible indirect effect of a proposed project is not within the scope of the EIS because it is not "reasonably foreseeable." Moreover, Sierra Club has cited no authority for its assertion that a court should review an agency's decision about what to include in a NEPA-mandated EIS in a manner different from the way courts typically review agency decisions.

Sierra Club's assertion that the affidavits are inadmissible because they constitute post-hoc "rationalizations" is similarly without merit. In Overton Park, the Supreme Court specifically anticipated that affidavits containing post-hoc explanations would be considered by courts reviewing the propriety of an agency decision. The solution in such situations is not to ignore the affidavits altogether, but rather to view them "critically." Overton Park, 401 U.S. at 420, 91 S.Ct. at 825. The district court noted this limitation. Sierra Club IV-D, 744 F.Supp. at 356 n. 7. In this case, the agencies' explanations for their decisions were supported by evidence in the administrative record.



Sierra Club failed to proffer in the district court any evidence that disputed the agencies' explanations. For example, Sierra Club challenged the credibility of Mahady's assertion that heavy industry could not develop on Sears Island because of the Island's limited water and sewer capabilities. Sierra Club claimed that a report prepared for the agencies (the Mallar Report) indicates that one million gallons of water per day could be provided to Sears Island. The district court found, however, that the Mallar Report states that "major facility improvements would be required at considerable cost" to provide a million gallons of water a day, and that Sierra Club had offered no evidence to rebut Mahady's conclusion that the large capital expenditures required to make such improvements would render such improvements unlikely. Sierra Club IV-D, 744 F.Supp. at 358 n. 10. In these circumstances, the district \*775 court properly accepted the post-hoc explanations of the decisionmakers' action.

#### VI.

#### Application of the Legal Requirements to the Secondary Impact Analysis in the Challenged EIS

Sierra Club challenges the agencies' decision to restrict the EIS analysis of secondary impacts to light-dry industries on the ground that "it is too unreasonable for the law to permit it to stand." Sierra Club I, 769 F.2d at 871. In particular, Sierra Club asserts (1) that it was unreasonable to include the four light-dry industries in the EIS discussion of secondary impacts at all because the development of these industries on Sears Island is not a reasonably foreseeable indirect effect of the port project; (2) that it was unreasonable not to include heavy industry as a reasonably foreseeable indirect effect of the port project; and (3) that it was unreasonable not to include the development of water-dependent industry as a secondary impact. We consider each of these arguments separately.

#### A.

Sierra Club claims that there is nothing in the EIS or administrative record that supports a conclusion that the port project will "induce" the development of the four light-dry industries on Sears Island. In support of its argument, Sierra Club points out that the final EIS states that the four light-dry industries analyzed as secondary impacts do not require access to water. See Final EIS, Vol. II, F-5 (App. 220). The EIS states also that "due to the high availability of fully

serviced industrial park land in the Greater Bangor area" industries that do not require access to water are likely to locate in the Greater Bangor area rather than the Searsport area. See *id.* at F-2 (App. 204). Sierra Club asserts also that none of the reports before the agencies lists a marine cargo port as a siting factor for any of the four light-dry industries.

[12] The agencies concluded that because of the highly competitive nature of industrial park development in Maine, "it was reasonably certain that the industries which ultimately located in the industrial park would be those which both were acceptable to the local population and were the targets of intensive marketing efforts and inducements." Mahady Supplemental Affidavit at § 11. This method of determining likely tenants of the industrial park is called "target market analysis." A 1980 Land Use Plan prepared by Bangor Investment Corporation, owner of Sears Island ("Land Use Plan"), includes a marketing study that identifies the four light-dry industries as those "that could best utilize the opportunities offered by the port facility, Sears Island, and the surrounding region, and, in turn, offer the most benefit to the existing region." Land Use Plan at 24 (App. 548). In addition, a 1983 report prepared for the Town of Searsport by Mallar Development Services entitled "A Municipal Response Plan for the Industrial Development of Sears Island" ("Mallar Report"), targets the same four light-dry industries as good candidates for development on Sears Island. Thus, the agencies concluded that because the four light-dry industries are those that local officials and the Sears Island property owners are trying to attract to the industrial park, these industries are reasonably likely to develop on Sears Island. Mahady Supplemental Affidavit at § 11.

Moreover, although the four light-dry industries do not require access to water, the information before the agencies supports a conclusion that these four industries would benefit from close proximity to the port. The Mallar report observes that these industries would benefit from the transport cost savings associated with a centralized port, see Final EIS, Vol. II, 4-110 (App. 119), because they have significant import/export needs or potential, see, e.g., ERA Special Report at IV-5 to IV-6, IV-8 (App. 456-57, 459).

We conclude that it was not arbitrary and capricious for the agencies to include in the EIS discussion of secondary impacts the four light-dry industries targeted in the Mallar Report and the Land Use Plan.

\*776 This conclusion is consistent with our statement in *Sierra Club I* that the Mallar Report and the Land Use Plan--the very reports that identify the four light-dry industries as those most likely to develop on Sears Island--"are detailed enough for an EIS to describe the *type* of development likely to occur, even if it is pointless to analyze precise details." *Sierra Club I*, 769 F.2d at 879.

The conclusion in the EIS that "industries that do not require access to water" are likely to locate in Greater Bangor does not make the agencies' decision to include the four light-dry industries in the EIS analysis of secondary impacts arbitrary and capricious. First, not all information in the administrative record must support the agency decision. See *Environmental Coalition of Broward County, Inc. v. Myers*, 831 F.2d 984, 986 (11th Cir.1987) (citing *Bowman Transp., Inc. v. Arkansas-Best Freight System, Inc.*, 419 U.S. 281, 285-86, 95 S.Ct. 438, 441-42, 42 L.Ed.2d 447 (1974)). Second, when the conclusion is read in its proper context it does not imply that industries not dependent on water are *unlikely* to develop on Sears Island. The conclusion compares the attractiveness of Mack Point--an alternative site to Sears Island--to the Greater Bangor area. The EIS concludes that Mack Point is not a viable alternative to Sears Island in part because Mack Point does not offer sufficient land contiguous to the port. Thus, industries not dependent on water would be more likely to develop in the Greater Bangor area than in scattered parcels in Searsport near Mack Point. See Final EIS, Vol. II, F-1 to F-2 (App. 203-04). Indeed, that same section of the EIS observes that "[o]nly Sears Island offers sufficient developable industrial land which is contiguous to a prospective port facility." *Id.*

B.

[13] Sierra Club argues next that the final EIS is inadequate because it repeatedly refers to Searsport as the future site of "heavy industry," [FN1] yet the EIS secondary impact analysis assumes that only light-dry industry is likely to develop on Sears Island. For example, in several places the EIS refers to a 1978 report from the State of Maine Advisory Committee on Coastal Development and Conservation ("Advisory Report") that recommends that heavy industry be clustered in either the Portland-South Portland area or the Searsport-Stockton Springs-Penobscot area. See, e.g., Final EIS, Vol I, 2-3 (App. 91). Moreover, a letter written by Leslie Stevens, Director of the Maine Development Office, states that the proposed Sears

Island Industrial Park is intended for heavy industry that needs close proximity to a cargo terminal. See Final EIS, Vol. II, S-2 (App. 226).

[FN1] A report entitled "Where Should Heavy Industry Be Located in Central Maine" defines heavy industry as a development characteristically employing equipment such as, but no (sic) limited to, smoke stacks, tanks, distillation or reaction columns, chemical processing equipment, scrubbing towers, pickling equipment, and waste treatment lagoons; which industry, although conceivably operable without polluting or otherwise causing a significant adverse environmental impact on the coastal are[a] (by, but not limited to, the likelihood of generation of glare, heat, noise, vibration, radiation, electromagnetic interference and obnoxious odors) has the potential to pollute or otherwise cause a significant adverse environmental impact.

*Sierra Club IV-C*, 714 F.Supp. at 562 n. 27 (quoting Final EIS at 12-8, as quoted in Plaintiffs' Memorandum in Support of Objections to Defendants' Motion for Summary Judgment at p. 18).

The agencies provide two related explanations for their decision not to include the development of "heavy industry" as a reasonably foreseeable indirect effect of the port project. Mahady explains that a key factor in the selection of industries as "reasonably foreseeable" tenants of the industrial park was that "industries locating in the industrial parks had to be those which do not require substantial water and sewer capabilities in order to function," because existing sewer and water facilities are limited. Mahady affidavit at § 10 (citing Land Use Plan and Mallar Report). Thus, for Sears Island to accommodate heavy industry "\*777 major facility improvements would be required at considerable cost." *Id.* Because these improvements were not part of the proposed port project, and because the state, county, town, and property owners were unlikely to make such improvements in view of their expense, the agencies concluded that heavy industry was unlikely to locate on Sears Island as a consequence of the port project. See *id.*

The use of the "target market analysis" also led the agencies to conclude that "heavy industry" was unlikely to develop on Sears Island as an indirect

effect of the port project. As stated in Part VI(A), *supra*, the local officials and property owners have directed their marketing efforts toward light-dry industries--not heavy industry. Moreover, because of the environmental effects of heavy industry, the development of such industry on Sears Island would likely meet heavy public opposition. Mahady Affidavit at §§ 9, 12.

In sum, the agencies decided that heavy industry was not likely to develop on Sears Island as a result of the port project, despite the Advisory Report's recommendation that heavy industry be clustered in the same area as a cargo port facility, because the available water and sewer facilities on Sears Island are insufficient to support heavy industry, and because the project owners and the town are not directing their marketing efforts at heavy industry. We are satisfied that this decision is not unreasonable.

In the alternative, Sierra Club contends that the agencies' conclusion that heavy industry is unlikely to locate at Sears Island is a "substantial revision" to the final EIS requiring the preparation of a supplemental EIS. NEPA regulations mandate a supplemental EIS if one of two conditions is met:

- (i) The agency makes substantial changes in the proposed action that are relevant to environmental concerns; or
- (ii) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.

40 C.F.R. § 1502.9(c); see also Watt, 716 F.2d at 948. Sierra Club argues that "[i]f the long-established policy of using public funds to build a cargo terminal at Sears Island in order to concentrate heavy industry at that location has been abandoned, then the purpose of the project has fundamentally changed and the public must be informed of that fact through a supplemental EIS." Appellants' Brief at p. 20.

We can find nothing in the record to support Sierra Club's assertion that "the purpose of the cargo terminal is to concentrate heavy industry at that location." The 1978 Advisory Report recommends that heavy industry and port facilities be clustered together in two areas of the state in order "to ensure that more than 95% of Maine's 3,000 mile coastline would be free of heavy industries and major port activities." Final EIS, Vol. I, 2-3 (App. 91). It does not follow from this recommendation that the purpose of the port

project is to induce heavy industry to locate on Sears Island. Nor does it follow from the agencies' conclusion that heavy industry is unlikely to develop on Sears Island as a consequence of the port project that Maine has abandoned its clustering policy. Thus, there is no need to issue a supplementary EIS.

C.

Sierra Club claims that the development of water-dependent industry is a reasonably foreseeable indirect effect of the port project. See, e.g., Final EIS, Volume II, F-2 (App. 203) ("there are really two classes of industries likely to locate at or near the cargo port facility proposed for Searsport: [the first of which is] those industries engaged in intensive handling of waterborne commerce which require direct proximity to the port facility, since greater distance from the port would add transportation costs which would make their operations infeasible....").

Although Sierra Club does not identify what types of water-dependent industries it believes the EIS should have discussed, it does identify a 1987 study excerpted in the EIS that analyzes the water-dependent industries\*778 that have developed at port projects comparable to the Searsport proposal. See Final EIS, Vol I, 4-149 to 4-151 (App. 158-60). The study found that auto processing, stevedoring, and chemical industries developed at Colonels Island, Georgia, and that industries involving bananas, phosphates, stevedoring, and ship repair developed at Port Manatee, Florida. See *id.* Sierra Club appears to contend that the EIS should have discussed these industries as reasonably foreseeable secondary impacts, or at the very least, discussed why they are not reasonably foreseeable.

The agencies respond that the EIS discusses industries that rely upon water commerce as a direct--rather than indirect--effect of the port project; therefore there is no reason to discuss these industries as secondary impacts. As support for their response, the agencies cite to Sierra Club IV-D, 744 F.Supp. at 357 n. 9, and to page 94 of the appendix on appeal.

[14] In Sierra Club IV-D, the district court observed that although the agencies had originally anticipated that forest product and food industries would locate facilities on Sears Island, the secondary impacts analysis does not discuss these industries. The court concluded, however, that the final EIS does not discuss the manufacturing of food and forest products because "primary manufacturing production facilities

... tend to be located in as close a proximity as possible to their raw materials." Sierra Club IV-D, 744 F.Supp. at 357 n. 9 (quoting Mahady Supplementary Affidavit at § 13). The agencies determined that these industries would utilize storage facilities in the port complex. The final EIS considers impacts related to the storage of forest and food products in its discussion of the *direct* impacts of the project. See *id.* (citing Final EIS, Vol. 1, 2-12, § § 4.4.2, 4.8.2). The document at page 94 of the appendix is a diagram of the placement of the storage facilities at the port. The agencies' identification of the EIS diagram and note nine of Sierra-Club IV-D, is not completely responsive to Sierra Club's argument. The fact that the agencies considered the effects of forest and food products industries--two industries that rely upon water commerce, see Sierra Club IV-C, 714 F.Supp. at 565--does not explain why the EIS does not include an analysis of other water-dependent industries, such as the industries identified in the 1987 study of comparable ports. Nonetheless, we conclude that the EIS analysis of secondary impacts is adequate.

First, Sierra Club has not called our attention to any record that it made this argument in the district court. Neither the district court's decision allowing Sierra Club's motion for a preliminary injunction, see Sierra Club IV-C, 714 F.Supp. at 559-65, nor the court's decision on the cross-motions for summary judgment, see Sierra Club IV-D, 744 F.Supp. at 354-60, discusses any contention by Sierra Club that the EIS evaluation of the port project's secondary impacts is inadequate because it does not evaluate water-dependent industries (other than food and forest manufacturing). Absent an exceptional circumstance--and none appears here--an appellate court will not consider arguments that were not made to the trial court. See, e.g., Borden v. Secretary of Health & Human Services, 836 F.2d 4, 6 (1st Cir.1987); Johnston v. Holiday Inns, Inc., 595 F.2d 890, 894 (1st Cir.1979).

Second, NEPA requires an EIS to evaluate only those secondary impacts that are reasonably foreseeable. We conclude that it was permissible for the agencies not to analyze other water-dependent industries, such as auto processing, petroleum, and cement, because the likelihood of these industries developing on Sears Island is too speculative to be reasonably foreseeable. The only evidence Sierra Club identifies (other than general statements to the effect that water-dependent industries are likely to develop) is the study of comparable ports around the United States. The fact that auto processing

developed as an indirect effect of a port project in Georgia, for example, does not, without more, make the development of auto processing on Sears Island reasonably foreseeable.

\*779 D.

Accordingly, we conclude that the agencies' decision to restrict the EIS secondary impact analysis to the four light-dry industries is reasonable in light of the findings in the Mallar Report, the Land Use Plan, and the environmental and physical limitations of Sears Island. We observe that it does not matter whether we, or the district court, would have reached the same decision as the agencies. Our only role, and that of the district court, is to satisfy ourselves that the agencies have "made a reasoned decision based on [their] evaluation" of the information before them. Oregon Natural Resources Council, 490 U.S. at 378, 109 S.Ct. at 1861. We are so satisfied.

#### VII. Conclusion

We conclude that the agencies' decision to restrict the EIS analysis of secondary impacts to the four light-dry industries is permissible. In other words, the decision is not too unreasonable for the law to permit it to stand. See Sierra Club I, 769 F.2d at 871. We conclude also that the district court did not err in admitting and considering the agencies' affidavits pursuant to Camp v. Pitts. We can find nothing in NEPA, its regulations, or case law, that would allow us to conclude that a court reviewing an agency's decision about the scope of a NEPA-mandated EIS may not consider affidavits that explain the basis for the agency's decision.

*Affirmed. Costs to appellees.*

END OF DOCUMENT

1 Environmental Quality Commission  
2 c/o Stephanie Hallock, Director, DEQ  
3 811 SW Sixth Avenue  
4 Portland, Oregon 97204

5  
6 May 23, 2001

7  
8 RE: **PETITION FOR REVIEW, EXCEPTIONS TO HEARING DECISION AND PROPOSED**  
9 **ORDER & BRIEF, RESPONDENT BRIEF, AND RESPONDENT AFFIDAVIT**

10  
11 Dear Ms. Hallock:

12 This letter is officially submitted as a PETITION FOR REVIEW for case No. WQ/I-NWR-00-125.

13 Accompanying this PETITION FOR REVIEW you will find enclosed the following:

- 14 • EXCEPTIONS TO HEARING DECISION AND PROPOSED ORDER & BRIEF  
15 • RESPONDENT BRIEF  
16 • RESPONDENT AFFIDAVIT  
17 • EXHIBITS & ATTACHMENTS

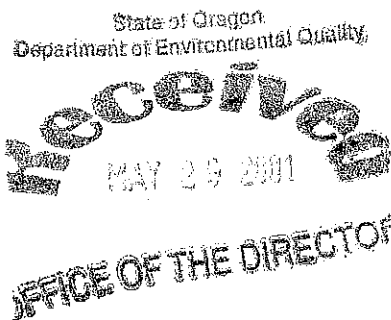
18 We continue to look forward to a just resolve.

19 Sincerely,

20   
21

22 Reggie D. Huff  
23 President

24 Enclosures



1 STATE OF OREGON ENVIRONMENTAL QUALITY COMMISSION

2 Reggie D. Huff  
3 Respondent - Petitioner

} Case No. WQ11-NWR-00-125

4  
5 v.

} **EXCEPTIONS TO HEARING**  
} **DECISION AND PROPOSED ORDER**  
} **& BRIEF**

6  
7 Department of Environmental Quality  
8

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9 **EXCEPTIONS & BRIEF**

10 The PROPOSED ORDER that contains the hearing officer's, Kevin Anselm's, decision regarding the  
11 above matter is rife with errors.

12 There are errors in the "history" of the case, the "findings of fact", and the "ultimate findings."

13 This brief, however, will focus mainly on the gross errors in the conclusion of law, namely that  
14 regarding ORS 468B.025(1)(a) or OAR 340-012-0055(2)(c).

15 Even the conclusions one can agree with are correct for the wrong reasons.

16 The respondent – petitioner finds that the hearings officer has literally rewritten the applicable law, and  
17 so egregiously contorted the meaning of it that it does not even come close to anything the legislature could have  
18 intended. It cannot stand.

19 The respondent is relying on the record as a whole.

20 The respondent recommends an ORDER dismissing this case in its entirety. Alternative CONCLUSIONS OF  
21 LAW and FINDINGS OF FACT AND ULTIMATE FINDINGS are consolidated within the RESPONDENT'S BRIEF.

22 The respondent is somewhat dismayed by the lengths to which the hearings officer went in order to find  
23 in favor of the DEQ's case. But, the respondent is also extremely encouraged that a clearer path to a successful  
24 appeal could not have been created. The respondent – petitioner believes this review process is a bit of a "fox  
25 guarding the hen-house" scenario that is not likely to produce the correct result.

26 The respondent – petitioner desires that this process be allowed to move ahead swiftly, and is therefore  
27 presenting the PETITION FOR REVIEW, EXCEPTIONS & BRIEF, and BRIEF at the same time, and is not requesting  
28 oral arguments.

1 STATE OF OREGON ENVIRONMENTAL QUALITY COMMISSION

2 Reggie D. Huff  
3 Respondent - Petitioner

} Case No. WQ11-NWR-00-125

} **RESPONDENT BRIEF**

4  
5 v.

6  
7 Department of Environmental Quality  
8

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9 **CONCLUSIONS OF LAW**

10 Normally one would discuss Findings of Fact prior to Conclusions of Law, but the instant case warrants  
11 a special order. This brief assumes the pre-reading of Exhibit 31, Rebuttal to Transmitted Answer, and Exhibit  
12 A, The Proposed Order, preferably in that order. With the reading of these documents a fairly rudimentary  
13 background of the facts and issues has been laid out.

14 The crux of this case hinges on the interpretation of applicable law, namely ORS 468B.025(1)(a) or  
15 OAR 340-012-0055(2)(c), which is the rule the amended penalty assessment is based on.

16 ORS 468B.025(1)(a) states:

17 "cause pollution of any waters of the state or place or cause to be placed  
18 any wastes in a location where such wastes are likely to escape or be  
19 carried into the waters of the state by any means."

20 OAR 340-012-0055(2)(c) states:

21 "placing wastes such that the wastes are likely to enter public waters by  
22 any means."

23 After an objective review of the hearing officer's decision one can come to only one conclusion as to  
24 how she interprets this language. She has reinterpreted this statute to say 'placing wastes where there is any  
25 chance of entering the waters of the state' is a violation.

26 The hearings officer points out the fact that the respondent has correctly shown that there is no proof  
27 that the subject solution ever entered the 'waters of the state'. This is, in fact, a very telling understatement. The  
28 respondent has, in fact, shown that there is absolutely no proof, and absolutely no evidence, that there is any  
29 reasonable possibility that the solution ever entered the waters of the state. And, there is even far less possibility  
30 that it ever reached the waters as "wastes", as supported by the DEQ's own evidence.

31 While under the applicable statute, the DEQ does not have to prove that the solution factually ever  
32 reached the waters, it is absolutely necessary and incumbent upon the DEQ, as the party making the charge, to  
33 prove that the seemingly *impossible* is, in fact, likely, probable, or reasonably certain, in order to meet the  
34 definition of a violation.

35 This might be done with a statistical analysis of actual data. For example, a sample of the hard packed  
36 clay, which is ubiquitous in the subject area, could be taken and tested for permeability and/or matched against  
37 data available for similar clay. This could lead to a statistical model to predict the odds the subject solution  
38 would travel through 30-35 feet of hard clay, defying all common knowledge. (A 1/4" thickness of clay has been  
39 used to create water tight vessels for literally thousands of years.)

40 Then, if this impossibility is properly controverted, the DEQ would need to support these findings with  
41 evidence that the highly diluted cooling solution would still meet the definition of "wastes" once it got to the  
42 waters.

1 Since this would obviously not produce the desired result the DEQ could then focus on a study of the  
2 solution traveling laterally for approximately 2500 feet above the clay layer into the nearest wetland, a private  
3 wetland. Once again, there are huge hurdles, but information is available. For example, an analysis of the drop in  
4 the wetlands water level in the springtime, especially in the spring of '99, could be made. This would likely  
5 show that lateral drainage is no longer replenishing the wetlands, and that a relatively tiny discharge over 2500  
6 feet away would never make it there.

7 But, let's say the study actually showed a 51% chance it would reach it. The next question is: Is it even  
8 remotely possible the solution would still be "wastes" once it got there?

9 All of this, of course, is irrelevant since the DEQ's own evidence shows that the 10% ethylene glycol  
10 concentration was totally gone by the time of the discharge. It had all 'broke down' into presumably harmless  
11 by-products. The DEQ provides absolutely no evidence as to what these by-products are, or that they are in any  
12 way harmful. And, in fact, as previously testified, in the first contact with the DEQ, prior to the discharge,  
13 seeking advice for how to dispose of the solution, the DEQ expressed disinterest and lack of concern as to the  
14 chances of these by-products being harmful. (See Affidavit, Exhibit 17) The EPA simply says it "breaks down"  
15 and offers no warning that the by-products are in any way a concern as far as the evidence presented by the DEQ  
16 would show. (Exhibit #10)

17 The DEQ has absolutely zero (0) evidence to allow it to prevail in this matter in accord with ORS  
18 468B.025(1)(a) as written and as its interpretation was intended.

19 It is painfully clear that the hearings office herself recognized this fact. This is why it was necessary for  
20 her to literally rewrite the statute in order to prop up the DEQ's case.

21 In order to get around the clearly delineated 'reasonable certainty' standard in the applicable law the  
22 hearings office states:

23 "The law provides that wastes may not be placed in a location where such  
24 wastes are "*likely* to escape or be carried into the waters of the state *by any*  
25 *means.*" " (Emphasis Quoted)

26 Clearly she highlights the words "likely" and "by any means" to serve as the basis for literally rewriting  
27 the statute to include an 'any possibility' standard, as evidenced by her actual rewriting of the statute as follows:

28 "The respondent violated ORS 468B.025(1)(a) by placing a solution  
29 containing ethylene glycol and metal leaching in a place where it *may* be  
30 carried into the waters of Oregon." (Emphasis Added)

31 And she repeats as:

32 "Huff violated ORS 468B.025(1)(a) by discharging the ethylene glycol  
33 solution in a place where it *may* be carried into the waters of Oregon."  
34 (Emphasis Added)

35 It is cumbersome to be put into a position of needing to make such common sense and logical  
36 arguments in defining clear words that should be so clearly discernable on their face.

37 May the reviewer(s) please understand that it is the respondent's intent to be thorough, and not to insult  
38 anyone's intelligence.

39 It should be noted that the 'any possibility' standard asserted by the hearings officer is perhaps the most  
40 ridiculous interpretation of law ever conceived. It is completely unworkable, and if upheld it would make every  
41 man, woman, and child in the state of Oregon a violator of the law for simply going to the bathroom, owning a  
42 car, washing dishes, washing the car, washing clothes, owning a bottle of bleach, etc., etc., etc. It would make  
43 this law and the state of Oregon a complete anachronism to common sense and the civilized world!

44 It is inconceivable that the legislature would purposely enact a law so over-broad in definition that it  
45 would simply collapse under the weight of its own absurdity. The subject statute is written with specific words  
46 that have specific meaning in the law in a specific order. These facts cannot be ignored on a whim in order to  
47 justify what has become a malicious and improper prosecution.



1 In this case the hearing officer has focused on the words "likely" and "by any means" and has elevated  
2 the word "any" as controlling over the entire statute. Clearly the word "likely" is controlling over the term "by  
3 any means". This fact cannot be ignored for very practical reasons. The statute gives the DEQ the freedom to  
4 speculate however it wishes as to the means by which wastes could enter the waters, as long as it is, in fact, a  
5 "likely" scenario, and can be proven as such.

6 To understand the importance of this point one only needs to look at what kind of activities could be  
7 successfully prosecuted if the key word "likely" was not controlling. Without that limitation the DEQ need only  
8 show that wastes were placed where "any" possible chance of entering the waters existed. No evidence that a  
9 particular scenario ever occurred in the past would be necessary, nor any statistical evidence as to the probability  
10 of the scenario actually occurring or actually resulting in "waste" entering the waters of the state would be  
11 necessary.

12 For example, if one has cleaners under one's sink there is some possibility that those containers could  
13 leak. There is further a possibility that it could find its way to the ground. And, despite knowing that the ground  
14 water is protected by 30-35 feet of hard packed clay, the DEQ would not need to consider this in favor of  
15 common sense, nor care what the real implication of a fact like that is. So you, the reviewer(s), for example,  
16 would become a violator, and deserve to be stigmatized as a polluter for the rest of your life, according to the  
17 DEQ. Further, if the substance leaked very slowly you could be charged for multiple violations for every day it  
18 leaked, all because you 'placed wastes where there is a possibility of entering the waters of the state!

19 Or, you may mow your lawn and hit a nasty rock that ricochets off the bottom of your crankcase or  
20 drain plug and cracks it, spilling oil onto the ground. Once again, the fact that the nearest wetlands is over ½ mile  
21 away and the fact that the groundwater is protected by a huge clay layer won't help you.

22 But what if this accident did not occur? Still doesn't help you, because under the newly revised law, or  
23 the 'Anselm Law', as we may call it, the mere possibility it *could* or *may* happen is enough to violate the statute!  
24 This new law covers simply placing or causing to be placed wastes where there is *any* possibility of entering the  
25 waters of the state.

26 Now, let's talk about going to the bathroom in Portland. It turns out that Portland's sewer system  
27 sometimes overflows into the Willamette River. Under the new statute regular citizens who simply use the  
28 system could be written up for placing wastes where there is "any" possibility it could enter the waters by means  
29 of the city sewer system. In addition, the DEQ could charge you with negligence, because this problem is so  
30 highly publicized you should know this possibility exists and take steps to avoid it.

31 What steps could be taken? Well, one could collect sewage in large containers and take them out to  
32 Eastern Oregon in the desert, where no "waters of Oregon" are in site, and dig a hole and dump it. But wait, this  
33 won't work either, because aquifers run under ground even in the desert, and even if they're hundreds of feet  
34 down, and protected by natural barriers, you can and will be deemed a polluter and a violator.

35 Perhaps one could blast it into outer space. No. That won't work either, because there is some  
36 possibility that it "*may*" come back through the atmosphere and therefore "*may*" come back to Oregon and land  
37 right in a lake, or a river, or on the ground!

38 The term "likely" therefore definitively restricts the interpretation of the entire statute to something  
39 approaching sanity, and is designed to avoid the very abuses that are taking place in this case.

40 An analysis of the specific words in controversy is appropriate.

41 If a person buys a lottery ticket it would be appropriate to say that that person "may" win the lottery,  
42 even if the odds are 100 million to one. However, it would be extremely inappropriate to say that that person is  
43 "likely" to win. If a person purchases 51% of all lottery tickets sold then technically it would be appropriate to  
44 say that that person is "likely" to win.

45 The difference between these cases is almost infinite.

46 The 51% scenario could also employ the word "may". Context is important.

47 Webster's New 20<sup>th</sup> Century Dictionary defines the word "may" as:

- 48 **1. Possibility; Used in this sense to form the subjunctive or potential**  
49 **modes of verbs; as it *may* rain tomorrow."**

1 Other dictionaries show the word can mean "possibility" or "probability". Actually, the word can be  
2 used to denote almost any possibility, whether it be a trillion to one or a 99% possibility, a near certainty.

3 The word "likely", however, has a much more restrictive meaning. Its meaning is restricted to  
4 something with more than 50% probability, although the definitional terms used in law, such as "probable" or  
5 "reasonably certain", etc., indicate something greater than 51%. (Sierra Club v. Marsh, C.A. (me), 976 F.2d 763,  
6 767, and Crenshaw v. Pendleton Mfg. Co., 54 S.E. 2d 61, 215 S.C. 66). It would be difficult to argue that one  
7 who is only 51% certain of anything is, in fact, "reasonably certain", since it would mean that one could be  
8 almost just as 'certain' in the opposite direction.

9 In this case the respondent has argued forcefully at the hearing, in the April 11<sup>th</sup> rebuttal, (Exhibit 31),  
10 and here, that the DEQ has not presented one shred of evidence or even a single argument that would indicate it  
11 can ever meet the actual "reasonably certain" standard in the law.

12 It is clear that the hearings officer realized in some sense, whether it be consciously or subconsciously,  
13 that the DEQ, in fact, has no case under the law, and therefore it became necessary to literally rewrite the law. If  
14 there actually was a case to be made here she would have simply found the DEQ had proven its case, as required  
15 under the existing statute, and offered clear support for it, instead of obfuscating and offering no support.

16 If the DEQ had truly proven its case, through scientific studies and statistical modeling, etc., proving a  
17 probability of actual contamination over 50%, then there would be no need to highlight select words, literally flip  
18 their meanings, and insert new words.

19 In addition, she had to get around the forceful arguments of the respondent as to the actual meaning of  
20 the statute. This puts the context of her repeated use of the word "may" as clearly **below 50%**, which violates the  
21 law and opens its interpretation up to the wildest of all possible speculation. A million to one. A billion to one.  
22 It's all up for grabs now.

23 If the legislature wanted the "any" possibility standard it could have made this clear in the statute by  
24 employing words such as "any", "possibility", or "may", etc. Owing to the pension for abuse of discretion the  
25 legislature wisely chose not to do so. No one outside of the legislative process has the right or authority to simply  
26 rewrite any statute to include possibilities it is not possible for the legislature to have intended.

27 Until the legislature changes the law, this case, and cases like it, must be dismissed.

### 28 FINDINGS OF FACT AND ULTIMATE FINDINGS

29 The hearings officer concludes that the subject discharge contained "ethylene glycol" and "metal  
30 leachings". Both of these conclusions are, in fact, false. And the hearings officer was not provided and has not  
31 provided a basis for these conclusions.

32 The evidence and testimony indicate that the subject discharge contained no ethylene glycol, nor any  
33 metal leachings.

34 The respondent has argued consistently from the first response to the DEQ charges (Exhibit 8) to the  
35 present that the subject ethylene glycol was exposed to the atmosphere for over two years prior to discharge, and  
36 had broken down completely, and therefore no longer existed as ethylene glycol. The DEQ offered no evidence  
37 to the contrary whatsoever, and, in fact, offered evidence that supports the respondent's claim.

38 The DEQ's own Exhibit #10 states:

- 39 • "Neither compound is likely to exist in large amounts in air."
- 40 • "About half of the compounds that enter the air will break down in 24-  
41 50 hours."
- 42 • "Both compounds break down within several days to a week in water  
43 and soil."

44 The respondent offered facts by way of affidavit (Exhibit 17) that is consistent with the DEQ's own  
45 evidence above, such as the specific gravity of the solution before discharge. The DEQ offered absolutely no  
46 evidence to refute these facts, but relented by only arguing that the so-called "toxicity" did not change with the

1 break down process. The DEQ was then allowed to continue to argue its case as if “ethylene glycol” was deemed  
2 relevant in this case.

3 The fact is the respondent has proven that no ethylene glycol existed in the subject solution at the time it  
4 was discharged. The respondent has asserted facts by way of affidavit which were not controverted by way of  
5 affidavit or sworn testimony and therefore should be taken as true.

6 The DEQ’s arguments as to the “toxicity” of the ethylene glycol by-products was not supported by any  
7 evidence whatsoever. If anything the DEQ’s own evidence indicates that the already generally innocuous  
8 ethylene glycol breaks down into something of far less concern. The DEQ’s Exhibit 10, which came from the  
9 EPA, for example, after describing the breakdown process offers no warning that the by-products are harmful in  
10 any way. Surely the EPA would do so if this were, in fact, the case. Instead the EPA leaves the reader to assume  
11 that this simple organic compound, (see the attachment to Exhibit #31), simply breaks down into the harmless  
12 components that it consists of. The DEQ offers no evidence, only the opinion of obviously biased employees of  
13 the DEQ who admit to lacking expertise in this area, that the by-products have any “toxicity” whatsoever, let  
14 alone that any so-called “toxicity” is unchanged.

15 Without giving sway to the above, the irrelevant arguments and evidence regarding the non-existent  
16 ethylene glycol are misstated and over stated in favor of the DEQ.

17 The respondent has proven and asserted by way of affidavit and sworn testimony that the subject  
18 solution was originally 89-90% city tap water. This fact has not been challenged. All of the evidence presented  
19 by the DEQ, such as Exhibits #10 & #11, that deal with the possible harmful effects of ethylene glycol do so in  
20 the context of pure ethylene glycol. No evidence regarding a highly diluted solution was ever presented.

21 Once again the DEQ’s own evidence refutes its case. Exhibit #10, which is information from the EPA,  
22 states:

- 23 • Acute (short-term) exposure of humans to ethylene glycol by ingesting large quantities causes three  
24 stages of health effects. **Central nervous system (CNS) depression**, including such symptoms as  
25 vomiting, drowsiness, coma, respiratory failure, and convulsions, is followed by **cardiopulmonary**  
26 **effects**, and later **renal damage**.
- 27 • No effects were noted in one study of individuals exposed to low levels of ethylene glycol by  
28 inhalation for about a month. Rats and mice chronically (long-term) exposed to ethylene glycol in  
29 their diet exhibited signs of **kidney toxicity** and liver effects. Ocular irritation and lesions and  
30 pulmonary inflammation have been observed in rats, rabbits, and guinea pigs subchronically  
31 exposed by inhalation.
- 32 • The U.S. Environmental Protection Agency (EPA) has not established a Reference Concentration  
33 (RfC) for ethylene glycol.
- 34 • The Reference Dose (RfD) for ethylene glycol is 2.0 mg/kg/d.<sup>a</sup> EPA estimates that consumption of  
35 this dose or less, over a lifetime, would not likely result in the occurrence of chronic, noncancer  
36 effects.<sup>b</sup>
- 37 • No information is available on the reproductive or developmental effects of ethylene glycol in  
38 humans. Several studies of rodents exposed orally, by gavage (experimentally placing the chemical  
39 in the stomach), or by inhalation showed ethylene glycol to be **fetotoxic**.
- 40 • No information is available on the carcinogenic effects of ethylene glycol in humans. Oral exposure  
41 of rats and mice was not associated with an increased incidence of tumors. EPA has classified  
42 ethylene glycol as a Group D, **not classifiable as to human carcinogenicity**.

43 (Emphasis Quoted)

44 It also states that on a hazard ranking from 1-100, where 100 represents the most toxic, ethylene glycol  
45 ranks #10, or put another way, on a ranking from 1-10 it ranks a 1, one being the least toxic.

46 All of this information refers to pure ethylene glycol, not ethylene glycol diluted with water by 90%,  
47 and broken down by exposure to the air for over two years. Even fresh ethylene glycol made 10 times weaker by  
48 water dilution might rank a 1 on the 1-100 scale.

1 When talking about the health effects on humans, the term "ingesting large quantities" is employed as a  
2 qualifier. The word "large" indicates something significantly more than a normal consumption amount at any  
3 one time. The noted health effects are very similar to those of consuming "large" quantities of alcohol, which  
4 makes sense since ethylene glycol is an alcohol.

5 Putting this in proper perspective, if a person were to drink three quarts of beer in 20 minutes time the  
6 effect would be considered "toxic". However, if the same beer were cut by 90% water dilution a person would  
7 have to consume 7.5 gallons in the same 20-minute time span in order to consume the same amount of harmful  
8 substance.

9 This is, of course, humanly impossible. A person would literally drown before ever achieving a small  
10 portion of this consumption. In this context the diluted substance is no more toxic than water.

11 Other toxic effects were only observed in small animals that were chronically exposed in their diet.  
12 Once again, there is no evidence the subject situation could cause chronic exposure to any animal or human.  
13 There is no evidence that chronic exposure to a 90% diluted solution would cause health effects to any living  
14 creature in any way.

15 According to the DEQ's Exhibit #10, the EPA has established a "drinking water guideline" for ethylene  
16 glycol of 7,000 micrograms in a liter of water for an adult." (7,000 Mg/L) (This is merely a guideline. There is  
17 no regulatory limit.) This is based on a lifetime exposure.

18 With a calculation of liters converted to gallons and the number of micrograms converted to Mg in a  
19 gallon of water, a calculation of the number of gallons of water that could absorb 55 gallons of pure ethylene  
20 glycol under the EPA guideline can be made. That number is approximately 7.8 million gallons.

21 As stated in Exhibit 31, the city of Scappoose pulls 700,000 gallons of water per day from a single well  
22 of many in the area without impacting the static water level. This is proof the subject aquifer contains tens of  
23 millions, or hundreds of millions of gallons of water. This also proves that even if pure ethylene glycol were  
24 piped directly to the aquifer, 55 gallons over a 10 to 12 day period would not be found anywhere near the EPA's  
25 lifetime drinking water guideline for a single day.

26 Exhibit #10 establishes the EPA's position that the consumption of 2 milligrams per kilogram (of all  
27 food and water intake) per day for a lifetime "would **not likely** result in the occurrence of chronic, noncancer  
28 effects." (Emphasis Supplied)

29 All of these facts would be very persuasive if, in fact, any pure ethylene glycol were involved in this  
30 case, and if there was any chance that it could ever get to the aquifer as pure ethylene glycol or in any other  
31 form. Since the facts indicate that neither is the case here these facts only illustrate the falsity as to the subject  
32 discharge having any environmental impact whatsoever. The facts show that this event was a zero (0) to  
33 something below zero (0) impact event.

34 The respondent properly argued at the hearing that the DEQ should not be allowed to use the terms  
35 "toxic" or "toxicity" in application to the subject discharge solution, because the DEQ has not presented and  
36 cannot present any evidence that those terms as they are generally defined apply in this case.

37 Respondent repeats the said objection here.

38 The hearings officer concluded in her "Ultimate Findings" that the subject discharge contained "metal  
39 leachings".

40 The Department provided no definite evidence that "metal leachings" either could or would be present  
41 in the subject discharge. The Department made not definitive statement regarding a belief that metal leachings  
42 either were or must have been present. The Department only speculated as to some possibility based on ethylene  
43 glycol that had run in an engine for a lengthy time, in a sealed system, under 14-16 PSI.

44 The hearings officer's own language on this issue supports these facts. She states:

45 "The Department is concerned about *possible* metal contamination of ground  
46 water from the solution. Ethylene glycol solutions used to cool engines *often*  
47 contain metals that are leached from the engine \*\*\*\*\*" (Emphasis Supplied)

1 Once again, the mere speculation that something is "possible" causes it to be treated as fact. This is  
2 improper.

3 Respondent is not suggesting that this speculation should not be allowed in general arguments in  
4 support of a case, only that it should not show up under "Ultimate Findings of Fact" as if any burden of proof  
5 had been met, let alone the burden of proof on the DEQ.

6 The Department's own hazardous waste inspector, Ms. Susan Shewezyk, when questioned on cross  
7 regarding her knowledge of ethylene glycol admitted that her knowledge was limited to basically what she had  
8 researched in preparation for the hearing. She admitted to having no knowledge of automobile engines or how  
9 the cooling system worked. She had no knowledge that the cooling system in cars operates under 14-16 PSI  
10 gauge pressure. She also did not know that most research engines, such as the subject engine, operate with an  
11 open, zero (0) gauge pressure cooling system. When asked if it was possible that this pressure difference could  
12 severely retard the so-called "metal leaching" she admitted it could make a difference. She was also asked if her  
13 information made a distinction between aluminum heads and cast iron heads. She did not know.

14 In addition to all of these controverting questions, she was asked very pointedly about the ability of  
15 such "metal leachings" to "settle out". She answered affirmatively that all such leachings would "settle out". She  
16 also admitted, upon further questioning, that since the subject tank could not be drained to the bottom, because  
17 the drain spout was installed approximately 1.5 inches from the bottom, leaving approximately 1.5 inches of  
18 water behind, it is likely that, if there were any so-called "metal leachings", most, if not all, would have been left  
19 behind and not discharged.<sup>1</sup> The truth is, since there is no evidence that these metals can float, they all would,  
20 in fact, be left behind.

21 Further, it should be noted that the tank in question is large and very heavy. The tank sat undisturbed for  
22 many months prior to discharge, and the discharge itself resulted in no disturbance of the solution. It was a very  
23 slow discharge through a garden hose. There simply is no mechanism by which any so-called "metal leachings"  
24 could have been taken up in defiance of gravity to be a part of this discharge, despite the serious doubt that any  
25 even existed to be taken up.

26 The hearing officer was asked prior to this hearing: "Who has the burden of proof in this case?" It was  
27 verified to be the DEQ. The burden of proof does not shift to the respondent on a whim of the hearing officer or  
28 simply because a defense that the DEQ does not want to agree with is presented. The DEQ has the burden of  
29 proof, not the luxury of wild speculation.

30 The DEQ put forth this so-called "metal leaching" speculation as a red herring to sensationalize an  
31 otherwise completely innocuous event.

32 The DEQ itself asserted that "metal leachings" were only a "possibility". Zero evidence that any existed  
33 was presented even though sampling was offered and suggested by the respondent many months earlier. The  
34 DEQ's own witness admitted that there was little chance such leachings could have ever made it to the ground in  
35 any event. Despite all these facts the hearing officer included this wild speculation in her "Ultimate Findings"  
36 as if it were incontroverted fact. This fact alone demonstrates some sort of bias.

### 37 **BURDEN OF PROOF & PROOF OF BIAS**

38 The respondent has asserted from the beginning, going all the way back to the first response letter,  
39 (Exhibit #8), through the informal meeting with the Department, and the request for a hearing, (Exhibit #3),  
40 through the hearing itself, the Rebuttal letter, (Exhibit #31), and now this brief, that the subject discharge  
41 contained NO ethylene glycol, and that NO ethylene glycol could have ever made it to the waters of the state.  
42 The respondent stands on this position as uncontroverted fact, and these are the reasons why:

- 43 1. On or about late January 2001 the respondent received from the Department various Exhibits to be  
44 used by the Department at the hearing, including Exhibit #10. Exhibit #10 shows that ethylene  
45 glycol exposed to the atmosphere has a half-life of 24-50 hours, and that the compound can

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<sup>1</sup> There was not enough time to produce and study transcripts of the February 27, 2001 hearing. The respondent has attached an affidavit as to this line of questions and the witness's responses. (See RESPONDENT'S AFFIDAVIT, attached)

1 experience a total breakdown in several days to a week mixed in water and soil while exposed to  
2 the atmosphere.

- 3 2. On February 14, 2001 the respondent asserted facts by way of affidavit, (Exhibit #17), that indicate  
4 that the ethylene glycol had, in fact, completely broken down, consistent with the Exhibit #10 facts  
5 from the EPA, before the discharge.
- 6 3. In the spring of 2000 the respondent offered the Department the opportunity to sample the solution  
7 from under floor pipes, and also to sample the surrounding wells. This offer was rejected. (See  
8 RESPONDENT'S AFFIDAVIT, attached)  
9

10 The Department has no controverting evidence and has asserted none, by way of affidavit or any  
11 other means.

- 12 4. The Department has conceded these facts in two ways:
- 13 A. By not arguing that ethylene glycol either could or should have been present, or does not  
14 "breakdown", but only that its so-called "toxicity" would not decrease with the "breakdown"  
15 process, while offering no evidence to support such.
- 16 B. By objecting to the admission of test results from an EPA method 8260B analysis, (Exhibit  
17 #19), on the grounds that the test did not include ethylene glycol, and that even if such a test  
18 was done it would not be accurate because of the amount of "time and exposure" involved.  
19

20  
21 This indicates that the Department accepts as fact that "time and exposure" to the atmosphere  
22 "breakdown" ethylene glycol. The time of exposure prior to discharge as asserted by affidavit  
23 was approximately two (2) years and four (4) months. Enough time to have 'broken down' the  
24 ethylene glycol many times over.

- 25 5. The hearings officer claims in her Findings of Fact that the Department testified that ethylene  
26 glycol "breaks down to a certain extent with time and exposure", and that it "may be  
27 consumed by some bacteria in the soil, or may be ionized, or attached to soil particles, which  
28 would inhibit additional movement through the soil."

29 Despite all of these undeniably relevant facts the hearings officer simply ignored them and states:

30 "The ethylene glycol solution fits the definition of waste *when it was originally mixed*  
31 *in the tank because of the toxic properties of the ethylene glycol to humans and*  
32 *animals.*" (Emphasis Supplied)

33 She then shifts the *burden of proof* to the accused and states:

34 "Huff's arguments that the solution contained little or no ethylene glycol or other  
35 contaminants possibly injurious to health or the environment is not supported by the  
36 weight of evidence offered, including the laboratory tests that were not  
37 contemporaneous with the discharge and did not include testing for ethylene glycol or  
38 possible metallic contaminants. Huff's own actions of inquiring about proper disposal  
39 methods reflects his conscientiousness about possible pollutants and the realization  
40 that the solution deserved to be handled with care in order to avoid polluting. Further,  
41 Wabshall's instruction to discharge small amounts of the solution over a period of  
42 time indicates some concern over the solution's content."

43 It is clear that the burden of proof has been unfairly, improperly, and illegally shifted to the accused  
44 here. The hearings officer refers only to evidence "offered" by the accused, and, at that, only the evidence which  
45 could be distorted to support the DEQ's speculations, while ignoring all said relevant evidence.

46 Prior to the hearing the respondent inquired to the hearings officer directly as to the burden of proof,  
47 and it was clearly verified that the DEQ must prove its allegations to sustain a violation. The DEQ's own  
48 reaction to the revelation that it could not prove the discharge ever went to groundwater, shifting from a Class 1  
49 to a Class 2 violation, verifies that the DEQ itself understands where the burden of proof lies.

1 Despite these assurances the hearings officer has betrayed the respondent by relying on and exploiting a  
2 test voluntarily conducted at the respondent's own expense which did not test for ethylene glycol. And then  
3 indicating that *even if it did* the results would be rejected because it was "not contemporaneous with the  
4 discharge".

5 Of course, had it been known that the respondent was required to invent time travel in order to conduct  
6 "contemporaneous" tests for ethylene glycol and so-called "metal leachings" or else the DEQ's controverted  
7 speculation would become fact, then, certainly, this giant leap for mankind would have been pursued with all  
8 vigor.

9 This is a little like convicting someone based on his answer to the question, "Have you stopped beating  
10 your wife?"

11 The DEQ and the hearings office want it both ways. They want thinking people to believe that their  
12 own evidence from the EPA, (Exhibit #10), regarding the process of breakdown of ethylene glycol *only* applies  
13 to the period of "time and exposure" *after* the discharge, and *not* the two (2) years and four (4) months *prior*.  
14 This way they can reject any test data which would prove the solution had no ethylene glycol.

15 The respondent had no need to specifically test for ethylene glycol, as there were already enough facts  
16 in evidence to prove that ethylene glycol was not a factor. It was and is not the respondent's responsibility to  
17 conduct any tests. And the hearings officer errs and demonstrates bias when:

- 18 • she incorrectly points to a voluntarily provided test's 'inadequacy' to disprove the accuser's  
19 speculation of the presence of ethylene glycol,
- 20 • she then concludes that this 'inadequacy' somehow converts speculation to an *ultimate finding of*  
21 *fact*, and,
- 22 • she does all this while ignoring all other contravening facts and evidence.

23 This is a clear and complete shifting of the burden of proof to the accused.

24 It really is just that simple. The tests conducted voluntarily by the respondent fail to prove that ethylene  
25 glycol and metal leachings were not present at the time of the discharge. Therefore it is concluded that they were  
26 present. The test also failed to prove arsenic and mercury were *not* present. Based on the hearing officer's  
27 method of reasoning, this would prove that they *were* present. This is a prosecutor's dream and an appeals  
28 court's nightmare.

29 The test was done entirely voluntarily, to show that no volatile organics, such as may be associated with  
30 oil, fuel, or solvents, was involved in the solution. This was a concern because of an earlier comment from Ms.  
31 Greco indicating that she was poised to argue that because an engine was cooled by the solution these  
32 compounds could be present. The test was not done because it was believed that this wild speculation had to be  
33 proven false, as if the burden of proof rested on the accused. These tests are expensive, and this process is very  
34 costly in lost time and earnings. With the DEQ providing its own evidence supporting the complete breakdown  
35 of ethylene glycol, and the burden of proof to prove otherwise resting on them, it made no sense to test for  
36 ethylene glycol. This fact cannot be used against the accused now.

37 This case represents a particularly egregious example of bias, because the unfair and illegal application  
38 of a burden of proof was and is actually met by the accused.

39 But, with all this she is still not done. She then claims that the responsible approach taken by the  
40 respondent and Mr. Wabshall actually controverts all incontrovertible evidence and proof, and proves that the  
41 solution contained ethylene glycol and metal contaminants.

42 Of course this is absurd. There are people who are uneducated as to the edibility of tomatoes. Cautious  
43 behavior around tomatoes by these individuals hardly proves that tomatoes are, in fact, poisonous.

44 Perhaps she got her cue from Ms. Cox, who indicated under oath that she was incensed that the  
45 respondent did not commit perjury at trial when asked about the discharge. She felt this justified an overly  
46 aggressive prosecution of this non-case.

47 You know the deck is stacked when failure to commit perjury and other responsible conduct is used so  
48 unfairly against you.

1 As far as the so-called 'metal contamination' goes, the issue is the same. The burden of proof is on the  
2 accuser not the accused. And once again, the DEQ's own evidence, in the form of sworn testimony, indicates  
3 that, *if* there were any metal leachings in the tank, none could have made it to the ground, as they would have  
4 "settled out" and been trapped at the bottom of the tank. This speculation was not even mentioned until the  
5 hearing.

6 The accused should never be put in a position of being forced to prove negatives and/or disprove all  
7 kinds of wild speculations from an accuser. The accuser must prove the charges.

8 The DEQ was offered a sample, and they have the money and the time and the expertise to prove their  
9 allegations. It is quite simple. Either the Department can prove its allegations or not. If not, the case must be  
10 dismissed.

11 In addition to all this, the hearings officer completely ignores the issue of the effects of the ground and  
12 the 30-35 foot clay layer protecting the groundwater. *If* the DEQ *could* prove ethylene glycol *actually* made it to  
13 the ground, then these effects could not be ignored in the context of the applicable law. She actually ignores her  
14 own findings of fact, quoting testimony from the DEQ itself, where she properly points out the multiplicity of  
15 ways the ground and other processes would attack ethylene glycol, as quoted previously. (Page 10, Lines 35-37)  
16 She bases her rulings on a blind and improper assumptions that if ethylene glycol ever existed, then it made it to  
17 the ground, if it made it to the ground, then it also automatically made it to the groundwater, and it made it there  
18 as pure ethylene glycol. Once again, based on all of the evidence submitted, and just plain common sense, this is  
19 not just improbable and unprovable, but absurd.

20 The hearings office seems to be on a course to set a new standard in bias, whether it be consciously or  
21 unconsciously. As to the base charge, the new standard appears to be:

- 22 1. Ignore all relevant incontroverted and incontrovertible facts and  
23 evidence for one side. Even facts supported by the opposing side's own  
24 evidence can be ignored.
- 25 2. Wild speculation from one side becomes "persuasive" arguments, while  
26 proof from the other side is ignored.
- 27 3. Shift the burden of proof to the accused.
- 28 4. Responsible conduct by the accused becomes evidence against the  
29 accused.
- 30 5. Literally rewrite the law, without any authority to do so, if sections 1-4  
31 are not adequate to justify a victory for the desired side.

### 32 REVIEW & CONCLUSION

33 The elements of proof necessary for the DEQ to sustain a violation under the applicable law and the  
34 OAR that define that violation are spelled out on page 3 of the April 11 REBUTTAL LETTER, Exhibit #31.

35 The DEQ has, in fact, proven zero (0) of these elements.

36 In order to get around this fact the DEQ and the supposedly independent hearings officer engaged in  
37 rather spectacular legal gymnastics. The hearings officer ignored incontrovertible evidence, and shifted the  
38 burden of proof onto the accused, etc. Without diminishing the significance of these errors, in the opinion of the  
39 respondent there is nothing more illuminating as to the weakness of the DEQ's case than a literal rewriting of the  
40 applicable law, broadening it so as to include everyone as a violator in order to sustain a single \$1,200 fine!

41 Obviously the Appeals Court, which is concerned with precedent, cannot let this ruling stand.

42 The implications are manifold and downright scary. For example, how can anyone argue that a law that  
43 covers placing wastes or causing wastes to be placed where such "may" or "possibly" could enter the waters of  
44 the state, does not apply to the thousands of people who live on house boats, or on flood plains. These people  
45 literally live on top of the waters of the state, and everything they do in their residence presents a reasonable  
46 possibility of spillage into the waters.



1 The only people I know who live in a houseboat are the well-known newscaster, and popular radio  
2 personality, Lars Larson and his family. On wonders how people like Mr. Larson would react to finding out that  
3 the Environmental Quality Commission and the DEQ are trying to set precedent in the law that would render his  
4 property worthless, and that of all other home owners, and make them all environmental violators. What should  
5 the respondent say to such individuals if they were to inquire as to the facts and import of this case?

6 The respondent has detailed in part in this brief, without obligation to do so, how the DEQ could have  
7 conducted a legitimate investigation and scientific analysis that would have allowed them to prove their case  
8 under the applicable law, if, in fact, their speculations are correct.

9 The DEQ has lost its right to introduce new evidence at this time. Therefore, the respondent is offering  
10 to forego any objection to introducing more evidence in the form of scientific analysis specific to this case, but  
11 only reserves the right to object to any specific methodology that may produce biased and/or inaccurate results.

12 This would lead to the best possible resolution of this matter, one based on the *truth*, not speculation.

13 Once the method of determining the truth can be agreed upon the respondent will agree to stipulate to  
14 the results if the DEQ agrees to the same. If the DEQ wins its case with real science and real facts, the  
15 respondent will agree to accept the fine and pay it promptly, and to give up any claim against the DEQ arising  
16 from this case.

17 In order to be reasonable and practical, the respondent will agree to what amounts to a significant  
18 advantage for the DEQ.

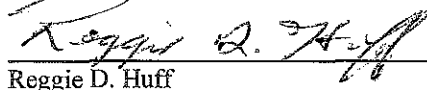
19 The DEQ can, for expediency's sake, test using fresh ethylene glycol in a 90/10 dilution, 90% water  
20 and 10% ethylene glycol, exposed to the atmosphere for merely one month, not the two years and four months of  
21 the subject solution.

22 This is a legitimate offer to clear up this case, and one that could lead to useful information for the DEQ  
23 to use in similar cases.

24 If this \$1,200 fine is truly important to the DEQ, and the DEQ truly believes its case to be legitimate,  
25 then this opportunity will be seized.

26 Otherwise, the DEQ has not met its burden of proof in any manner, to any standard, and therefore the  
27 Environmental Quality Commission should enter an order dismissing this case in its entirety.

28 Respectfully submitted this 25<sup>th</sup> day of May 2001.

29 

30 Reggie D. Huff  
31 34685 Bachelor Flat Rd.  
32 St. Helens, OR 97051  
33 Ph & Fax: (503)366-0223

1 STATE OF OREGON ENVIRONMENTAL QUALITY COMMISSION

2 Reggie D. Huff  
3 Respondent - Petitioner

} Case No. WQ11-NWR-00-125

} **RESPONDENT AFFIDAVIT**

4  
5 v.

6  
7 Department of Environmental Quality  
8

9 State of Oregon }

10 } ss.

11 County of Columbia }

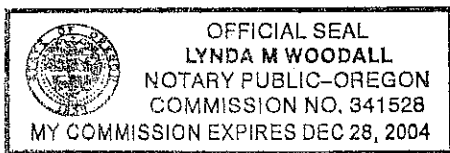
12 I, Reggie D. Huff, being first duly sworn, do depose and say that:

- 13 1. I am a resident of St. Helens, Oregon.
- 14 2. I am the respondent to a matter in the Department of Environmental Quality for the state of Oregon titled
- 15 DEQ v. Reggie D. Huff, Case No. WQ/I-NWR-00-125.
- 16 3. On February 27, 2001 I was present at a hearing relating to the above matter held at 2020 SW 4<sup>th</sup> St.,
- 17 Portland, Oregon.
- 18 4. I represented myself and I was present for the entire hearing on the record.
- 19 5. I cross-examined Susan Shewazyk at the said hearing, a Department Hazardous Waste Inspector, while she
- 20 was under oath.
- 21 6. I asked Ms. Shewazyk to directly describe her knowledge of internal combustion engines and the cooling
- 22 systems therein. She answered that she had no such knowledge.
- 23 7. I asked Ms. Shewazyk if so-called metal leachings that may exist in ethylene glycol which has been present
- 24 in an operating engine for an extended period of time would "settle out" if left in an undisturbed location for
- 25 any length of time. She answered in a clear and affirmative manner to support the fact that metal leachings
- 26 would and do "settle out".
- 27 8. I asked Ms. Shewazyk if a slow discharge of fluid out of a large tank over many hours, where the tank
- 28 cannot be drained to the bottom, would leave settled out metal leachings behind in the tank. Once again Ms.
- 29 Shewazyk answered in the affirmative to support the fact that metal leachings would be left behind in the
- 30 fluid tank.
- 31 9. Sometime in the spring of 2000 I attended an informal meeting at the same above office about the same case
- 32 matter. Roger Dilts, Susan Greco, and Ann Cox were present. I offered to any and all DEQ representatives
- 33 present the opportunity to acquire samples of a cooling solution discharged in the spring of 1999 that was
- 34 kept at our facility on Old Portland Road in Scappoose, Oregon.

35 The above is true as I verily believe.

36 *Reggie D. Huff*  
37 Reggie D. Huff

38 *Subscribed and sworn* to before me this 25<sup>th</sup> day of May 2001



39 *Lynda M. Woodall*  
40 NOTARY PUBLIC FOR OREGON  
41 My commission expires: 12-28-04

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**CERTIFICATE OF MAILING**

I hereby certify that on the 25<sup>th</sup> day of May 2001, I mailed a true copy of the "PETITION FOR REVIEW", the "EXCEPTIONS TO HEARING DECISION AND PROPOSED ORDER & BRIEF", the "RESPONDENT BRIEF", and a "RESPONDENT AFFIDAVIT", and all of their attachments, in the matter in the STATE OF OREGON ENVIRONMENTAL QUALITY COMMISSION, Case No. WQ11-NWR-00-125, Reggie D. Huff v. DEQ to:

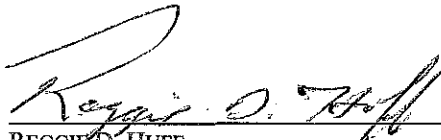
Environmental Quality Commission  
C/O Stephanie Hallock, Director, DEQ  
811 SW Sixth Avenue  
Portland, Oregon 97204

AND

Susan Greco  
Environmental Law Specialist  
DEQ Enforcement Section  
2020 SW 4<sup>th</sup> Ave., Suite 400  
Portland, Oregon 97201-4959

AND

Kevin Anselm  
Employment Department  
875 Union Street NE  
Salem, Oregon 97311

  
REGGIE D. HUFF

STATE OF OREGON  
BEFORE THE HEARING OFFICER PANEL  
FOR THE ENVIRONMENTAL QUALITY COMMISSION

In the Matter of	)	
	)	
REGGIE D. HUFF	)	PROPOSED ORDER
	)	Notice of Assessment of
	)	Civil Penalty
Respondent	)	No. WQ/I-NWR-00-125

HISTORY

The Department of Environmental Quality (hereinafter the "Department") issued a Notice of Assessment of Civil Penalty No. WQ/I-NWR-00-125 on August 1, 2000 and amended October 30, 2000 to Respondent for disposing of approximately 500 gallons of waste anti-freeze into a dry well that discharged to groundwater in Scappoose, Oregon. Respondent Reggie D. Huff (hereinafter "Huff") requested a hearing on August 9, 2000 and November 13, 2000.

The Department referred the matter to the Central Hearings Panel. The Panel appointed Hearing Officer Kevin Anselm to hear the case. The hearing was held February 27, 2001 at the Department of Environmental Quality, 2020 SW 4<sup>th</sup> Street, 4<sup>th</sup> floor conference room E, Portland, Oregon. Respondent Huff appeared and represented himself. Daniel E. Murphy, Water Quality Complaint Coordinator for the Department, and Robert Gill, hydrologist, appeared as respondent's witnesses. Respondent's wife and daughter observed the hearing. Susan Greco, Environmental Law Specialist, represented the Department. The Department called witnesses Lucinda Ann Bidleman, a Department Natural Resource Specialist in the area of ground water; Susan Shewczyk, a Department Hazardous Waste Inspector; and Anne Cox, a Department Natural Resource Specialist and case investigator.

On March 8, 2001, the Hearing Officer transmitted a question regarding the Department's interpretation of the terms "negligence" and "negligent" to the Department. The Department responded on April 4, 2001. Huff postmarked his rebuttal to the Department's response on April 12, 2001. The hearing record closed upon receipt of Huff's rebuttal on April 13, 2001.

ISSUES

Shall the Department's Notice of Assessment of Civil Penalty dated August 1, 2000, amended October 30, 2000, be affirmed, modified or vacated?

FINDINGS OF FACT

Respondent Huff operates Acro-Tech, Inc. from a leased building and parking lot located at 51377 SW Old Portland Rd. in Scappoose, Oregon (hereinafter the "property"). The company leased the property in 1996, and operates a research laboratory, conducting research and development for improving internal combustion engine processes, including ways to make the processes more environmentally friendly (Exhibit 21). In 1999, the research laboratory included a combustion engine and an open tank containing fluids that were pumped through the engine for cooling purposes. The 2000-gallon capacity tank initially contained about 450-500 gallons of water. In November 1996, Huff added about 55 gallons of ethylene glycol, commonly known as anti-freeze, to the tank.

EXHIBIT A

Ethylene glycol lowers the freezing point of water, so is used as antifreeze in cooling and heating systems. It is an odorless liquid, soluble in water, and is relatively non-volatile. Huff added ethylene glycol to the tank contents to inhibit the freezing of the contents, which may cause problems with the combustion engine equipment. Ethylene glycol is toxic if ingested or inhaled in sufficient amounts. (Exhibits 10 -11)

In the spring of 1999, Huff thought he might need to quickly move the business and its equipment from the property because of problems with the landlord. The tank needed to be empty in order to move it. He was concerned about disposing the tank contents of about 500 gallons of ethylene glycol solution. Huff said that he called the Department to find out how he was required to dispose of the contents, but he does not recall whom he spoke with at the Department. Huff testified that the Department representative did not seem concerned about disposal. Because he had concerns about the Department's seeming disinterest, Huff then called the City of Scappoose. After a conversation with Steve Wabshall, Operations Superintendent, at the City of Scappoose, Huff received permission to discharge the ethylene glycol solution into the city's sanitary sewer system. Wabshall recommended that Huff make the discharge in small amounts over a week's time. (Exhibit 6)

Huff discharged the ethylene glycol solution through a hose connected to the tank and into the storm drain located in the Huff property parking lot over about 10 days in the spring of 1999. He did not test the solution for any chemicals or other substances before draining it, although he did check the solution's specific gravity at some point. Huff recalls that the specific gravity of the solution was about the same as water.

While preparing for a court case against his landlord in December 1999, Huff talked again to the City of Scappoose, and found out that the storm drain in the parking lot was not connected to the sanitary sewer system. The property building plumbing, however, is connected to the sanitary sewer.

Beginning in February 2000, the Department conducted an investigation at the site and found that under the grate in the parking lot was a holding cylinder or sump from which fluid contained there may flow into a drywell under the parking lot asphalt. From the drywell, fluid may drain or seep into the surrounding ground. The relevant area is covered with asphalt, and the specific piping could not be seen. There was no outlet or piping in the area that originated at the sump which then moved fluid to a ditch or other surface waterway. The Department is familiar with the construction of this type of storm system, which allows fluids that enter the cylinder or drywell to seep into the ground.

The ground in the area is generally well drained. The area soil characteristics of the stream or water-laid (alluvial) deposits include clay or clay mixed with other soil types in layers from the soil surface to depths ranging between 11 - 30 feet (Exhibits 9 and 23). Clay is generally more impermeable than other soil types, and may direct fluids more horizontally, depending on the integrity of the clay layer. The land topography slopes gently downhill from the property. Surface water is generally not evident in the immediate area, with the closest surface water location estimated at over 1000 feet downhill and away from the Huff property. There was no evidence presented about soil saturation conditions or rainfall during or after the spring of 1999.

On February 4, 2001, Huff took a sample of the solution remaining in a pipe from the tank that formerly contained the solution, and had the sample tested for volatile organic compounds. The sample was not tested for ethylene glycol. (Exhibits 19-20).

In addition to residual ethylene glycol, the Department is concerned about possible metal contamination of ground water from the solution. Ethylene glycol solutions used to cool engines often contain metals that are leached from the engine components during the cooling process. The Department testified that the ethylene glycol breaks down to a certain extent with time and exposure, but that it does not lose toxicity. Ethylene glycol may be consumed by some bacteria in the soil, or

may be ionized, or attached to soil particles, which would inhibit additional movement through the soils. Any metallic contamination is less likely to break down, and would continue to be present in the ground or ground water, unless carried away.

The Department calculated the civil penalty according to the formula outlined on Exhibit 1 to the Amended Notice of Assessment of Civil Penalty including \$1,000 for the base penalty for a Class II moderate magnitude violation; +2 for repeated or continuous violations alleging the violation occurred on more than one day; and +2 for respondent's negligent conduct.

#### ULTIMATE FINDINGS

Huff disposed of about 500 gallons of solution containing ethylene glycol and metal leachings from internal combustion engine cooling operations into a storm drain sump that was not connected to a sanitary sewer.

The civil penalty includes factors to increase the penalty for repeated or continuous violations and respondent's alleged negligent conduct.

#### APPLICABLE LAW

**Oregon Revised Statute (ORS) 468B.025 Prohibited Activities** states in part:

- (1) Except as provided in ORS 468B.050 or 468B.053, no person shall:
  - (a) Cause pollution of any waters of the state or place or cause to be placed any wastes in a location where such wastes are likely to escape or be carried into the waters of the state by any means.

\* \* \*

**ORS 468B.005 Definitions for water pollution control laws** states in part:

As used in the laws relating to water pollution, unless the context requires otherwise:

\* \* \* \*

- (2) "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.
- (3) "Pollution" or "water pollution" means such 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 discharge of any liquid, gaseous, solid, radioactive or other substance into any waters of the state, which will or tends to, either by itself or in connection with any other substance, create a public nuisance or which will or tends to 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.

\* \* \* \*

- (7) "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 waters of the state.

(8) "Water" or "the 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. [Formerly 449.075 and then 468.700]

**OAR 340-012-0030 Definitions, states in part:**

(11) "Negligence" or "Negligent" means failure to take reasonable care to avoid a foreseeable risk of committing an act or omission constituting a violation.

**OAR 340-012-0045 Civil Penalty Determination Procedure**

(1) When determining the amount of civil penalty to be assessed for any violation, other than violations of ORS 468.996, which are determined according to the procedure set forth below in OAR 340-012-0049(8), the Director shall apply the following procedures:

(a) Determine the class and the magnitude of each violation:

(A) The class of a violation is determined by consulting OAR 340-012-0050 to 340-012-0073;

(B) The magnitude of the violation is determined by first consulting the selected magnitude categories in OAR 340-012-0090. In the absence of a selected magnitude, the magnitude shall be moderate unless:

(i) If the Department finds that the violation had a significant adverse impact on the environment, or posed a significant threat to public health, a determination of major magnitude shall be made. In making a determination of major magnitude, the Department shall consider all available applicable information including such factors as: The degree of deviation from the Commission's and Department's statutes, rules, standards, permits or orders, concentration, volume, percentage, duration, toxicity, and the extent of the effects of the violation. In making this finding, the Department may consider any single factor to be conclusive for the purpose of making a major magnitude determination;

(ii) If the Department finds that the violation had no potential for or actual adverse impact on the environment, nor posed any threat to public health, or other environmental receptors, a determination of minor magnitude shall be made. In making a determination of minor magnitude, the Department shall consider all available applicable information including such factors as: The degree of deviation from the Commission's and Department's statutes, rules, standards, permits or orders, concentration, volume, percentage, duration, toxicity, and the extent of the effects of the violation. In making this finding, the Department may consider any single factor to be conclusive for the purpose of making a minor magnitude determination.

(b) Choose the appropriate base penalty (BP) established by the matrices of OAR 340-012-0042 after determining the class and magnitude of each violation;

(c) Starting with the base penalty, determine the amount of penalty through application of the formula:  $BP + [(1 \times BP) \times (P + H + O + R + C)] + EB$ , where:

(A) "P" is whether the Respondent has any prior significant actions relating to statutes, rules, orders and permits pertaining to environmental quality or pollution control. A violation is deemed to have become a Prior Significant Action on the date of the issuance of the first Formal Enforcement Action in which it is cited. For the purposes of this determination, violations that were the subject of any prior significant actions that were issued before the effective date of the Division 12 rules as adopted by the Commission in March 1989, shall be classified in accordance with the classifications set forth in the March 1989 rules to ensure equitable consideration of all prior significant actions. The values for "P" and the finding which supports each are as follows:

- (i) 0 if no prior significant actions or there is insufficient information on which to base a finding;
- (ii) 1 if the prior significant action is one Class Two or two Class Threes;
- (iii) 2 if the prior significant action(s) is one Class One or equivalent;
- (iv) 3 if the prior significant actions are two Class One or equivalents;
- (v) 4 if the prior significant actions are three Class Ones or equivalents;
- (vi) 5 if the prior significant actions are four Class Ones or equivalents;
- (vii) 6 if the prior significant actions are five Class Ones or equivalents;
- (viii) 7 if the prior significant actions are six Class Ones or equivalents;
- (ix) 8 if the prior significant actions are seven Class Ones or equivalents;
- (x) 9 if the prior violations significant actions are eight Class Ones or equivalents;
- (xi) 10 if the prior significant actions are nine Class Ones or equivalents, or if any of the prior significant actions were issued for any violation of ORS 468.996;
- (xii) In determining the appropriate value for prior significant actions as listed above, the Department shall reduce the appropriate factor by:
  - (I) A value of 2 if the date of issuance of all the prior significant actions are greater than three years old; or
  - (II) A value of 4 if the date of issuance of all the prior significant actions are greater than five years old.
  - (III) In making the above reductions, no finding shall be less than zero.
- (xiii) Any prior significant action which is greater than ten years old shall not be included in the above determination;
- (xiv) A permittee, who would have received a Notice of Permit Violation, but instead received a civil penalty or Department Order because of the application of OAR 340-012-0040(2)(d), (e), (f), or (g) shall not have the violation(s) cited in the former action counted as



a prior significant action, if the permittee fully complied with the provisions of any compliance order contained in the former action.

(B) "H" is Respondent's history in correcting prior significant actions or taking reasonable efforts to minimize the effects of the violation. In no case shall the combination of the "P" factor and the "H" factor be a value less than zero. In such cases where the sum of the "P" and "H" values is a negative numeral the finding and determination for the combination of these two factors shall be zero. The values for "H" and the finding which supports each are as follows:

(i) -2 if Respondent took all feasible steps to correct the majority of all prior significant actions;

(ii) 0 if there is no prior history or if there is insufficient information on which to base a finding.

(C) "O" is whether the violation was repeated or continuous. The values for "O" and the finding which supports each are as follows:

(i) 0 if the violation existed for one day or less and did not recur on the same day, or if there is insufficient information on which to base a finding;

(ii) 2 if the violation existed for more than one day or if the violation recurred on the same day.

(D) "R" is whether the violation resulted from an unavoidable accident, or a negligent, intentional or flagrant act of the Respondent. The values for "R" and the finding which supports each are as follows:

(i) 0 if an unavoidable accident, or if there is insufficient information to make a finding;

(ii) 2 if negligent;

(iii) 6 if intentional; or

(iv) 10 if flagrant.

(E) "C" is the Respondent's cooperativeness and efforts to correct the violation. The values for "C" and the finding which supports each are as follows:

(i) -2 if Respondent was cooperative and took reasonable efforts to correct a violation, took reasonable affirmative efforts to minimize the effects of the violation, or took extraordinary efforts to ensure the violation would not be repeated;

(ii) 0 if there is insufficient information to make a finding, or if the violation or the effects of the violation could not be corrected;

(iii) 2 if Respondent was uncooperative and did not take reasonable efforts to correct the violation or minimize the effects of the violation.

(F) "EB" is the approximated dollar sum of the economic benefit that the Respondent gained through noncompliance. The Department or Commission may assess "EB" whether or not it applies the civil penalty formula above to determine the gravity and magnitude-based portion

of the civil penalty, provided that the sum penalty does not exceed the maximum allowed for the violation by rule or statute. "EB" is to be determined as follows:

(i) Add to the formula the approximate dollar sum of the economic benefit gained through noncompliance, as calculated by determining both avoided costs and the benefits obtained through any delayed costs, where applicable;

(ii) The Department need not calculate nor address the economic benefit component of the civil penalty when the benefit obtained is de minimis;

(iii) In determining the economic benefit component of a civil penalty, the Department may use the U. S. Environmental Protection Agency's BEN computer model, as adjusted annually to reflect changes in marginal tax rates, inflation rate and discount rate. With respect to significant or substantial change in the model, the Department shall use the version of the model that the Department finds will most accurately calculate the economic benefit gained by Respondent's noncompliance. Upon request of the Respondent, the Department will provide Respondent the name of the version of the model used and respond to any reasonable request for information about the content or operation of the model. The model's standard values for income tax rates, inflation rate and discount rate shall be presumed to apply to all Respondents unless a specific Respondent can demonstrate that the standard value does not reflect that Respondent's actual circumstance. Upon request of the Respondent, the Department will use the model in determining the economic benefit component of a civil penalty;

(iv) As stated above, under no circumstances shall the imposition of the economic benefit component of the penalty result in a penalty exceeding the statutory maximum allowed for the violation by rule or statute. When a violation has extended over more than one day, however, for determining the maximum penalty allowed, the Director may treat the violation as extending over at least as many days as necessary to recover the economic benefit of noncompliance. When the purpose of treating a violation as extending over more than one day is to recover the economic benefit, the Department has the discretion not to impose the gravity and magnitude-based portion of the penalty for more than one day.

(2) In addition to the factors listed in section (1) of this rule, the Director may consider any other relevant rule of the Commission and shall state the effect the consideration had on the penalty. On review, the Commission shall consider the factors contained in section (1) of this rule and any other relevant rule of the Commission.

(3) In determining a civil penalty, the Director may reduce any penalty by any amount the Director deems appropriate when the person has voluntarily disclosed the violation to the Department. In deciding whether a violation has been voluntarily disclosed, the Director may take into account any conditions the Director deems appropriate, including whether the violation was:

(a) Discovered through an environmental auditing program or a systematic compliance program;

(b) Voluntarily discovered;

(c) Promptly disclosed;

(d) Discovered and disclosed independently of the government or a third party;

(e) Corrected and remedied;

- (f) Prevented from recurrence;
- (g) Not repeated;
- (h) Not the cause of significant harm to human health or the environment; and
- (i) Disclosed and corrected in a cooperative manner.

(4) The Department or Commission may reduce any penalty based on the Respondent's inability to pay the full penalty amount. If the Respondent seeks to reduce the penalty, the Respondent has the responsibility of providing to the Department or Commission documentary evidence concerning Respondent's inability to pay the full penalty amount:

(a) When the Respondent is currently unable to pay the full amount, the first option should be to place the Respondent on a payment schedule with interest on the unpaid balance for any delayed payments. The Department or Commission may reduce the penalty only after determining that the Respondent is unable to meet a long-term payment schedule;

(b) In determining the Respondent's ability to pay a civil penalty, the Department may use the U.S. Environmental Protection Agency's ABEL computer model to determine a Respondent's ability to pay the full civil penalty amount. With respect to significant or substantial change in the model, the Department shall use the version of the model that the Department finds will most accurately calculate the Respondent's ability to pay a civil penalty. Upon request of the Respondent, the Department will provide Respondent the name of the version of the model used and respond to any reasonable request for information about the content or operation of the model;

(c) In appropriate circumstances, the Department or Commission may impose a penalty that may result in a Respondent going out of business. Such circumstances may include situations where the violation is intentional or flagrant or situations where the Respondent's financial condition poses a serious concern regarding the ability or incentive to remain in compliance.

## CONCLUSIONS AND REASONS

*The respondent violated ORS 468B.025(1)(a) by placing a solution containing ethylene glycol and metal leaching in a place where it may be carried into the waters of Oregon.*

The basic facts of the case are not in dispute. Huff freely admits that he disposed of about 500 gallons of fluid that originally contained about 10% ethylene glycol, that had been used in his internal combustion engine research, in a storm drain over a period of about 10 days in the spring of 1999. Huff disagrees with the characterization of the fluid as a waste or pollution because he believes it was not harmful by the time it was discharged. He further argues that even if the fluid is deemed as waste or pollution, the ground absorbed the fluid, and it did not ultimately enter the ground, surface or any other waters of the state.

The ethylene glycol solution clearly fits the definition of waste when it was originally mixed in the tank because of the toxic properties of the ethylene glycol to humans and animals. As the solution was used in cooling the internal combustion equipment, it is likely to have leached metallic compounds from the equipment. Huff's argument that the solution contained little or no ethylene glycol or other contaminants possibly injurious to health or the environment is not supported by the

weight of evidence offered, including the laboratory tests that were not contemporaneous with the discharge and did not include testing for ethylene glycol or possible metallic contaminants. Huff's own actions of inquiring about proper disposal methods reflects his conscientiousness about possible pollutants and the realization that the solution deserved to be handled with care in order to avoid polluting. Further, Wabshall's instruction to discharge small amounts of the solution over a period of time indicates some concern over the solution's content.

Huff also argues that there is no proof that the solution ever entered the waters of the state. Huff is correct. However, the law provides that waste may not be placed in a location where such wastes are "likely to escape or be carried into the waters of the state by any means" (emphasis added). In this case, the Department's testimony about how a dry sump system works is persuasive. Fluid held in the sump or drywell can seep into the surrounding ground and into ground water. Rainwater or other fluid entering the dry sump system may flush the solution into the ground and existing groundwater. There is no allegation or evidence that Huff purposely placed waste where it could enter into the waters of the state. It is clear that Huff conscientiously endeavored to properly dispose of the solution by securing permission from the City of Scappoose to drain the tank contents into the sanitary sewer. Unfortunately, and unbeknownst to Huff, the parking lot sump was not part of the sanitary sewer. Accordingly, Huff violated ORS 468B.025(1)(a) by discharging the ethylene glycol solution in a place where it may be carried into the waters of Oregon.

The remaining question is whether the civil penalty assessed for violating ORS 468B.025(1)(a) is appropriate in this case.

*The civil penalty imposed is not appropriate pursuant to OAR 340-012-0045.*

In this case, the civil penalty is not appropriately calculated in respect to the factor for the cause of the violation. The Department has the burden to prove each factor value as alleged. The remaining factors, including the base penalty factor, are correctly valued.

The "single or repeated occurrence" (O) variable is correctly valued as +2. Huff agrees that he drained the tank in several small amounts over the 10-day period as instructed by the City of Scappoose. While it is unfortunate that the penalty is increased because Huff was attempting to follow instructions, the variable is correctly valued in this case of an ongoing or repeat violation.

The "cause of the violation" (R) variable is incorrectly valued as +2. The Department alleges that while Huff determined that the waste could be disposed of into a sanitary sewer, he failed to take reasonable steps to determine whether the storm drain lead to the sanitary sewer, and was therefore negligent. The Department's rule defines negligent or negligence as "failure to take reasonable care to avoid a foreseeable risk of committing an act or omission constituting a violation". In this case, Huff solicited and received permission to discharge the tank contents into the sanitary sewer. He mistakenly thought the storm drain was connected to the sanitary sewer. The Department offered no evidence or testimony that Huff failed to take reasonable care to ascertain whether the storm drain was connected to the sanitary sewer. Huff thought that all storm drains were connected to the sanitary sewer. There is no evidence that persons in a like circumstance would ask about the storm drain, or that there was something different about this storm drain than others in the area that may cause a reasonable person to question whether the storm drain was connected to the sanitary sewer. There is not enough information to determine whether Huff was negligent for failing to determine whether the storm drain was attached to the sanitary sewer. Accordingly, the correct value for "Cause of the Violation" is '0'.

Applying the correct values to the Penalty Calculation results in a civil penalty calculation of \$1,200 as follows:

$$\begin{aligned} \text{Penalty} &= \text{BP} + [(.1 \times \text{BP}) (\text{P}+\text{H}+\text{O}+\text{R}+\text{C})] + \text{EB} \\ &= \$1,000 + [(.1 \times \$1,000) \times (0+0+2+0+0)] + 0 \\ &= \$1,000 + [(\$100) \times (2)] + 0 \\ &= \$1,000 + \$200 + 0 \\ &= \$1,200 \end{aligned}$$

#### PROPOSED ORDER

IT IS HEREBY PROPOSED that the Notice of Assessment of Civil Penalty No. WQ/I-NWR-00-125 issued on August 1, 2000 and amended October 30, 2000 be MODIFIED as follows:

Respondent Huff is assessed a civil penalty of \$1,200 for violating ORS 468B.025(1)(a).

Dated this 27<sup>th</sup> day of April, 2001

For the ENVIRONMENTAL QUALITY COMMISSION



Kevin Anselm  
Hearings Officer

If you are not satisfied with this decision, you have the right to have the decision reviewed by the Oregon Environmental Quality Commission. To have the decision reviewed, you must file a "Petition for Review" within 30 days of the date this order is served on you as provided in Oregon Administrative Rule (OAR) 340-011-0132(1) and (2). The Petition for Review must be filed with:

Environmental Quality Commission  
c/o Stephanie Hallock, Director, DEQ  
811 SW SIXTH AVENUE  
Portland, OR 97204.

Within 30 days of filing the Petition for Review, you must also file exceptions and a brief as in provided in OAR 340-011-0132(3). If the petition, exceptions and brief are filed in a timely manner, the Commission will set the matter for oral argument and notify you of the time and place of the Commission's meeting. The requirements for filing a petition, exceptions and briefs are set out in OAR 340-011-0132.

*Unless you timely and appropriately file a Petition for Review as set forth above, this Proposed Order becomes the Final Order of the Environmental Quality Commission 30 days from the date of service on you of this Proposed Order. If you wish to appeal the Final Order, you have 60 days from the date the Proposed Order becomes the Final Order to file a petition for review with the Oregon Court of Appeals. See ORS 183.400 et. seq.*



The Class II violation is stated specifically as:

“Placing wastes such that the wastes are likely to enter public waters by any means.” [Emphasis added.]

This is very important because the assessment of civil penalties for violations of ORS is done through the OAR. The Assistant Attorney General himself made arguments that the legislature has given the authority to state agencies to adopt rules that reflect its interpretation of the statutes and he argued using case authorities that the courts give some deference to the various state agencies.

Therefore, in order for the DEQ to assess a penalty it must find a violation within the language of its own rules. According to the DEQ and the Justice Department, any distinction between the statute language and that of the OAR should be weighed in favor of the OAR. Right or wrong that appears to be their position.

All this being said, in order to properly apply any negligence standard we must first understand specifically what the charge is.

The charge is specifically that a Class II violation pursuant to OAR 340-012-0055(2)(c) has occurred.

There is a clear distinction between the OAR rule and that of the ORS.

ORS 468B.005(8) defines “the waters of the state” to include both public and private waters with a clearly defined exception. This statute affirms that there is a distinction between public and private waters in the law. A Class I violation under OAR 340-012-0055(1)(d) uses the term “waters of the state”, but a Class II violation in the same section under (2)(c) clearly applies only to “public” waters. I will illustrate the relevance of this later, but now we can focus on the actual language of the actual charge that the DEQ is making.

#### DEFINITIONS:

The DEQ must first prove its charge before any definition of “negligence” can be applied.

By “definition” the DEQ has not and can not do so. By definition I mean as defined in the ORS and/or the OAR.

ORS 468B.005(7) defines “wastes” as:

“Sewage, industrial wastes, and all other liquid, gases, solids, radioactive or other substances which will or may *cause pollution* or tend to cause pollution of any waters of the state.” [Emphasis supplied.]

Therefore, the term “wastes” is directly linked to the definition of “**pollution**” which is paraphrased to mean: ‘the alteration of the water to a degree that it is either physically perceptible and/or factually detrimental to the safety and welfare of humans, livestock, and/or wildlife.’

Accordingly, unless the substance in question alters the water in this manner it does not meet the definition of “wastes” no matter where it comes from.

Some proportionality and common sense needs to be applied to the “**cause pollution of any waters of the state**” section of the “wastes” definition. A glass of Alka Seltzer poured into a tide pool containing one gallon of water may technically meet the definition of pollution even though it would do no ecological harm. But what if that same glass is poured in the Columbia River. Now it does not even come close to becoming far away from meeting that definition. Therefore, I should hope that we would never see the DEQ prosecute someone for accidentally dropping a couple of Alka Seltzer in the Columbia River, even though in another context it technically would cause pollution. The DEQ and the legislature would be the laughing stock of the civilized world if this was the way these terms were meant to be defined.

Therefore, technically, in order for the DEQ to charge that “wastes” were placed where they were likely to enter the waters of Oregon, it must first show that if the discharge ever got to where they claim it was going it would meet the common sense standard of causing pollution.

This causes serious problems for the DEQ case. The elements of proof necessary are as follows:

- 1<sup>st</sup> - The DEQ must prove that if the organic, biodegraded and biodegradable, highly diluted cooling water, which is the subject of this case, was gradually discharged unaltered over a 10-12 day period directly into the waters of Oregon it would meet the common sense definition of "pollution".
- 2<sup>nd</sup> - The DEQ must prove that it is "likely", meaning 'reasonably certain or probable or foreseeable', (Sierra Club v. Marsh, C.A.1(Me.), 976 F.2d 763, 767, and Crenshaw v. Pendleton Mfg. Co., 54 S.E.2d 61, 64, 215 S.C. 66.) that the substance would be unaltered and indeed still meet the definition of "wastes", despite whatever it would come into contact with along the way before it reached the "waters".
- 3<sup>rd</sup> - The DEQ must prove that the location and the timing of the discharge provides a "likely" clear path for all or most of the substance to actually reach the "waters" in whatever condition.
- 4<sup>th</sup> - The DEQ must prove that the "waters" it reached are in fact "public waters".
- 5<sup>th</sup> - The DEQ must prove that reasonable care, based on the average person's understanding of modern public waterworks technical nomenclature, was not exercised, therefore proving "negligence".

It is important to note that the DEQ must prove all five elements to sustain its case as charged, which is the only context in which negligence can be considered.

The DEQ has in fact proven zero (0) of these elements

### DISCUSSION OF ELEMENTS OF PROOF

1. The question is:

**If the subject cooling water was discharged unaltered, gradually, over a 10-12 day period, into the underground aquifer, which runs 40-60 feet below the discharge point, would this event be like dumping a glass of Alka Seltzer in the small tide pool or something more akin to dumping a glass of Alka Seltzer into the Columbia River?**

The fact is it is far closer to the latter than the Former.

The City of Scappoose maintains a well approximately 300 feet south of the subject discharge point. (See Well Log #D-159-78; Owner: City of Scappoose). The city states that it pulls up to 700,000 gallons of water from this well per day. Taking this fact, along with the other operating wells in the area, and the fact that the aquifer levels are not negatively impacted by this usage, and by any measure you have literally 10s of millions of gallons of water passing through this aquifer every day.

I submit that if samples were taken directly from the aquifer 5 feet away from the discharge area, (if by some miracle the discharge got there unchanged), not one would meet the definition of "pollution".

2. The rule states that it is a violation to place "wastes" where they are "likely" to enter public waters. It does not say that placing wastes where they will become non-wastes before entering public waters is a violation. Nor does the definition of "wastes" even imply that wastewater is always wastewater forever. Wastes are only "wastes" when they meet the definition of "wastes". Otherwise simply watering lawns could be a violation.

We now know there are only two scenarios in which the discharge could have ever reached the waters of the state, which are:

- A: It followed the only downward slope leaving the discharge property, made its way due east, 1-3 feet below the surface, above the clay layer, over ½ mile, to the only available wetlands in the area, namely a private wetlands and lake in the middle of a manufactured housing development owned by Dave Scharf;

OR,



B: It traveled straight down through 30-35 feet of clay to the huge underground public aquifer.

Testimony from Miss Cox at the hearing revealed that biological and microbial activity takes place down to 3 feet below the surface. I believe that it is typically even further than 3 feet because the roots of trees can go far deeper and would encourage this bio-activity. Miss Cox also testified that microbes would eat the ethylene glycol. After all, it is a simple organic compound. (See Enclosure.) The DEQ's own evidence stated that ethylene glycol begins to break down almost immediately in water and soil.

The DEQ's own evidence and simple logic dictates that it is impossible for the cooling water to pass through Scenario A and not be transformed into non-waste before exiting. Mountain spring water is so good because it is water that has been filtered through the ground. The ground is the most universally effective water filtration system. This is especially so where simple organic compounds are involved.

Scenario B is simply far closer to the *impossible* than the probable. Even if it did occur the cooling water would be transformed into something more akin to mountain spring water than "wastes".

Remember, the statute and the rule employ the term "likely", which has a clear meaning in law, essentially 'reasonable certainty'. **The DEQ has not even proven that its fantastic scenarios are possible, let alone probable. Even if the DEQ could prove a 50/50 probability it would not meet the statutory requirements and their case must be dismissed.**

3. The discussion of element two illuminates the problems of proving element #3.

The discharge amount was 450-500 gallons. 500 gallons spread 1/16 of an inch thick over solid glass, with evaporation held to zero (0), would only cover 13,670 FT<sup>2</sup>. In other words, it would not even leave the property. But, this discharge, apportioned out in small amounts over ten to twelve days, went into the ground where it would not be able to create a plume that covered even a tiny fraction of that area. Therefore, on its own, the discharge was not large enough to even leave the confines of the small property it was on. It would take an enormous amount of water coming continually behind it to push the discharge over ½ mile away. I do not believe we came anywhere near that amount of water in the spring of 1999. However, even if there was enough water to accomplish this, the original discharge would be so highly diluted from this activity that even if there was no filtration effect by the time it reached its destination the dilution effect would have transformed it into a non-waste. Therefore no "wastes" would have entered the "waters of Oregon" and the statute and the rule have not been violated in any manner, shape, or form.

As to traveling straight down through 30-35 feet of clay, this is just ridiculous. You don't have to be a scientist to know that fluid will always take the path of least resistance, and porous soil has far less resistance than hard clay. Once again we are talking about impossibility rather than probability. The DEQ must prove their scenario, which they have not even put forward, is "likely", or it is wasting everyone's time and the taxpayers' money.

The theory that since aquifers are charged by rain water then the subject discharge had to have gone to groundwater is based on pure nonsense, and is defeated by simple common sense. Since aquifers can run for hundreds of miles, this kind of reasoning would have to assume that all points provide equal access to the groundwater. This is simply absurd reasoning.

4. The DEQ must prove that whatever impossible odds were defied, the waters that would be effected are in fact "public waters". The wetlands and lake over ½ mile east of the discharge point are in fact "private". This leaves only the clay scenario.
5. Since no violation has occurred, the DEQ cannot claim "negligence" under any definition. I do not feel that I in any way demonstrated "negligence", but rather took extra precautions to ensure that I was doing the right thing. However, if, by the opinion of some, my precautions did not extend to their preference, a charge of "negligence" still cannot be maintained if no violation has occurred.

### CONCLUSION:

The definition of "negligence" has to be taken in context with the facts in this case. The "degree" of negligence must be considered, and the degree can only be measured against any actual violation. Since no violation has occurred in this case the "degree" of negligence is zero (0).

In order to illustrate the true meaning of "negligence" a contrasting example is helpful.

We now know and can prove that the DEQ ignored the recommendations of at least two (2) of its own investigators, and decided to charge me with violations that it had no evidence to support.

I subsequently conducted my own investigation, which revealed many relevant facts that countered the DEQ's charges. Only after I brought these facts to the DEQ, which they could have easily uncovered with a minimum of effort, did they recognize they had erred.

In addition, they became aware that the source of their false and slanderous information had sworn, both on tape and in writing, that he would bury my family and my business in frivolous litigation if we did not turn over our business to his criminal enterprise. This should have been ample incentive for them to put forth the effort to truly confirm or rule out the legitimacy of the information.

However, rather than drop the case and allow me to try to focus on developing products to help the environment, to save face they simply shifted to another charge for which they have no facts to support.

Furthermore, they really crossed the line when it appears they purposely released false information to the media for publication, at a particularly strategic time, within days following my refusal to accept their altered accusation. And/or they negligently allowed false information to be released two and one-half (2 1/2) months after they knew the charges were false, and after they had already admitted in writing they were false.

The local newspaper did a special little article just about me and these false charges, and other media in other areas may have done the same. The DEQ has done nothing to rectify this slander.

The DEQ has been absolutely "negligent" in this case.

The DEQ has wasted taxpayer money on a case it should have dropped a long time ago.

The DEQ has conducted itself in a manner that has opened up to a potential lawsuit for liable.

The DEQ has acted maliciously and recklessly to stigmatize an innocent citizen as a polluter for the rest of his life, and damage the reputation of his legitimately environmentally conscientious business, and its 165 investors, creating a stigma that can have far reaching consequences today.

The DEQ has abused its political capital as an agency that protects the environment. The DEQ should be held to the same, if not a greater standard of conduct, since its charges can be so much more damaging than those of other agencies.

Therefore, my answer to your question is that "negligence" is best defined by the conduct of the DEQ, not myself, and I therefore once again move that the hearing officer dismiss this case on the basis of lack of evidence and/or prosecutorial misconduct.

Please advise me of any other questions you may have as I will do my best to answer them in a timely manner, and in accord with how they are asked.

Thank you sincerely for your conscientious approach to this matter.

Yours truly,



Reggie D. Huff  
President

RDH/lgh  
Enclosures

CC: Susan Greco, DEQ

# AN INTRODUCTION TO PHYSICAL SCIENCE - Fourth Edition

## By D.C. Heath and Company - 1983

states the fundamental unit may be repeated  $n$  times and the resulting chainlike structure is called a polymer. For example, if  $n = 3$ , the resulting compound is propane (see Section 13-8). This simple example is meant to introduce the concept of repeating units, and it should be kept in mind that the polymers occurring in nature, or prepared synthetically, may have repetition numbers ( $n$ ) which may be in the thousands or hundreds of thousands. In addition, the fundamental unit may itself be quite complex and the chain configurations and variations may differ greatly.

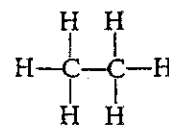
Nature has been in the business of making large complex molecules for a long time. All living and growing matter is composed of these molecules, some being so complex that they are still not completely understood. The complexity of nature's molecules should come as no surprise since they compose the structure of life itself. The newest frontier of science is concerned with determining the structures and interactions of the complex molecules of which living things are made. Society someday may be forced to make some fundamental decisions regarding how far it will allow science to go in solving the mysteries of life.

### 16-1

#### COMMON ORGANIC COMPOUNDS

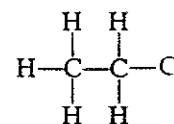
The number and complexity of the organic compounds in nature can, in large part, be attributed to the ability of the carbon atom to form single, double, and even triple bonds with itself and other elements. There are over a million organic compounds, and their identification, classification, and structural determination has been—and still is—the task of workers in the field of organic chemistry. Only a few of the more common compounds will be presented here, most of which should be familiar to the student because of their usage and occurrence in everyday life.

First, consider the following list of classes of compounds. A specific example from each class is given to show how the complexity of molecules can develop, starting with just a simple hydrocarbon.



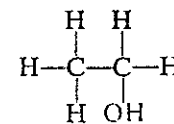
Hydrocarbon (Ethane)

1. Alkyl halides



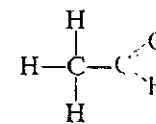
(Ethyl chloride)

2. Alcohols



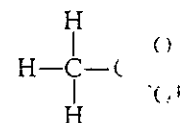
(Ethyl alcohol)

3. Aldehydes



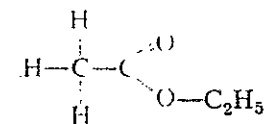
(Acetaldehyde)

4. Acids (organic)



(Acetic acid)

5. Esters

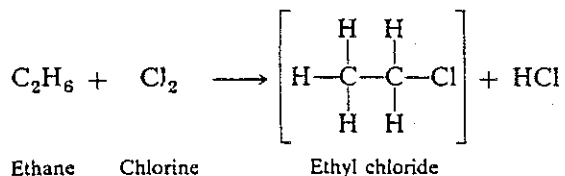


(Ethyl acetate)

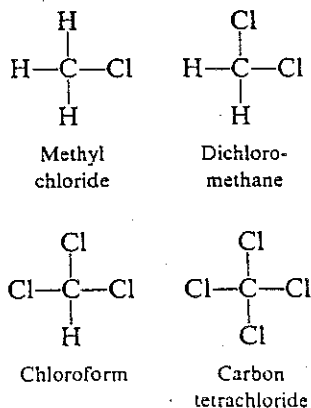
The colored portions of the formulas indicate the organic functional group that characterizes the general physical and chemical properties of these compounds.

### Alkyl Halides

An **alkyl halide** is formed by replacing the hydrogen atom(s) in hydrocarbons with halogens—chlorine, bromine, fluorine, and iodine. Ethyl chloride, the example given in the list, is used as a local anesthetic and is the product of the reaction of ethane with chlorine.



The halogen may replace more than one of the hydrogen atoms; in fact, they may all be replaced as the following series shows:



The latter two compounds are common as an anesthetic and a cleaning fluid, respectively. However, the toxicity of carbon tetrachloride is a serious hazard, and caution should be exercised when using it.

### Alcohols

**Alcohols** are organic compounds that contain one or more OH groups that have been substituted for one or more hydrogen atoms. Examples of some common alcohols are shown in Fig. 16-1a. Ethyl

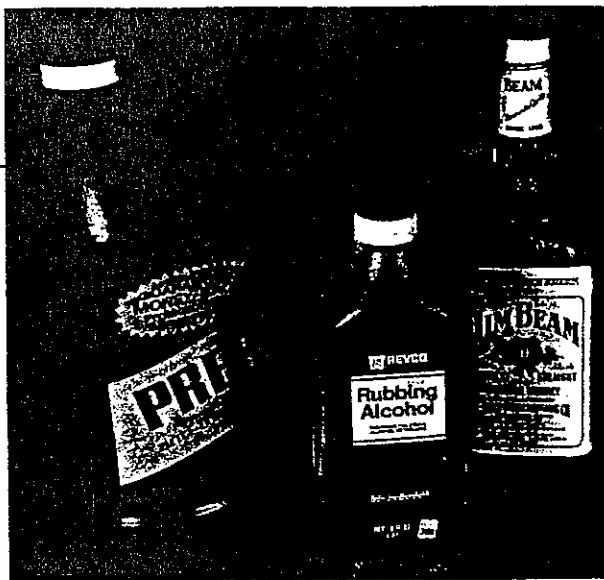
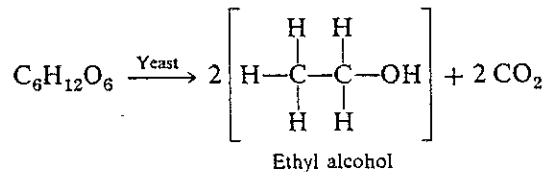
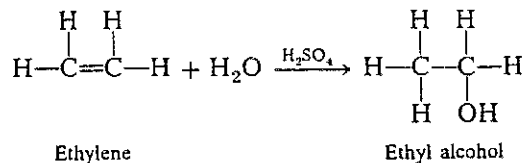


Figure 16-1a Commercial products that contain a common alcohol. (Photo courtesy James Crouse.)

alcohol ( $\text{C}_2\text{H}_5\text{OH}$ ) is probably the most important alcohol known. It is made from sugars by the action of yeast in the process of fermentation.

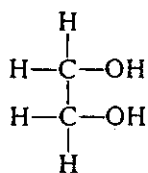


or synthetically from ethylene and water



Ethyl alcohol is a colorless liquid that mixes with water in all proportions. It is the least toxic of all alcohols and is used in alcoholic beverages. Ethyl alcohol is also used as a solvent and in the production of many substances including perfumes, dyes, varnishes, antifreeze, and ethyl ether.

Alcohols are characterized by the —OH, or hydroxyl group; hence they are the organic equivalent to the inorganic bases. Many alcohols exist, some with one (—OH) group, others with two or more (—OH) groups. Ethylene glycol is an example of an alcohol with two hydroxyl groups.



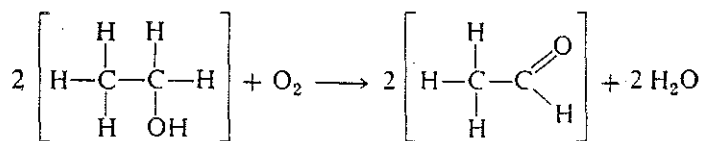
Ethylene Glycol

Ethylene glycol is widely used as an antifreeze in automobiles.

#### Aldehydes

Aldehydes are characterized by the  $-\overset{\text{O}}{\parallel}{\text{C}}-\text{H}$  group

and are formed when alcohols react with oxygen (are oxidized). When ethyl alcohol is oxidized, acetaldehyde is formed.



Ethyl alcohol

Acetaldehyde

A more common aldehyde, formaldehyde is prepared similarly from methyl alcohol (CH<sub>3</sub>OH). Formaldehyde is used as a disinfectant and tissue preservative.

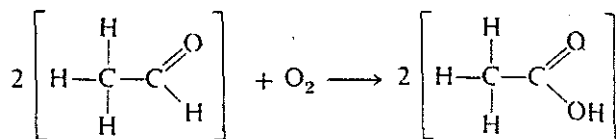
#### Organic Acids

The further action of oxygen on aldehydes produces a group of compounds known as **organic acids**,

which are characterized by the molecular arrange-

ment  $-\overset{\text{O}}{\parallel}{\text{C}}-\text{OH}$  called the **carboxyl** group. There are

many of these carboxylic acids. Acetic acid, whose dilute natural form is vinegar, is formed by the following reaction:



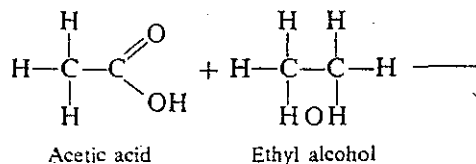
Acetaldehyde

Acetic acid

The simplest carboxyl acid, formic acid, is common in insects and is the cause of painful discomfort from insect bites. It is prepared by the oxidation of formaldehyde.

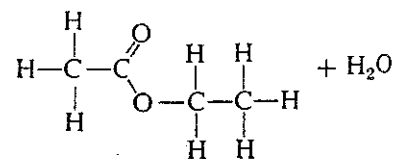
#### Esters

When a carboxylic acid reacts with an alcohol, an ester is formed. For example,



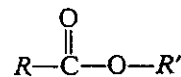
Acetic acid

Ethyl alcohol

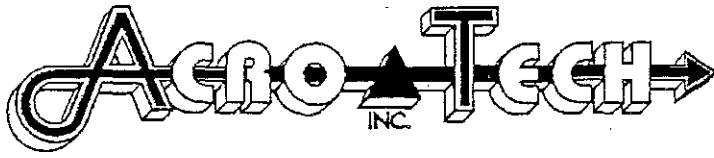


Ethyl acetate  
(an ester)

An **ester** is a compound which conforms to the general formula



# EXHIBIT 8



51377 SW Old Portland Rd.  
Scappoose, OR 97056  
(503)543-8220; Fax: (503)543-8221

Department of Environmental Quality  
Northwest Region  
2020 SW Fourth Ave.  
Suite 400  
Portland, OR 97201-4987  
(503)229-5263

DEPT OF ENVIRONMENTAL QUALITY  
RECEIVED

MAY 08 2000

ATT: Ms. Cox

May 3, 2000

NORTHWEST REGION

Dear Ms. Cox:

We are in receipt of a letter dated April 26, 2000 from Mr. Robert P. Baumgartner. As per our phone conversation of 4/27/2000 I am responding to the letter to you directly.

The underlying facts, as presented in the letter, are not in dispute. I did, in fact, dump 450-500 gallons of wastewater in the storm drain of our parking lot, divided into 5-6 episodes, over approximately a 10 day period. However, there are more facts that may be relevant which I am respectfully submitting at this time.

First, I actively sought approval from the appropriate authorities. I first called someone at DEQ. I was told that this might be a substance that could be handled by the local sewer system. I then contacted Steve Wabschall at the Scappoose Water Department, and received approval as noted in the letter.

The concentration of ethylene glycol was highly diluted originally at 10-11%. The solution was exposed to the outside atmosphere for over two years prior to dumping. Although I am not a chemist I understand that ethylene glycol is in the family of alcohol and in the exposed state would experience some evaporation as well as a tendency to become inert due to oxidation in a relatively short period of time.

You asked if the water was drinkable, besides not being appealing to look at. While I cannot speak directly to that question, my sense is that someone could drink the solution without getting deathly ill. That being said, I will admit that I personally would not want to drink it given the choice.

I must apologize, and I am somewhat embarrassed to admit that I was apparently ignorant as to the definition of a sewer. After years of watching TV shows like the "Honeymooners", where Ed Norton spoke of working "down in the sewer", and other movies depicting all kinds of goings on in the city's sewer system down under manhole covers, I believed I understood what the city sewer system is. Add to this the fact that I have personally witnessed storm drains draining into this "sewer system" and you get the makings of an honest mistake.

ACRO-TECH and I myself are committed to developing products that help the environment. I pride myself in the fact that, on a highly competitive basis, we were awarded a research contract by the EPA in 1992 for one of our innovations. I have real concerns about MTBE, which you and I discussed. I would never intentionally violate environmental laws, or their reasonable tenets.

Lastly, the people who filed the complaint against us did not do so out of concern for the environment. In fact, I can assure you their intentions were less than honorable. I have enclosed a copy of our latest offering circular. Please read pages 9-11. They will give you an overview of their intentions.

I first learned about our mistake in a meeting I had with Mr. Wabschall and other city employees in early December 1999. One of the employees spoke of firsthand knowledge that our storm drain was not tied into any drainage system, but was, in fact, a "ground trap".

In light of these facts I have some questions as to whether this is a violation under the statutes referenced in the letter. In any event, I would have reservations about the third statute referenced.

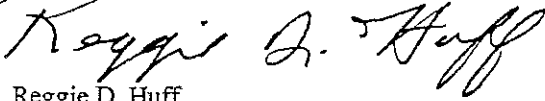
If I have, in fact, violated the DEQ statutes all I can do is throw myself upon your mercy and tell you I am sincerely sorry. It was an accident, but I am still responsible, and I promise it will not happen again.

Even if it is not a violation, I still beg your forgiveness for the mistake. I am generally a thorough person, and it won't happen again.

Your fair review of these facts is most appreciated and respected.

Please call or write if you have any further questions.

Sincerely,

A handwritten signature in cursive script that reads "Reggie D. Huff". The signature is written in dark ink and is positioned to the right of the word "Sincerely,".

Reggie D. Huff  
President

RDH/lgh  
Enclosure



DEQ  
2020 SW Fourth Ave.  
Portland, OR 97201

ATT: Deborah Nesbit

RE: Amended Notice of Assessment of Civil Penalty  
No. WQ/1-NWR-00-125  
Columbia County

November 13, 2000

Dear Ms. Nesbit:

I am officially requesting a contested case hearing in the above matter.

I did not violate ORS 468.025(1)(a) by "placing wastes in a location where such wastes are likely to escape or be carried into the waters of the state by any means."

The waste-water discharged likely did not contain ethylene glycol, as it had been exposed to the atmosphere for over two years prior to discharge, oxidizing it and rendering the substance inert. In addition, much evaporation had occurred, reducing the initial 90% diluted quantity. (The initial dilution was 400-450 gallons of water to 55 gallons of ethylene glycol.)

Reasonably and logically considered, the substance did not "render waters of the state detrimental to beneficial uses."

Records indicate that the waste carrying water was discharged in an area where the static ground water level runs between 43 to 61 feet below the surface. In addition, a clay layer has been observed between 3 to 12 feet. Common sense dictates that this scenario protected the groundwater in numerous ways. Including:

1. The ground acted as a de-fuser, spreading the water out over a large area, increasing the opportunity for the water to be taken up, utilized by plants and other organisms, and/or evaporated.
2. The clay layer, which lies fairly near the surface, carried what water may have actually made it to the clay layer laterally across a large area, greatly increasing the opportunity for the water's to dissipate, hydrate, and evaporate away.
3. The ground is well established to act as a very effective filter. The highly diluted, non-toxic, inert waste products within the water were bound up and trapped within the soil. One must suspend credulity to imagine that the wastewater could travel through millions of cubic feet of ground and still contain the same waste products it contained when it entered the ground. Therefore it is extremely unlikely, and even impossible for the waste products to be "likely", "escaped", or "carried" into the waters of the state.

I am herein also requesting another informal meeting prior to the contested case hearing in accordance with your invitation.

I am also requesting a copy of all public documents contained within this case file, especially those related to the investigation of this case.

Please inform me in writing as to whether you will provide Ann Cox, Daniel Murphy, and Susan Greco at the hearing for questioning.

Your prompt response will be most appreciated.

Sincerely,

Reggie D. Huff  
President

CC: Ann Cox  
Susan Greco

51177 SW O I D P O R T L A N D S C E P P O S E R O 9 7 2 0 1 • 5 0 3 • 3 4 3 • 8 0 2 2 8 7 F A X • 5 0 3 • 3 4 3 • 2 2 8 1





## ETHYLENE GLYCOL

*Propylene is different*

107-21-1

### Hazard Summary

CAUTION: Unless otherwise noted, the quantitative information on these fact sheets are from "EPA Health Effects Notebook for Hazardous Air Pollutants-Draft", EPA-452/D-95-00, PB95-503579, December 1994." Please conduct a current literature search and check the appropriate current online database for the most recent quantitative information.

- Acute (short-term) exposure of humans to ethylene glycol by ingesting large quantities causes three stages of health effects. **Central nervous system (CNS) depression**, including such symptoms as vomiting, drowsiness, coma, respiratory failure, and convulsions, is followed by **cardiopulmonary effects**, and later **renal damage**.
- No effects were noted in one study of individuals exposed to low levels of ethylene glycol by inhalation for about a month. Rats and mice chronically (long-term) exposed to ethylene glycol in their diet exhibited signs of **kidney toxicity** and liver effects. Ocular irritation and lesions and pulmonary inflammation have been observed in rats, rabbits, and guinea pigs subchronically exposed by inhalation.
- The U.S. Environmental Protection Agency (EPA) has not established a Reference Concentration (RfC) for ethylene glycol.
- The Reference Dose (RfD) for ethylene glycol is 2.0 mg/kg/d.<sup>a</sup> EPA estimates that consumption of this dose or less, over a lifetime, would not likely result in the occurrence of chronic, noncancer effects.<sup>b</sup>
- No information is available on the reproductive or developmental effects of ethylene glycol in humans. Several studies of rodents exposed orally, by gavage (experimentally placing the chemical in the stomach), or by inhalation showed ethylene glycol to be **fetotoxic**.
- No information is available on the carcinogenic effects of ethylene glycol in humans. Oral exposure of rats and mice was not associated with an increased incidence of tumors. EPA has classified ethylene glycol as a Group D, **not classifiable as to human carcinogenicity**.

<sup>a</sup> Milligrams per kilogram per day is one way to measure the amount of the contaminant that is consumed in food.

<sup>b</sup> The RfD is not a direct estimator of risk but rather a reference point to gauge the potential effects. Exceedance of the RfD does not imply that an adverse health effect would necessarily occur. As the amount and frequency of exposures exceeding the RfD increase, the probability of adverse health effects also increases. Please Note: The main sources of information for this fact sheet are EPA's

Integrated Risk Information System (IRIS), which contains information on oral chronic toxicity and the RfD, and the carcinogenic effects of ethylene glycol, and EPA's *Health Effects Assessment for Ethylene Glycol*. Other secondary sources include the Hazardous Substances Data Bank (HSDB), a database of summaries of peer-reviewed literature, and the Registry of Toxic Effects of Chemical Substances (RTECS), a database of toxic effects that are not peer reviewed.

### Environmental/Occupational Exposure

- Dermal or inhalation exposure to workers may occur during the manufacture or use of the chemical. (1)
- Ethylene glycol may be discharged into wastewater from its production and use. It may also enter the environment from its uses in deicing airplane runways and from spills and improper disposal of used antifreeze, coolant, and solvents containing ethylene glycol. (1,2)

### Assessing Personal Exposure

- Urinalysis for oxalic acid, an ethylene glycol metabolite, may be useful in diagnosis of poisoning by oral exposure. (3)

### Health Hazard Information

#### *Acute Effects:*

- Acute (short-term) exposure of humans to ethylene glycol by ingesting large quantities causes three stages of health effects. CNS depression, including such symptoms as vomiting, drowsiness, coma, respiratory failure, and convulsions, is followed by cardiopulmonary effects and later renal damage. (4,5)
- Acute animal tests, such as the LC<sub>50</sub> and LD<sub>50</sub> tests in rats, mice, rabbits, and guinea pigs, have demonstrated ethylene glycol to have moderate acute toxicity by inhalation or dermal exposure and low to moderate acute toxicity by ingestion. (6)

#### *Chronic Effects (Noncancer):*

- No effects were noted in one study of individuals exposed to low levels of ethylene glycol by inhalation for about a month. (5)
- Rats and mice chronically (long-term) exposed to ethylene glycol in their diet exhibited signs of kidney toxicity and liver effects. (5,7)
- Ocular irritation and lesions and pulmonary inflammation have been observed in rats, rabbits, and guinea pigs subchronically exposed by inhalation. (5)
- EPA has not established an RfC for ethylene glycol. (7)
- The RfD for ethylene glycol is 2.0 mg/kg/d based on kidney toxicity in rats. (7)
- EPA has high confidence in the study on which the RfD was based because it was a well-conducted lifetime study by a relevant route and defined a no-observed-adverse-effect level (NOAEL) and lowest-observed-adverse-effect level (LOAEL); high confidence in the database because it contains another chronic rat study and a monkey study that support the NOAEL and LOAEL and it also contains data that indicate that the RfD is protective of teratogenic and

reproductive effects; and, consequently, high confidence in the RfD. (7)

- EPA's Office of Air Quality Planning and Standards, for a hazard ranking under Section 112(g) of the Clean Air Act Amendments, has evaluated ethylene glycol for chronic toxicity and has given it a composite score of 10 (scores range from 1 to 100, with 100 being the most toxic). These scores are nonlinear and are the product of two ratings: a rating based on the minimal-effect-dose and a rating based on the type of effect. (8)

#### *Reproductive/Developmental Effects:*

- No information is available on the reproductive or developmental effects of ethylene glycol in humans.
- Several studies of rodents exposed orally, by gavage (experimentally placing the chemical in the stomach), or by inhalation showed ethylene glycol to affect animal fetuses. Fetotoxicity manifested as increased preimplantation loss, delayed ossification, and an increased incidence of fetal malformations were reported. The inhalation study, however, noted continuous grooming of the fur, resulting in a high rate of exposure by ingestion as well. (5,7)

#### *Cancer Risk:*

- No information is available on the carcinogenic effects of ethylene glycol in humans. (5)
- Oral exposure of rats and mice was not associated with an increased incidence of tumors. (5)
- EPA has classified ethylene glycol as a Group D, not classifiable as to human carcinogenicity. (5)

#### **Physical Properties**

- The chemical formula for ethylene glycol is  $C_2H_6O_2$ , and its molecular weight is 62.07 g/mol. (4)
- Ethylene glycol occurs as a clear, slightly viscous liquid that is completely miscible with water. (1,4,5)
- Ethylene glycol is odorless. (3)
- The vapor pressure for ethylene glycol is 0.06 mm Hg at 20 C, and its log octanol/water partition coefficient ( $\log K_{ow}$ ) is -1.36. (5)

#### **Uses**

- Ethylene glycol is used as antifreeze in cooling and heating systems, in hydraulic brake fluids, as an industrial humectant, as an ingredient of electrolytic condensers, as a solvent in the paint and plastics industries, in the formulations of printers' inks, stamp pad inks, and inks for ballpoint pens, as a softening agent for cellophane, and in the synthesis of safety explosives, plasticizers, synthetic fibers (Terylene, Dacron), and synthetic waxes. (4)

---

#### **Conversion Factors:**

To convert from ppm to  $mg/m^3$ :  $mg/m^3 = (ppm) \times (\text{molecular weight of the compound}) / (24.45)$ . For ethylene glycol:  $1 \text{ ppm} = 2.54 \text{ mg/m}^3$ .

## Health Data from Inhalation Exposure

Concentration (mg/m <sup>3</sup> )	Health numbers <sup>a</sup>	Regulatory, advisory numbers <sup>b</sup>	Reference
1,000,000.0			
---			
---			
---			
100,000.0			
---	• LC <sub>50</sub> (rats) (10,876 mg/m <sup>3</sup> )		6
10,000.0			
---			
---			
1,000.0			
---		• ACGIH TLV and OSHA PEL (125 mg/m <sup>3</sup> )	6
100.0			
---		• MSHA standard (10 mg/m <sup>3</sup> )	6
10.0			

ACGIH TLV--American Conference of Governmental and Industrial Hygienists' threshold limit value expressed as a time-weighted average; the concentration of a substance to which most workers can be exposed without adverse effects.

LC<sub>50</sub> (Lethal Concentration<sub>50</sub>)--A calculated concentration of a chemical in air to which exposure for a specific length of time is expected to cause death in 50% of a defined experimental animal population.

MSHA--Mine Safety and Health Administration.

OSHA PEL--Occupational Safety and Health Administration's permissible exposure limit expressed as a time-weighted average; the concentration of a substance to which most workers can be exposed without adverse effect averaged over a normal 8-h workday or a 40-h workweek.

<sup>a</sup> Health numbers are toxicological numbers from animal testing or risk assessment values developed by EPA.

<sup>b</sup> Regulatory numbers are values that have been incorporated in Government regulations, while

advisory numbers are nonregulatory values provided by the Government or other groups as advice.

## References

1. U.S. Department of Health and Human Services. Hazardous Substances Data Bank (HSDB, online database). National Library of Medicine, National Toxicology Information Program, Bethesda, MD. 1993.
2. U.S. Environmental Protection Agency. *Ethylene Glycol Health Advisory*. Office of Drinking Water, Washington, DC. 1987.
3. M. Sittig. *Handbook of Toxic and Hazardous Chemicals and Carcinogens*. 2nd ed. Noyes Publications, Park Ridge, NJ. 1985.
4. *The Merck Index. An Encyclopedia of Chemicals, Drugs, and Biologicals*. 11th ed. Ed. S. Budavari. Merck and Co. Inc., Rahway, NJ. 1989.
5. U.S. Environmental Protection Agency. *Health Effects Assessment for Ethylene Glycol*. EPA/600/8-88/038. Environmental Criteria and Assessment Office, Office of Health and Environmental Assessment, Office of Research and Development, Cincinnati, OH. 1988.
6. U.S. Department of Health and Human Services. Registry of Toxic Effects of Chemical Substances (RTECS, online database). National Toxicology Information Program, National Library of Medicine, Bethesda, MD. 1993.
7. U.S. Environmental Protection Agency. *Integrated Risk Information System (IRIS) on Ethylene Glycol*. Environmental Criteria and Assessment Office, Office of Health and Environmental Assessment, Office of Research and Development, Cincinnati, OH. 1993.
8. U.S. Environmental Protection Agency. *Technical Background Document to Support Rulemaking Pursuant to the Clean Air Act--Section 112(g). Ranking of Pollutants with Respect to Hazard to Human Health*. EPA450/3-92-010. Emissions Standards Division, Office of Air Quality Planning and Standards, Research Triangle Park, NC. 1994.



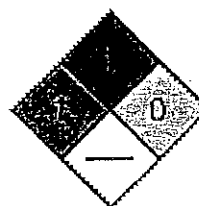
ToxFAQs

## Ethylene Glycol and Propylene Glycol

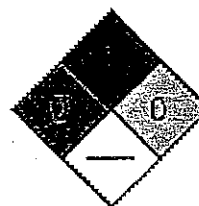
CAS# 107-21-1, 57-55-6

September 1997

Ethylene Glycol

 $C_2H_6O_2$ [Stereo Image](#)[XYZ File](#)[NFPA Label Key](#)[Material Safety Data Sheet](#)  
(University of Utah)

Propylene Glycol

 $C_3H_8O_2$ [Stereo Image](#)[XYZ File](#)[NFPA Label Key](#)[Material Safety Data Sheet](#)  
(University of Utah)

### Agency for Toxic Substances and Disease Registry

*This fact sheet answers the most frequently asked health questions (FAQs) about ethylene glycol and propylene glycol. For more information, call the ATSDR Information Center at 1-800-447-1544. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It's important you understand this information because these substances may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.*

**HIGHLIGHTS:** Ethylene glycol and propylene glycol are clear liquids that are used in antifreeze and deicing solutions. Exposure to large amounts of ethylene glycol can damage the kidneys, heart, and nervous system. Both compounds can change your body chemistry by increasing the amount of acid. Ethylene glycol has been found in at least 34, and propylene glycol in at least 5, of the 1,416 National Priorities List sites identified by the Environmental Protection Agency (EPA).

### **What are ethylene glycol and propylene glycol?**

Both ethylene glycol and propylene glycol are clear, colorless, slightly syrupy liquids at room temperature. Either compound may exist in air in the vapor form, although propylene glycol must be heated or briskly shaken to produce a vapor. Ethylene glycol is odorless but has a sweet taste. Propylene glycol is practically odorless and tasteless.

Both compounds are used to make antifreeze and de-icing solutions for cars, airplanes, and boats; to make polyester compounds; and as solvents in the paint and plastics industries. Ethylene glycol is also an ingredient in photographic developing solutions, hydraulic brake fluids and in inks used in stamp pads, ballpoint pens, and print shops.

The **Food and Drug Administration (FDA)** has classified propylene glycol as an additive that is "generally recognized as safe" for use in food. It is used to absorb extra water and maintain moisture in certain medicines, cosmetics, or food products. It is a solvent for food colors and flavors.

Propylene glycol is also used to create artificial smoke or fog used in fire-fighting training and in theatrical productions.

### **What happens to ethylene glycol and propylene glycol when they enter the environment?**

- Neither compound is likely to exist in large amounts in air.
- About half of the compounds that enter the air will break down in 24-50 hours.
- Both compounds break down within several days to a week in water and soil.

### **How might I be exposed to ethylene glycol and propylene glycol?**

- You can be exposed to ethylene glycol when you use antifreeze, photographic developing solutions, coolants, and brake fluid.
- You can be exposed to propylene glycol by eating food products, using cosmetics, or taking medicine that contains it.
- If you work in an industry that uses ethylene glycol or propylene glycol, you could be exposed by breathing or touching these substances.

### **How can ethylene glycol and propylene glycol affect my health?**

Animal testing is sometimes necessary to find out how toxic substances might harm people or to treat those who have been exposed. Laws today protect the welfare of research animals and scientists must follow strict guidelines.

Eating or drinking very large amounts of ethylene glycol can result in death, while large amounts can result in nausea, convulsions, slurred speech, disorientation, and heart and kidney problems. In addition, ethylene glycol affects the body's chemistry by increasing the amount of acid, resulting in metabolic problems.

Female animals that ate large amounts of ethylene glycol had babies with birth defects, while male animals had reduced sperm counts. However, these effects were seen at very high levels and would not be expected in people exposed to lower levels at hazardous waste sites.

Similar to ethylene glycol, propylene glycol increases the amount of acid in the body. However, larger amounts of propylene glycol are needed to cause this effect.

### **How likely are ethylene and propylene glycol to cause cancer?**

The **Department of Health and Human Services (DHHS)**, the **International Agency for Research on Cancer (IARC)**, and the **EPA** have not classified ethylene glycol and propylene glycol for carcinogenicity. Studies with people who used ethylene glycol did not show carcinogenic effects. Animal studies also have not shown these chemicals to be carcinogens.

### **Is there a medical test to show whether I've been exposed to ethylene or propylene glycol?**

Tests are available to determine if you have been exposed to ethylene glycol. These tests are only used on people who are showing symptoms of ethylene glycol poisoning (but they could be used in other situations). The tests are most often used on people who have intentionally consumed, or who suspect they have consumed, large amounts of ethylene glycol.

Propylene glycol is generally considered to be a safe chemical, and is not routinely tested for, unless specific exposure, such as to a medicine or cosmetic, can be linked with symptoms. Since both chemicals break down very quickly in the body, they are very difficult to detect, even though symptoms may be present.

### **Has the federal government made recommendations to protect human health?**

The **EPA** has set a drinking water guideline for ethylene glycol of 7,000 micrograms (7,000 µg/L) in a liter of water for an adult.

The **Food and Drug Administration (FDA)** has classified propylene glycol as "generally recognized as safe," which means that it is acceptable for use in flavorings, drugs, and cosmetics, and as a direct food additive.

The **American Conference of Governmental Industrial Hygienists (ACGIH)** recommends a maximum level of 127 milligrams of ethylene glycol per cubic meter of air (127 mg/m<sup>3</sup>) for a 15-minute exposure.

## **Glossary**

### **Acid:**

A sour substance



**Carcinogenicity:**

Ability to cause cancer

**CAS:**

Chemical Abstracts Service

**Metabolic:**

Chemical changes in cells that provide energy to the body

**Synthetic:**

Made by humans

**Reference**

Agency for Toxic Substances and Disease Registry (ATSDR). 1996. Toxicological profile for ethylene glycol and propylene glycol (update). Atlanta, GA.: U.S. Department of Health and Human Services, Public Health Service.

**Where can I get more information?**

ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances.

You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

**For more information, contact:**

Agency for Toxic Substances and Disease Registry  
Division of Toxicology  
1600 Clifton Road NE, Mailstop E-29  
Atlanta, GA 30333  
Phone: 1-800-447-1544  
Fax: 404-639-6359



**U.S. Department of Health and Human Services  
Public Health Service  
Agency for Toxic Substances and Disease Registry**

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[Link to ToxFAQs Home Page](#)

[Link to ATSDR Science Corner](#)

[Link to ATSDR Home Page](#)

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*ATSDR Information Center / [ATSDRIC@cdc.gov](mailto:ATSDRIC@cdc.gov) / 1-800-447-1544*

**AFFIDAVIT OF REGGIE D. HUFF**

State of Oregon

}

}

}

County of Columbia

}

I, Reggie D. Huff, being first duly sworn, do depose and say that:

1. I am the president of ACRO-TECH, Inc.
2. In my capacity as president of said ACRO-TECH, Inc. I purchased 55 gallons of ethylene glycol for use in our dynamometer cooling system on November 15, 1996.
3. Within one week of the purchase date of said ethylene glycol I added it to our cooling tank, which contained 450 to 500 gallons of Scappoose, Oregon city water.
4. Our cooling system is an open system, exposed to the atmosphere at both ends, both at the large storage tank area, where the bulk of the cooling fluid is stored, and at the staging tank, near the dynamometer. The system remained open at all times.
5. On or about February of 1999 I checked the specific gravity of the said mixture and determined that it had returned to the specific gravity of basic water.
6. On or about March of 1999 I contacted the Oregon Department of Environmental Quality and asked to talk to someone knowledgeable of the requirements regarding the disposal of an old ethylene glycol solution. I was turned over to a man who purported that he was knowledgeable of the requirements to dispose the cooling solution. I stated to him the above facts. He relayed to me that this substance sounded to him to be of minor consequence, and could be discharged on dry ground. I was not sanguine with this answer and inquired further. The said DEQ personnel then recommended I contact the City of Scappoose to ask if they would have any concerns about a discharge into their sewer system.
7. On February 4<sup>th</sup>, 2001 I thoroughly boiled a glass container and its lid and seal, as well as a plastic syringe and all of its parts. Immediately upon their being removed from the boiling water and air dried I placed the syringe and all of its parts in a plastic bag and sealed it, and I reattached the lid and seal to the glass container, and sealed it as well.
8. On February 4<sup>th</sup>, 2001, at approximately 8 PM I collected a sample, using the said container and syringe, of the said cooling fluid from a cement encased under-floor pipe which had contained the fluid since the inception of the system and had been undisturbed since the system had been shut down in the winter of 1998. Nothing had been added or taken away from the fluid contained in the said pipe.
9. On February 5<sup>th</sup>, at 1:30 PM I turned the sample over to North Creek Analytical, Inc. for analysis.

The above is true as I verily believe.

*Reggie D. Huff*  
 \_\_\_\_\_  
 Reggie D. Huff

Subscribed and sworn to before me this 14<sup>th</sup> day of February 2001.

*Linda K. Reichelt*  
 \_\_\_\_\_  
 NOTARY PUBLIC FOR OREGON  
 My commission expires: *Aug 25, 2003*



EXHIBIT 17



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8223  
425.420.9200 fax 425.420.9210  
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4778  
509.324.9200 fax 509.924.9290  
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
503.906.9200 fax 503.906.9210  
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
541.383.9310 fax 541.382.7588

February 19, 2001

Reggie D. Huff  
Acro Tech Inc.  
51377 SW Old Portland Rd  
Scappoose, OR 97056

Re: Cooling Water Analysis

North Creek Analytical performed EPA method 8260B for volatile organic compounds on a sample provided by you (NCA sample # P1B0103-01). Analysis results showed a 2-butanone (methyl ethyl ketone) concentration of 2.14 mg/L.

Please note that the EPA regulatory level for 2-butanone is 200 mg/L, approximately 100 times higher than the concentration found in the cooling water sample. No other compounds detected have a regulatory limit as defined by the EPA.

If you have any questions, please call me at 503 906-9239.

Sincerely,

Brian L. Cone, CHMM  
Industrial Services Manager

Exhibit 19



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8223  
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 541.383.9310 fax 541.382.7588

Acro Tech Inc. 51377 SW Old Portland Rd Scappoose, OR 97056	Project: Cooling System Project Number: na Project Manager: Reggie D. Huff	Reported: 02/07/01 16:23
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**Volatile Organic Compounds per EPA Method 8260B  
 North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
Under Floor Cooling Pipe Sample (PIB0103-01) Water						Sampled: 02/04/01 Received: 02/05/01			
Acetone	217	100	ug/l	10	EPA 8260B	02/06/01	02/07/01	1020165	
Benzene	ND	10.0	"	"	"	"	"	"	
Bromobenzene	ND	10.0	"	"	"	"	"	"	
Bromochloromethane	ND	10.0	"	"	"	"	"	"	
Bromodichloromethane	ND	10.0	"	"	"	"	"	"	
Bromoform	ND	10.0	"	"	"	"	"	"	
Bromomethane	ND	50.0	"	"	"	"	"	"	
2-Butanone = 2.4 mg/L	2410	100	"	"	"	"	"	"	
n-Butylbenzene	ND	50.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	10.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	10.0	"	"	"	"	"	"	
Carbon disulfide	ND	100	"	"	"	"	"	"	
Carbon tetrachloride	ND	10.0	"	"	"	"	"	"	
Chlorobenzene	ND	10.0	"	"	"	"	"	"	
Chloroethane	ND	10.0	"	"	"	"	"	"	
Chloroform	ND	10.0	"	"	"	"	"	"	
Chloromethane	ND	50.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	10.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	10.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	50.0	"	"	"	"	"	"	
Dibromochloromethane	ND	10.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	10.0	"	"	"	"	"	"	
Dibromomethane	ND	10.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	50.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	10.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	10.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	10.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	10.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	10.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	10.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	10.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	10.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	10.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	10.0	"	"	"	"	"	"	
1,3-Dichloropropene	ND	10.0	"	"	"	"	"	"	

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Exhibit 19



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8223
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541.383.9310 fax 541.382.7588

Acro Tech Inc. Project: Cooling System
51377 SW Old Portland Rd Project Number: na Reported: 02/07/01 16:23
Scappoose, OR 97056 Project Manager: Reggie D. Huff

Volatile Organic Compounds per EPA Method 8260B
North Creek Analytical - Portland

Table with 10 columns: Analyte, Result, Reporting Limit, Units, Dilution, Method, Prepared, Analyzed, Batch, Notes. Lists various chemical compounds like Benzene, Toluene, Chlorobenzene, etc., with results mostly ND.

Table with 3 columns: Analyte, Result, Reporting Limit. Lists recovery percentages for 4-BFB (99.0%), 1,2-DCA-d4 (112%), Dibromofluoromethane (109%), and Toluene-d8 (103%).

North Creek Analytical - Portland The results in this report apply to the samples analyzed in accordance with the chain of custody documents. This analytical report must be reproduced in its entirety.



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 503.908.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

Aero Tech Inc. 51377 SW Old Portland Rd Scappoose, OR 97056	Project: Cooling System Project Number: na Project Manager: Reggie D. Huff	Reported: 02/07/01 16:23
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**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Under Floor Cooling Pipe Sample	PIB0103-01	Water	02/04/01 20:00	02/05/01 13:30

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



Seattle	425.420.9200	FAX 420.9210
Spokane	509.924.9200	FAX 924.9290
Portland	503.906.9200	FAX 906.9210
Bend	541.383.9310	FAX 382.7588

# FAX

Date: 2/7/01

Total Pages: 7

To: Reggie Hudd

From: *BCC* Brian Cone 503-906-9239

Company: Acro Tech

Company: NCA - Portland

Fax: 503 543-8221

bccone@ncalabs.com

 Urgent Please Confirm Receipt Please Reply ASAP

Hello Reggie!

Attached is the volatile organics report. The chemists gave us very fast turnaround time (2 days)! Three compounds were detected:

- Acetone
- 2-Butanone (methyl ethyl ketone, MEK)
- Methyl tert-butyl ether (MTBE, octane booster additive to gasoline that has been in the news lately).

If you want us to run any TICs (tentatively identified compounds), let me know. I will find out how much time and cost is involved.

Also, don't worry about the account application form; I'll talk to Mary.

Thanks for asking us to help you!

#### Confidentiality Notice:

This message is intended only for the use of the individual or entity to which it is addressed and may contain information that is privileged, confidential, and exempt from disclosure under applicable law. If the reader of this message is not the intended recipient, or the employee or agent responsible for delivering a message to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this message in error, please notify us immediately by telephone.

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8223  
425.420.9200 fax 425.420.9210  
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**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
541.383.9310 fax 541.382.7588

7 February, 2001

Reggie D. Huff  
Acro Tech Inc.  
51377 SW Old Portland Rd  
Scappoose, OR 97056

RE: Cooling System

Enclosed are the results of analyses for samples received by the laboratory on 02/05/01 13:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brian Cone  
Industrial Services Manager

Work Orders included in this report:  
**P1B0103**



# CHAIN OF CUSTODY REPORT

Work Order #: **PIB0103**

02-07-2001 04:44PM FROM 10 TO 85035438221 P. 07

NT: *Reggie A Huff - Aero-Tech Inc*  
 RT TO: *Reggie A Huff*  
 RESS: *3400 S.W. 10th St. Beaverton, OR 97005*  
 NE: *503-340-0023* FAX: *Same*

INVOICE TO:  
 P.O. NUMBER:

**TURNAROUND REQUEST in Business Days\***

Organic & Inorganic Analyses  
 10  7  5  4  3  2  1  <1

Petroleum Hydrocarbon Analyses  
 STD:  5  4  3  2  1  <1

STD:  OTHER Please Specify

OBJECT NAME:	REQUESTED ANALYSES
OBJECT NUMBER:	
COLLECTED BY: <i>R.A.H.</i>	
CLIENT SAMPLE IDENTIFICATION	
SAMPLING DATE/TIME	
<i>Dr Floor Cooling</i>	
<i>2 Sample</i>	
<i>9/4/01 - 8:00 PM</i>	
<i>X</i>	

MATRIX (W, S, O)	# OF CONT.	COMMENTS	NO. ID
<i>W</i>			

ACQUIRED BY: *Reggie A Huff* FIRM: *Aero-Tech Inc* DATE: *9/5/01* TIME: *1:30 PM*

RECEIVED BY: *Sarah Karsage* FIRM: *NCA* DATE: *2/5/01* TIME: *1:30*

ADDITIONAL REMARKS: *Discussion with Brian Cone*

TEMP: *12.9*



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-3223  
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 541.383.9370 fax 541.382.7588

Acro Tech Inc. 51377 SW Old Portland Rd Scappoose, OR 97056	Project: Cooling System Project Number: na Project Manager: Reggie D. Huff	Reported: 02/07/01 16:23
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**Notes and Definitions**

- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis. MRLs are adjusted if %Solids are less than 50%
- wet Sample results reported on a wet weight basis
- RPD Relative Percent Difference

Ref No.: G60417  
Case No: 01-GAP-00037  
Case Type: DEQ

**STATE OF OREGON**  
**Before the Hearing Officer Panel**  
**For the**  
**DEPT OF ENVIRONMENTAL QUALITY**  
875 Union Street NE  
Salem, Oregon 97311

Dec Mailed: 04/27/01  
Mailed by: LMV

## HEARING DECISION

REGGIE D. HUFF  
51377 SW OLD PORTLAND RD

SCAPPOOSE OR 97056 4018

DEPT OF ENVIRONMENTAL QUALITY  
811 SW 6TH AVE

PORTLAND OR 97204 1334

SUSAN GRECO  
DEQ ENFORCEMENT SECTION  
811 SW 6TH AVE  
PORTLAND OR 97204 1334

The following **HEARING DECISION** was served to the parties at their respective addresses.

STATE OF OREGON  
BEFORE THE HEARING OFFICER PANEL  
FOR THE ENVIRONMENTAL QUALITY COMMISSION

In the Matter of	)	
	)	
REGGIE D. HUFF	)	PROPOSED ORDER
	)	Notice of Assessment of
Respondent	)	Civil Penalty
	)	No. WQ/I-NWR-00-125

HISTORY

The Department of Environmental Quality (hereinafter the "Department") issued a Notice of Assessment of Civil Penalty No. WQ/I-NWR-00-125 on August 1, 2000 and amended October 30, 2000 to Respondent for disposing of approximately 500 gallons of waste anti-freeze into a dry well that discharged to groundwater in Scappoose, Oregon. Respondent Reggie D. Huff (hereinafter "Huff") requested a hearing on August 9, 2000 and November 13, 2000.

The Department referred the matter to the Central Hearings Panel. The Panel appointed Hearing Officer Kevin Anselm to hear the case. The hearing was held February 27, 2001 at the Department of Environmental Quality, 2020 SW 4<sup>th</sup> Street, 4<sup>th</sup> floor conference room E, Portland, Oregon. Respondent Huff appeared and represented himself. Daniel E. Murphy, Water Quality Complaint Coordinator for the Department, and Robert Gill, hydrologist, appeared as respondent's witnesses. Respondent's wife and daughter observed the hearing. Susan Greco, Environmental Law Specialist, represented the Department. The Department called witnesses Lucinda Ann Bidleman, a Department Natural Resource Specialist in the area of ground water; Susan Shewczyk, a Department Hazardous Waste Inspector; and Anne Cox, a Department Natural Resource Specialist and case investigator.

On March 8, 2001, the Hearing Officer transmitted a question regarding the Department's interpretation of the terms "negligence" and "negligent" to the Department. The Department responded on April 4, 2001. Huff postmarked his rebuttal to the Department's response on April 12, 2001. The hearing record closed upon receipt of Huff's rebuttal on April 13, 2001.

ISSUES

Shall the Department's Notice of Assessment of Civil Penalty dated August 1, 2000, amended October 30, 2000, be affirmed, modified or vacated?

FINDINGS OF FACT

Respondent Huff operates Acro-Tech, Inc. from a leased building and parking lot located at 51377 SW Old Portland Rd. in Scappoose, Oregon (hereinafter the "property"). The company leased the property in 1996, and operates a research laboratory, conducting research and development for improving internal combustion engine processes, including ways to make the processes more environmentally friendly (Exhibit 21). In 1999, the research laboratory included a combustion engine and an open tank containing fluids that were pumped through the engine for cooling purposes. The 2000-gallon capacity tank initially contained about 450-500 gallons of water. In November 1996, Huff added about 55 gallons of ethylene glycol, commonly known as anti-freeze, to the tank.

Ethylene glycol lowers the freezing point of water, so is used as antifreeze in cooling and heating systems. It is an odorless liquid, soluble in water, and is relatively non-volatile. Huff added ethylene glycol to the tank contents to inhibit the freezing of the contents, which may cause problems with the combustion engine equipment. Ethylene glycol is toxic if ingested or inhaled in sufficient amounts. (Exhibits 10 -11)

In the spring of 1999, Huff thought he might need to quickly move the business and its equipment from the property because of problems with the landlord. The tank needed to be empty in order to move it. He was concerned about disposing the tank contents of about 500 gallons of ethylene glycol solution. Huff said that he called the Department to find out how he was required to dispose of the contents, but he does not recall whom he spoke with at the Department. Huff testified that the Department representative did not seem concerned about disposal. Because he had concerns about the Department's seeming disinterest, Huff then called the City of Scappoose. After a conversation with Steve Wabshall, Operations Superintendent, at the City of Scappoose, Huff received permission to discharge the ethylene glycol solution into the city's sanitary sewer system. Wabshall recommended that Huff make the discharge in small amounts over a week's time. (Exhibit 6)

Huff discharged the ethylene glycol solution through a hose connected to the tank and into the storm drain located in the Huff property parking lot over about 10 days in the spring of 1999. He did not test the solution for any chemicals or other substances before draining it, although he did check the solution's specific gravity at some point. Huff recalls that the specific gravity of the solution was about the same as water.

While preparing for a court case against his landlord in December 1999, Huff talked again to the City of Scappoose, and found out that the storm drain in the parking lot was not connected to the sanitary sewer system. The property building plumbing, however, is connected to the sanitary sewer.

Beginning in February 2000, the Department conducted an investigation at the site and found that under the grate in the parking lot was a holding cylinder or sump from which fluid contained there may flow into a drywell under the parking lot asphalt. From the drywell, fluid may drain or seep into the surrounding ground. The relevant area is covered with asphalt, and the specific piping could not be seen. There was no outlet or piping in the area that originated at the sump which then moved fluid to a ditch or other surface waterway. The Department is familiar with the construction of this type of storm system, which allows fluids that enter the cylinder or drywell to seep into the ground.

The ground in the area is generally well drained. The area soil characteristics of the stream or water-laid (alluvial) deposits include clay or clay mixed with other soil types in layers from the soil surface to depths ranging between 11 - 30 feet (Exhibits 9 and 23). Clay is generally more impermeable than other soil types, and may direct fluids more horizontally, depending on the integrity of the clay layer. The land topography slopes gently downhill from the property. Surface water is generally not evident in the immediate area, with the closest surface water location estimated at over 1000 feet downhill and away from the Huff property. There was no evidence presented about soil saturation conditions or rainfall during or after the spring of 1999.

On February 4, 2001, Huff took a sample of the solution remaining in a pipe from the tank that formerly contained the solution, and had the sample tested for volatile organic compounds. The sample was not tested for ethylene glycol. (Exhibits 19-20).

In addition to residual ethylene glycol, the Department is concerned about possible metal contamination of ground water from the solution. Ethylene glycol solutions used to cool engines often contain metals that are leached from the engine components during the cooling process. The Department testified that the ethylene glycol breaks down to a certain extent with time and exposure, but that it does not lose toxicity. Ethylene glycol may be consumed by some bacteria in the soil, or

may be ionized, or attached to soil particles, which would inhibit additional movement through the soils. Any metallic contamination is less likely to break down, and would continue to be present in the ground or ground water, unless carried away.

The Department calculated the civil penalty according to the formula outlined on Exhibit I to the Amended Notice of Assessment of Civil Penalty including \$1,000 for the base penalty for a Class II moderate magnitude violation; +2 for repeated or continuous violations alleging the violation occurred on more than one day; and +2 for respondent's negligent conduct.

#### ULTIMATE FINDINGS

Huff disposed of about 500 gallons of solution containing ethylene glycol and metal leachings from internal combustion engine cooling operations into a storm drain sump that was not connected to a sanitary sewer.

The civil penalty includes factors to increase the penalty for repeated or continuous violations and respondent's alleged negligent conduct.

#### APPLICABLE LAW

**Oregon Revised Statute (ORS) 468B.025 Prohibited Activities** states in part:

- (1) Except as provided in ORS 468B.050 or 468B.053, no person shall:
  - (a) Cause pollution of any waters of the state or place or cause to be placed any wastes in a location where such wastes are likely to escape or be carried into the waters of the state by any means.

\* \* \*

**ORS 468B.005 Definitions for water pollution control laws** states in part:

As used in the laws relating to water pollution, unless the context requires otherwise:

\* \* \* \*

- (2) "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.
- (3) "Pollution" or "water pollution" means such 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 discharge of any liquid, gaseous, solid, radioactive or other substance into any waters of the state, which will or tends to, either by itself or in connection with any other substance, create a public nuisance or which will or tends to 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.

\* \* \* \*

- (7) "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 waters of the state.

(8) "Water" or "the 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. [Formerly 449.075 and then 468.700]

**OAR 340-012-0030 Definitions**, states in part:

(11) "Negligence" or "Negligent" means failure to take reasonable care to avoid a foreseeable risk of committing an act or omission constituting a violation.

**OAR 340-012-0045 Civil Penalty Determination Procedure**

(1) When determining the amount of civil penalty to be assessed for any violation, other than violations of ORS 468.996, which are determined according to the procedure set forth below in OAR 340-012-0049(8), the Director shall apply the following procedures:

(a) Determine the class and the magnitude of each violation:

(A) The class of a violation is determined by consulting OAR 340-012-0050 to 340-012-0073;

(B) The magnitude of the violation is determined by first consulting the selected magnitude categories in OAR 340-012-0090. In the absence of a selected magnitude, the magnitude shall be moderate unless:

(i) If the Department finds that the violation had a significant adverse impact on the environment, or posed a significant threat to public health, a determination of major magnitude shall be made. In making a determination of major magnitude, the Department shall consider all available applicable information including such factors as: The degree of deviation from the Commission's and Department's statutes, rules, standards, permits or orders, concentration, volume, percentage, duration, toxicity, and the extent of the effects of the violation. In making this finding, the Department may consider any single factor to be conclusive for the purpose of making a major magnitude determination;

(ii) If the Department finds that the violation had no potential for or actual adverse impact on the environment, nor posed any threat to public health, or other environmental receptors, a determination of minor magnitude shall be made. In making a determination of minor magnitude, the Department shall consider all available applicable information including such factors as: The degree of deviation from the Commission's and Department's statutes, rules, standards, permits or orders, concentration, volume, percentage, duration, toxicity, and the extent of the effects of the violation. In making this finding, the Department may consider any single factor to be conclusive for the purpose of making a minor magnitude determination.

(b) Choose the appropriate base penalty (BP) established by the matrices of OAR 340-012-0042 after determining the class and magnitude of each violation;

(c) Starting with the base penalty, determine the amount of penalty through application of the formula:  $BP + [(1 \times BP) \times (P + H + O + R + C)] + EB$ , where:

(A) "P" is whether the Respondent has any prior significant actions relating to statutes, rules, orders and permits pertaining to environmental quality or pollution control. A violation is deemed to have become a Prior Significant Action on the date of the issuance of the first Formal Enforcement Action in which it is cited. For the purposes of this determination, violations that were the subject of any prior significant actions that were issued before the effective date of the Division 12 rules as adopted by the Commission in March 1989, shall be classified in accordance with the classifications set forth in the March 1989 rules to ensure equitable consideration of all prior significant actions. The values for "P" and the finding which supports each are as follows:

(i) 0 if no prior significant actions or there is insufficient information on which to base a finding;

(ii) 1 if the prior significant action is one Class Two or two Class Threes;

(iii) 2 if the prior significant action(s) is one Class One or equivalent;

(iv) 3 if the prior significant actions are two Class One or equivalents;

(v) 4 if the prior significant actions are three Class Ones or equivalents;

(vi) 5 if the prior significant actions are four Class Ones or equivalents;

(vii) 6 if the prior significant actions are five Class Ones or equivalents;

(viii) 7 if the prior significant actions are six Class Ones or equivalents;

(ix) 8 if the prior significant actions are seven Class Ones or equivalents;

(x) 9 if the prior violations significant actions are eight Class Ones or equivalents;

(xi) 10 if the prior significant actions are nine Class Ones or equivalents, or if any of the prior significant actions were issued for any violation of ORS 468.996;

(xii) In determining the appropriate value for prior significant actions as listed above, the Department shall reduce the appropriate factor by:

(I) A value of 2 if the date of issuance of all the prior significant actions re greater than three years old; or

II) A value of 4 if the date of issuance of all the prior significant actions are greater than five years old.

(III) In making the above reductions, no finding shall be less than zero.

(xiii) Any prior significant action which is greater than ten years old shall not be included in the above determination;

(xiv) A permittee, who would have received a Notice of Permit Violation, but instead received a civil penalty or Department Order because of the application of OAR 340-012-0040(2)(d), (e), (f), or (g) shall not have the violation(s) cited in the former action counted as



a prior significant action, if the permittee fully complied with the provisions of any compliance order contained in the former action.

(B) "H" is Respondent's history in correcting prior significant actions or taking reasonable efforts to minimize the effects of the violation. In no case shall the combination of the "P" factor and the "H" factor be a value less than zero. In such cases where the sum of the "P" and "H" values is a negative numeral the finding and determination for the combination of these two factors shall be zero. The values for "H" and the finding which supports each are as follows:

(i) -2 if Respondent took all feasible steps to correct the majority of all prior significant actions;

(ii) 0 if there is no prior history or if there is insufficient information on which to base a finding.

(C) "O" is whether the violation was repeated or continuous. The values for "O" and the finding which supports each are as follows:

(i) 0 if the violation existed for one day or less and did not recur on the same day, or if there is insufficient information on which to base a finding;

(ii) 2 if the violation existed for more than one day or if the violation recurred on the same day.

(D) "R" is whether the violation resulted from an unavoidable accident, or a negligent, intentional or flagrant act of the Respondent. The values for "R" and the finding which supports each are as follows:

(i) 0 if an unavoidable accident, or if there is insufficient information to make a finding;

(ii) 2 if negligent;

(iii) 6 if intentional; or

(iv) 10 if flagrant.

(E) "C" is the Respondent's cooperativeness and efforts to correct the violation. The values for "C" and the finding which supports each are as follows:

(i) -2 if Respondent was cooperative and took reasonable efforts to correct a violation, took reasonable affirmative efforts to minimize the effects of the violation, or took extraordinary efforts to ensure the violation would not be repeated;

(ii) 0 if there is insufficient information to make a finding, or if the violation or the effects of the violation could not be corrected;

(iii) 2 if Respondent was uncooperative and did not take reasonable efforts to correct the violation or minimize the effects of the violation.

(F) "EB" is the approximated dollar sum of the economic benefit that the Respondent gained through noncompliance. The Department or Commission may assess "EB" whether or not it applies the civil penalty formula above to determine the gravity and magnitude-based portion

of the civil penalty, provided that the sum penalty does not exceed the maximum allowed for the violation by rule or statute. "EB" is to be determined as follows:

(i) Add to the formula the approximate dollar sum of the economic benefit gained through noncompliance, as calculated by determining both avoided costs and the benefits obtained through any delayed costs, where applicable;

(ii) The Department need not calculate nor address the economic benefit component of the civil penalty when the benefit obtained is de minimis;

(iii) In determining the economic benefit component of a civil penalty, the Department may use the U. S. Environmental Protection Agency's BEN computer model, as adjusted annually to reflect changes in marginal tax rates, inflation rate and discount rate. With respect to significant or substantial change in the model, the Department shall use the version of the model that the Department finds will most accurately calculate the economic benefit gained by Respondent's noncompliance. Upon request of the Respondent, the Department will provide Respondent the name of the version of the model used and respond to any reasonable request for information about the content or operation of the model. The model's standard values for income tax rates, inflation rate and discount rate shall be presumed to apply to all Respondents unless a specific Respondent can demonstrate that the standard value does not reflect that Respondent's actual circumstance. Upon request of the Respondent, the Department will use the model in determining the economic benefit component of a civil penalty;

(iv) As stated above, under no circumstances shall the imposition of the economic benefit component of the penalty result in a penalty exceeding the statutory maximum allowed for the violation by rule or statute. When a violation has extended over more than one day, however, for determining the maximum penalty allowed, the Director may treat the violation as extending over at least as many days as necessary to recover the economic benefit of noncompliance. When the purpose of treating a violation as extending over more than one day is to recover the economic benefit, the Department has the discretion not to impose the gravity and magnitude-based portion of the penalty for more than one day.

(2) In addition to the factors listed in section (1) of this rule, the Director may consider any other relevant rule of the Commission and shall state the effect the consideration had on the penalty. On review, the Commission shall consider the factors contained in section (1) of this rule and any other relevant rule of the Commission.

(3) In determining a civil penalty, the Director may reduce any penalty by any amount the Director deems appropriate when the person has voluntarily disclosed the violation to the Department. In deciding whether a violation has been voluntarily disclosed, the Director may take into account any conditions the Director deems appropriate, including whether the violation was:

(a) Discovered through an environmental auditing program or a systematic compliance program;

(b) Voluntarily discovered;

(c) Promptly disclosed;

(d) Discovered and disclosed independently of the government or a third party;

(e) Corrected and remedied;

- (f) Prevented from recurrence;
- (g) Not repeated;
- (h) Not the cause of significant harm to human health or the environment; and
- (i) Disclosed and corrected in a cooperative manner.

(4) The Department or Commission may reduce any penalty based on the Respondent's inability to pay the full penalty amount. If the Respondent seeks to reduce the penalty, the Respondent has the responsibility of providing to the Department or Commission documentary evidence concerning Respondent's inability to pay the full penalty amount:

(a) When the Respondent is currently unable to pay the full amount, the first option should be to place the Respondent on a payment schedule with interest on the unpaid balance for any delayed payments. The Department or Commission may reduce the penalty only after determining that the Respondent is unable to meet a long-term payment schedule;

(b) In determining the Respondent's ability to pay a civil penalty, the Department may use the U.S. Environmental Protection Agency's ABEL computer model to determine a Respondent's ability to pay the full civil penalty amount. With respect to significant or substantial change in the model, the Department shall use the version of the model that the Department finds will most accurately calculate the Respondent's ability to pay a civil penalty. Upon request of the Respondent, the Department will provide Respondent the name of the version of the model used and respond to any reasonable request for information about the content or operation of the model;

(c) In appropriate circumstances, the Department or Commission may impose a penalty that may result in a Respondent going out of business. Such circumstances may include situations where the violation is intentional or flagrant or situations where the Respondent's financial condition poses a serious concern regarding the ability or incentive to remain in compliance.

#### CONCLUSIONS AND REASONS

*The respondent violated ORS 468B.025(1)(a) by placing a solution containing ethylene glycol and metal leaching in a place where it may be carried into the waters of Oregon.*

The basic facts of the case are not in dispute. Huff freely admits that he disposed of about 500 gallons of fluid that originally contained about 10% ethylene glycol, that had been used in his internal combustion engine research, in a storm drain over a period of about 10 days in the spring of 1999. Huff disagrees with the characterization of the fluid as a waste or pollution because he believes it was not harmful by the time it was discharged. He further argues that even if the fluid is deemed as waste or pollution, the ground absorbed the fluid, and it did not ultimately enter the ground, surface or any other waters of the state.

The ethylene glycol solution clearly fits the definition of waste when it was originally mixed in the tank because of the toxic properties of the ethylene glycol to humans and animals. As the solution was used in cooling the internal combustion equipment, it is likely to have leached metallic compounds from the equipment. Huff's argument that the solution contained little or no ethylene glycol or other contaminants possibly injurious to health or the environment is not supported by the

weight of evidence offered, including the laboratory tests that were not contemporaneous with the discharge and did not include testing for ethylene glycol or possible metallic contaminants. Huff's own actions of inquiring about proper disposal methods reflects his conscientiousness about possible pollutants and the realization that the solution deserved to be handled with care in order to avoid polluting. Further, Wabshall's instruction to discharge small amounts of the solution over a period of time indicates some concern over the solution's content.

Huff also argues that there is no proof that the solution ever entered the waters of the state. Huff is correct. However, the law provides that waste may not be placed in a location where such wastes are "likely to escape or be carried into the waters of the state by any means" (emphasis added). In this case, the Department's testimony about how a dry sump system works is persuasive. Fluid held in the sump or drywell can seep into the surrounding ground and into ground water. Rainwater or other fluid entering the dry sump system may flush the solution into the ground and existing groundwater. There is no allegation or evidence that Huff purposely placed waste where it could enter into the waters of the state. It is clear that Huff conscientiously endeavored to properly dispose of the solution by securing permission from the City of Scappoose to drain the tank contents into the sanitary sewer. Unfortunately, and unbeknownst to Huff, the parking lot sump was not part of the sanitary sewer. Accordingly, Huff violated ORS 468B.025(1)(a) by discharging the ethylene glycol solution in a place where it may be carried into the waters of Oregon.

The remaining question is whether the civil penalty assessed for violating ORS 468B.025(1)(a) is appropriate in this case.

*The civil penalty imposed is not appropriate pursuant to OAR 340-012-0045.*

In this case, the civil penalty is not appropriately calculated in respect to the factor for the cause of the violation. The Department has the burden to prove each factor value as alleged. The remaining factors, including the base penalty factor, are correctly valued.

The "single or repeated occurrence" (O) variable is correctly valued as +2. Huff agrees that he drained the tank in several small amounts over the 10-day period as instructed by the City of Scappoose. While it is unfortunate that the penalty is increased because Huff was attempting to follow instructions, the variable is correctly valued in this case of an ongoing or repeat violation.

The "cause of the violation" (R) variable is incorrectly valued as +2. The Department alleges that while Huff determined that the waste could be disposed of into a sanitary sewer, he failed to take reasonable steps to determine whether the storm drain lead to the sanitary sewer, and was therefore negligent. The Department's rule defines negligent or negligence as "failure to take reasonable care to avoid a foreseeable risk of committing an act or omission constituting a violation". In this case, Huff solicited and received permission to discharge the tank contents into the sanitary sewer. He mistakenly thought the storm drain was connected to the sanitary sewer. The Department offered no evidence or testimony that Huff failed to take reasonable care to ascertain whether the storm drain was connected to the sanitary sewer. Huff thought that all storm drains were connected to the sanitary sewer. There is no evidence that persons in a like circumstance would ask about the storm drain, or that there was something different about this storm drain than others in the area that may cause a reasonable person to question whether the storm drain was connected to the sanitary sewer. There is not enough information to determine whether Huff was negligent for failing to determine whether the storm drain was attached to the sanitary sewer. Accordingly, the correct value for "Cause of the Violation" is '0'.

Applying the correct values to the Penalty Calculation results in a civil penalty calculation of \$1,200 as follows:

$$\begin{aligned} \text{Penalty} &= \text{BP} + [(.1 \times \text{BP}) (\text{P}+\text{H}+\text{O}+\text{R}+\text{C})] + \text{EB} \\ &= \$1,000 + [(.1 \times \$1,000) \times (0+0+2+0+0)] + 0 \\ &= \$1,000 + [(\$100) \times (2)] + 0 \\ &= \$1,000 + \$200 + 0 \\ &= \$1,200 \end{aligned}$$

#### PROPOSED ORDER

IT IS HEREBY PROPOSED that the Notice of Assessment of Civil Penalty No. WQ/I-NWR-00-125 issued on August 1, 2000 and amended October 30, 2000 be MODIFIED as follows:

Respondent Huff is assessed a civil penalty of \$1,200 for violating ORS 468B.025(1)(a).

Dated this 27<sup>th</sup> day of April, 2001

For the ENVIRONMENTAL QUALITY COMMISSION



Kevin Anselm  
Hearings Officer

If you are not satisfied with this decision, you have the right to have the decision reviewed by the Oregon Environmental Quality Commission. To have the decision reviewed, you must file a "Petition for Review" within 30 days of the date this order is served on you as provided in Oregon Administrative Rule (OAR) 340-011-0132(1) and (2). The Petition for Review must be filed with:

Environmental Quality Commission  
c/o Stephanie Hallock, Director, DEQ  
811 SW SIXTH AVENUE  
Portland, OR 97204.

Within 30 days of filing the Petition for Review, you must also file exceptions and a brief as in provided in OAR 340-011-0132(3). If the petition, exceptions and brief are filed in a timely manner, the Commission will set the matter for oral argument and notify you of the time and place of the Commission's meeting. The requirements for filing a petition, exceptions and briefs are set out in OAR 340-011-0132.

*Unless you timely and appropriately file a Petition for Review as set forth above, this Proposed Order becomes the Final Order of the Environmental Quality Commission 30 days from the date of service on you of this Proposed Order. If you wish to appeal the Final Order, you have 60 days from the date the Proposed Order becomes the Final Order to file a petition for review with the Oregon Court of Appeals. See ORS 183.400 et. seq.*

**State of Oregon  
Before the Hearing Officer Panel  
For the Environmental Quality Commission**

**In the Matter of:**

**Reggie D. Huff**

**Respondent**

)  
)  
)  
)  
)

**EXHIBIT LIST**

<u>Description</u>	<u>Number</u>
Notice of Hearing, Amended Notice of Hearing and Changed Notice of Hearing	1
Notice of Contested Case Rights and Procedures	1A
Notice of Assessment of Civil Penalty No. WQ/I-NWR-00-125 dated August 1, 2000	2
Huff Request for hearing dated August 9, 2000	3
Amended Notice of Assessment of Civil Penalty No. WQ/I-NWR-00-125 dated October 30, 2000	4
Huff Request for hearing dated November 13, 2000	5
Wabschall letter dated December 10, 1999	6
Notice of Noncompliance dated April 26, 2000	7
Huff letter dated May 3, 2000	8
Area Map and Well Logs	9
EPA Hazard Summary – Ethylene Glycol ToxFAQs – Propylene Glycol	10
Condensed Chemical Dictionary – Ethylene Glycol definitions	11
Conversion Factors	12
Crow Water Systems letter and attachments with fax date August 23, 2000	13
Cox e-mail dated February 25, 2000	14

HUFF - EXHIBIT LIST

Page 1 of 3

*Attachment F*

Complaint log dated August 16, 2000	15
Murphy's note dated April 10, 2000	16
Huff affidavit signed February 14, 2001	17
The Chronicle news release dated October 28, 2000	18
NCA test results dated February 19, 2001	19
NCA letter dated February 22, 2001	20
AcroTech Brochure	21
Pictures of grate and recent construction in area of AcroTech parking lot	22
Columbia County Dept of Land Development letter dated August 17, 2000 with tax map	23
Greco letter and Mutual Agreement and Order Copy dated September 18, 2000	24
Center for Hazardous Materials Research letter dated January 7, 1994	25
Transmittal of Question dated March 8, 2001	26
Huff letter dated March 15, 2001	27
Letter to Huff from Hearing Officer dated March 21, 2001	28
Fax from Susan Greco dated March 29, 2001	29
Department Response to Transmitted Question dated April 4, 2001	30
Huff Rebuttal to Transmitted Question dated April 11, 2001	31

Exhibit Disposition

Exhibits 1 – 1A	Offered and received by hearings officer with no objection
Exhibits 2 - 6	Stipulated as part of the record prior to the hearing.
Exhibits 7, 9-12, 20	Offered by the Department and received by hearing officer with no objection

- Exhibit 8 Offered by the Department and Respondent, and received by hearing officer.
- Exhibits 13-18, 21, 23-24 Offered by the Respondent and received by the hearing officer with no objection.
- Exhibits 19 and 22 Offered by Respondent and received by the hearing officer over the Department's relevancy objections.
- Exhibit 25 Offered by Respondent and not received by the hearing officer sustaining the Department's relevancy objection.
- Exhibits 26-31 Documents relating to the transmittal and answer of the question to the agency.



Ref No: G60417  
Case Type: DEQ  
Agency Case No: WQ1NWR00125  
Issued By SALEM

STATE OF OREGON  
Before the Hearing Officer Panel  
For the  
DEPT OF ENVIRONMENTAL QUALITY  
875 Union Street NE  
Salem, Oregon 97311

Date Mailed: 02/21/01  
Mailed By: LMV

**CHANGE IN NOTICE OF HEARING**

REGGIE D. HUFF  
51377 SW OLD PORTLAND RD  
SCAPPOOSE OR. 97056 4018

DEPT OF ENVIRONMENTAL QUALITY  
811 SW 6TH AVE  
PORTLAND OR. 97204 1334

SUSAN GRECO  
DEQ ENFORCEMENT SECTION  
2020 SW 4TH AVE STE 400  
PORTLAND OR. 97201 4959

**THE HEARING SCHEDULED FOR:**

ADMINISTRATIVE LAW JUDGE: ANSELM  
DATE: TUESDAY, FEBRUARY 27, 2001  
TIME: 9:30 AM PT  
PLACE OF HEARING: DEPT OF ENVIRONMENTAL QUALITY  
2020 SW 4TH  
4TH FLOOR - CONFERENCE ROOM C  
PORTLAND OR

**HAS BEEN CHANGED TO:**

ADMINISTRATIVE LAW JUDGE: ANSELM  
DATE: TUESDAY, FEBRUARY 27, 2001  
TIME: 8:30 AM PT  
PLACE OF HEARING: DEPT OF ENVIRONMENTAL QUALITY  
2020 SW 4TH  
4TH FLOOR - CONFERENCE ROOM E  
PORTLAND

*If you have questions prior your hearing, call: 1-888-577-2422.  
If you are calling from the Salem area, please use: 947-1515.*

**BE PROMPT AT TIME OF HEARING. INQUIRE IN LOCATION'S LOBBY AREA REGARDING HEARING ROOM. If you need directions, call: 1-800-311-3394.**

EXHIBIT # 1

RefNo: G60417  
Agency Case No: WQ1NWR00125  
Case Type: DEQ

STATE OF OREGON  
Before the Hearing Officer Panel  
For the  
DEPT OF ENVIRONMENTAL QUALITY  
875 Union Street NE  
Salem, Oregon 97311

Date Mailed: 02/06/01  
Mailed By: LMV

## AMENDED NOTICE OF HEARING

REGGIE D. HUFF  
51377 SW OLD PORTLAND RD  
SCAPPOOSE OR 97056 4018

DEPT OF ENVIRONMENTAL QUALITY  
811 SW 6TH AVE  
PORTLAND OR 97204 1334

SUSAN GRECO  
DEQ ENFORCEMENT SECTION  
2020 SW 4TH AVE STE 400  
PORTLAND OR 97201 4959

HEARING DATE AND TIME

TUESDAY, FEBRUARY 27, 2001  
9:30 AM PT

HEARING PLACE

DEPT OF ENVIRONMENTAL QUALITY  
2020 SW 4TH  
4TH FLOOR - CONFERENCE ROOM C  
PORTLAND OREGON

ADMINISTRATIVE LAW JUDGE

ANSELM

*If you have questions prior to your hearing, call toll-free: 1-800-311-3394.  
If you are calling from the Salem area, please use: 947-1515.*

**BE PROMPT AT TIME OF HEARING. INQUIRE IN LOCATION'S LOBBY AREA REGARDING HEARING ROOM. If you need directions, call the above number.**

The issue(s) to be considered are:

SHALL THE DEPARTMENT OF ENVIRONMENTAL QUALITY NOTICE OF ASSESSMENT OF CIVIL PENALTY DATED AUGUST 1, 2000 AND AMENDED ON OCTOBER 30, 2000, BE AFFIRMED, MODIFIED OR VACATED?

Ref No: G60417  
Agency Case No: WQ1NWR00125  
Case Type: DEQ

STATE OF OREGON  
Before the Hearing Officer Panel  
For the  
DEPT OF ENVIRONMENTAL QUALITY  
875 Union Street NE  
Salem, Oregon 97311

Date Mailed: 12/22/00  
Mailed By: LMV

## NOTICE OF HEARING

REGGIE D. HUFF  
51377 SW OLD PORTLAND RD  
SCAPPOOSE OR 97056 4018

DEPT OF ENVIRONMENTAL QUALITY  
811 SW 6TH AVE  
PORTLAND OR 97204 1334

SUSAN GRECO  
DEQ ENFORCEMENT SECTION  
2020 SW 4TH AVE STE 400  
PORTLAND OR 97201 4959

HEARING DATE AND TIME

TUESDAY, FEBRUARY 27, 2001  
9:30 AM PT

HEARING PLACE

DEPT OF ENVIRONMENTAL QUALITY  
2020 SW 4TH  
4TH FLOOR - CONFERENCE ROOM E  
PORTLAND OREGON

ADMINISTRATIVE LAW JUDGE

ANSELM

*If you have questions prior to your hearing, call toll-free: 1-800-311-3394.  
If you are calling from the Salem area, please use: 947-1515.*

**BE PROMPT AT TIME OF HEARING. INQUIRE IN LOCATION'S LOBBY AREA REGARDING HEARING ROOM. If you need directions, call the above number.**

The issue(s) to be considered are:

SHALL THE DEPT OF ENVIRONMENTAL QUALITY NOTICE OF ASSESSMENT OF CIVIL PENALTY DATED AUGUST 1, 2000, BE AFFIRMED, MODIFIED, OR VACATED?

**U.S. Postal Service**  
**CERTIFIED MAIL RECEIPT**  
 (Domestic Mail Only, No Insurance Coverage Provided)

Postmark Here  
12/18/91

Recipient's Name (Please Print Clearly) (to be completed by mailer)  
 Reggie Huff

Street, Apt. No., or PO Box No.  
 51377 SW O  
 Scappoose OR 97149

City, State, ZIP+4  
 PS Form 3811, February 2000

Postage	\$ 660417
Certified Fee	Anselm
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$

I also wish to receive the following services (for an extra fee):

1.  Addressee's Address  
 2.  Restricted Delivery

Receipt Requested\* on the mailpiece below the article number. Receipt will show to whom the article was delivered and the date

Issued to:  
 Reggie Huff  
 7 SW Old Portland Rd  
 Scappoose OR 97056-4018

4a. Article Number  
 3328 1196

4b. Service Type  
 Registered  Certified  
 Express Mail  Insured  
 Return Receipt for Merchandise  COD

7. Date of Delivery  
 12-19-92

8. Addressee's Address (Only if requested and fee is paid)  
 Reggie Huff  
 51377 SW O  
 Scappoose OR 97149

December 1994 102595-99-B-0223 Domestic Return Receipt

**SENDER:**

Complete items 1 and/or 2 for additional services.  
 Complete items 3, 4a, and 4b.  
 Print your name and address on the reverse side of the mailpiece.  
 Attach this form to the front of the mailpiece.  
 Write "Return Receipt Requested" on the reverse side of the mailpiece.  
 The Return Receipt will show to whom the article was delivered.

3. Article Addressed to:  
 Reggie Huff  
 51377 SW O  
 Scappoose OR 97149

5. Received By: (Print Name)  
 Reggie O. Huff

6. Signature (Address or Agent)  
 Reggie O. Huff

PS Form 3811, December 1994

**U.S. Postal Service**  
**CERTIFIED MAIL RECEIPT**  
 (Domestic Mail Only, No Insurance Coverage Provided)

Postmark Here  
12/18/91

Recipient's Name (Please Print Clearly) (to be completed by mailer)  
 Reggie Huff

Street, Apt. No., or PO Box No.  
 51377 SW O  
 Scappoose OR 97149

City, State, ZIP+4  
 PS Form 3811, February 2000

Postage	\$ 660417
Certified Fee	Anselm
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$

Is your RETURN ADDRESS completed on the reverse side?

**SENDER:**

Complete items 1 and/or 2 for additional services.  
 Complete items 3, 4a, and 4b.  
 Print your name and address on the reverse side of the mailpiece.  
 Attach this form to the front of the mailpiece.  
 Write "Return Receipt Requested" on the reverse side of the mailpiece.  
 The Return Receipt will show to whom the article was delivered.

3. Article Addressed to:  
 Susan Greco  
 DEF Enforce  
 4th Ave  
 Portland OR

5. Received By: (Print Name)  
 Susan Greco

6. Signature (Addressee or Agent)  
 Susan Greco

PS Form 3811, December 1994

I also wish to receive the following services (for an extra fee):

1.  Addressee's Address  
 2.  Restricted Delivery

Receipt Requested\* on the mailpiece below the article number. Receipt will show to whom the article was delivered and the date

Issued to:  
 Greco  
 Enforcement  
 4th Ave Ste 400  
 Portland OR 97201-4959

4a. Article Number  
 3328 1097

4b. Service Type  
 Registered  Certified  
 Express Mail  Insured  
 Return Receipt for Merchandise  COD

7. Date of Delivery  
 DEC 20 1991

8. Addressee's Address (Only if requested and fee is paid)  
 Susan Greco

December 1994 102595-99-B-0223 Domestic Return Receipt

**U.S. Postal Service**  
**CERTIFIED MAIL RECEIPT**  
 (Domestic Mail Only, No Insurance Coverage Provided)

Postmark Here  
12/18/91

Recipient's Name (Please Print Clearly) (to be completed by mailer)  
 Susan Greco

Street, Apt. No., or PO Box No.  
 DEF Enforce  
 4th Ave  
 Portland OR

City, State, ZIP+4  
 PS Form 3811, February 2000

Postage	\$ 660417
Certified Fee	Anselm
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$

DEPARTMENT OF ENVIRONMENTAL QUALITY HEARINGS

IMPORTANT INFORMATION FOR PREPARING FOR YOUR HEARING

NOTICE OF CONTESTED CASE RIGHTS AND PROCEDURES

Under ORS 183.413(2), you must be informed of the following:

1. Law that applies. The hearing is a contested case and it will be conducted under ORS Chapter 183 and Oregon Administrative Rules of the Department of Environmental Quality, Chapters 137 and 340.
2. Rights to an attorney. You may represent yourself at the hearing, or be represented by an attorney or an authorized representative, such as a partner, officer, or an employee. If you are a company, corporation, organization or association, you must be represented by an attorney or an authorized representative. Prior to appearing on your behalf, an authorized representative must provide a written statement of authorization. If you choose to represent yourself, but decide during the hearing that an attorney is necessary, you may request a recess. About half of the parties are not represented by an attorney. DEQ will be represented by an Assistant Attorney General or an Environmental Law Specialist.
3. Hearings officer. The person presiding at the hearing is known as the hearings officer. The hearings officer is an employee of the Central Hearing Officer Panel under contract with the Environmental Quality Commission. The hearings officer is not an employee, officer or representative of the agency.
4. Appearance at hearing. If you withdraw your request for a hearing, notify either DEQ or the hearing officer that you will not appear at the hearing, or fail to appear at the hearing, a final default order will be issued. This order will be issued only upon a prima facie case based on DEQ's file. No hearing will be conducted.
5. Address change or change of representative. It is your responsibility to notify DEQ and the hearings officer of any change in your address or a withdrawal or change of your representative.
6. Interpreters. If you have a disability or do not speak English, the hearings officer will arrange for an interpreter. DEQ will pay for the interpreter if (1) you require the interpreter due to a disability or (2) you file with the hearings officer a written statement under oath that you are unable to speak English and you are unable to obtain an interpreter yourself. You must provide notice of your need for an interpreter at least 14 days before the hearing.
7. Witnesses. All witnesses will be under oath or affirmation to tell the truth. All parties and the hearings officer will have the opportunity to ask questions of all witnesses. DEQ or the hearings officer will issue subpoenas for witnesses on your behalf if you show that their testimony is relevant to the case and is reasonably needed to establish your position. You are not required to

EXHIBIT # 1A

issue subpoenas for appearance of your own witnesses. If you are represented by an attorney, your attorney may issue subpoenas. Payment of witness fees and mileage is your responsibility.

8. Order of evidence. A hearing is similar to a court trial but less formal. The purpose of the hearing is to determine the facts and whether DEQ's action is appropriate. In most cases, DEQ will offer its evidence first in support of its action. You will then have an opportunity to present evidence to oppose DEQ's evidence. Finally, DEQ and you will have an opportunity to rebut any evidence.

9. Burden of presenting evidence. The party who proposes a fact or position has the burden of proving that fact or position. You should be prepared to present evidence at the hearing which will support your position. You may present physical, oral or written evidence, as well as your own testimony.

10. Admissible evidence. Only relevant evidence of a type relied upon by reasonably prudent persons in the conduct of their serious affairs will be considered. Hearsay evidence is not automatically excluded. Rather, the fact that it is hearsay generally affects how much the Commission will rely on it in reaching a decision.

There are four kinds of evidence:

- a. Knowledge of DEQ and the hearings officer. DEQ or the hearings officer may take "official notice" of conclusions developed as a result of its knowledge in its specialized field. This includes notice of general, technical or scientific facts. You will be informed should DEQ or the hearings officer take "official notice" of any fact and you will be given an opportunity to contest any such facts.
- b. Testimony of witnesses. Testimony of witnesses, including you, who have knowledge of facts may be received in evidence.
- c. Writings. Written documents including letters, maps, diagrams and other written materials may be received in evidence.
- d. Experiments, demonstrations and similar means used to prove a fact. The results of experiments and demonstrations may be received in evidence if they are reliable.

11. Objections to evidence. Objections to the consideration of evidence must be made at the time the evidence is offered. Objections are generally made on one of the following grounds:

- a. The evidence is unreliable;
- b. The evidence is irrelevant or immaterial and has no tendency to prove or disprove any issue involved in the case;
- c. The evidence is unduly repetitious and duplicates evidence already received.

12. Continuances. There are normally no continuances granted at the end of the hearing for you to present additional testimony or other evidence. Please make sure you have all your evidence ready for the hearing. However, if you can show that the record should remain open for additional evidence, the hearings officer may grant you additional time to submit such evidence.

13. Record. A record will be made of the entire proceeding to preserve the testimony and other evidence for appeal. This will be done by tape recorder. This tape and any exhibits received in the record will be the whole record of the hearing and the only evidence considered by the hearings officer. A copy of the tape is available upon payment of a minimal amount, as established by DEQ. A transcript of the record will not normally be prepared, unless there is an appeal to the Court of Appeals.

14. Proposed and Final Order. The hearing officer has the authority to issue a proposed order based on the evidence at the hearing. The proposed order will become the final order of the Environmental Quality Commission if you do not petition the Commission for review within 30 days of service of the order. The date of service is the date the order is mailed to you, not the date that you receive it. The Department must receive your petition seeking review within 30 days. See OAR 340-011-0132.

15. Appeal. If you are not satisfied with the decision of the Commission, you have 60 days from the date of service of the order, to appeal this decision to the Court of Appeals. See ORS 183.480 *et seq.*



# Oregon

John A. Kitzhaber, M.D., Governor

Department of Environmental Quality

811 SW Sixth Avenue  
Portland, OR 97204-1390  
(503) 229-5696  
TDD (503) 229-6993

CERTIFIED MAIL 7099 3220 0004 8966 5239

August 1, 2000

Mr. Reggie D. Huff  
51377 SW Old Portland Road  
Scappoose, OR 97056

Re: Notice of Assessment of  
Civil Penalty  
No. WQ/I-NWR-00-125  
Columbia County

Dear Mr. Huff:

At some time during the Spring of 1999, you disposed of 400-500 gallons of waste antifreeze solution down a dry well at 51377 SW Old Portland Road in Scappoose. The solution contained approximately 10% ethylene glycol. The dry well was part of a system built to manage storm water from the parking lot and was designed to inject storm water into groundwater.

Many communities and individuals in Oregon use groundwater for drinking or other domestic, industrial or agricultural uses. Contamination of these sources threatens the health of these people and impacts their welfare when they must secure other sources of water. Because groundwater ultimately discharges to the surface, wastes disposed into the subsurface also threaten the environment, including endangered species. For these reasons, the use of underground disposal wells for disposal of wastes is strictly regulated and requires a permit from the Department. You violated Oregon water quality law because you did not have a permit for the discharge. Furthermore, you likely could not have obtained a permit for the disposal because the Department does not issue such permits where a more protective means of disposal is available.

You are liable for a civil penalty assessment because you violated Oregon environmental law. In the enclosed Notice, I have assessed a civil penalty of \$4,200. In determining the amount of the penalty, I used the procedures set forth in Oregon Administrative Rule (OAR) 340-012-0045. The Department's findings and civil penalty determination are attached to the Notice as Exhibit No. 1.

EXHIBIT # 2



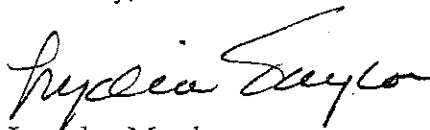
Appeal procedures are outlined in Section IV of the Notice. If you fail to either pay or appeal the penalty within twenty (20) days, a Default Order will be entered against you.

If you wish to discuss this matter, or if you believe there are mitigating factors that 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.

I look forward to your cooperation in complying with Oregon environmental law in the future. However, if any additional violations occur, you may be assessed additional civil penalties. Copies of referenced rules are enclosed. Also enclosed is a copy of the Department's internal management directive regarding civil penalty mitigation for Supplemental Environmental Projects (SEPs). If you are interested in having a portion of the civil penalty fund an SEP, you should review the enclosed SEP directive. Exceptional pollution prevention could also result in partial penalty mitigation.

If you have any questions about this action, please contact Roger Dilts with the Department's Enforcement Section in Portland at (503) 229-5692 or toll-free at 1-800-452-4011, enforcement extension 5692.

Sincerely,



Langdon Marsh  
Director

e:\winword\huff\cvr\tr

Enclosures

cc: Anne Cox, Northwest Region, DEQ  
Barbara Priest, HQ, DEQ  
Water Quality Division, DEQ  
Oregon Department of Justice  
U.S. Environmental Protection Agency  
Environmental Quality Commission  
Columbia County District Attorney

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

3 IN THE MATTER OF:  
4 REGGIE D. HUFF,

5 Respondent.

)  
) NOTICE OF ASSESSMENT  
) OF CIVIL PENALTY  
) No. WQ/I-NWR-00-125  
)  
) COLUMBIA COUNTY

7 I. AUTHORITY

8 This Notice of Assessment of Civil Penalty (Notice) is issued to Respondent Reggie D.  
9 Huff (Huff) by the Department of Environmental Quality (Department) pursuant to Oregon Revised  
10 Statutes (ORS) 468.090 through 468.140, ORS Chapter 183 and Oregon Administrative Rules  
11 (OAR) Chapter 340, Divisions 11 and 12.

12 II. VIOLATIONS

13 Respondent violated ORS 468B.025(1)(a) by causing pollution of any waters of the state.  
14 Specifically, during the Spring of 1999, Reggie D. Huff disposed of approximately 500 gallons of  
15 waste antifreeze into a dry well that discharged to groundwater, waters of the state, in Scappoose,  
16 Oregon. The waste, containing approximately 10% ethylene glycol, is a substance that will render  
17 waters of the state detrimental to beneficial uses. This is a Class 1 violation pursuant to OAR 340-  
18 012-0055(1)(b).

19 III. ASSESSMENT OF CIVIL PENALTIES

20 The Department imposes a civil penalty of \$4,200 for the violation in Section II, above.

21 The findings and determination of Respondent's civil penalty, pursuant to OAR 340-012-  
22 0045, are attached and incorporated as Exhibit No. 1.

23 IV. OPPORTUNITY FOR CONTESTED CASE HEARING

24 Respondent has the right to have a formal contested case hearing before the Environmental  
25 Quality Commission (Commission) or its hearings officer regarding the matters set out above, at  
26 which time Respondent may be represented by an attorney and subpoena and cross-examine  
27 witnesses. **The request for hearing must be made in writing, must be received by the**

CERTIFICATE OF MAILING

I hereby certify that I served Reggie D Huff

Notice of Assessment of Civil Penalty Case No. WQ/I-NWR-00-125

Reggie D Huff

51377 SW Old Portland Rd

Scappoose OR 97056

by mailing a true copy of the above by placing it in a sealed envelope, with postage prepaid, at the U.S. Post-Office in Portland, Oregon, on August 4, 2000

Peggy Helolon  
Department of Environmental Quality

U.S. Postal Service  
**CERTIFIED MAIL RECEIPT**  
 (Domestic Mail Only - No Insurance Coverage Provided)

7099 3220 0004 8966 5239

Article Sent To

Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$

Postmark  
Here

Name (Please Print Clearly) (To be completed by mailer)  
 Reggie D Huff  
 Street, Apt. No., or PO Box No.  
 51377 SW Old Portland Rd  
 City, State, ZIP+4  
 Scappoose OR 97056

PS Form 3800, July 1999 See Reverse for Instructions  
**CERTIFIED MAIL RECEIPT**  
 (Domestic Mail Only - No Insurance Coverage Provided)

7099 3220 0004 8966 5239

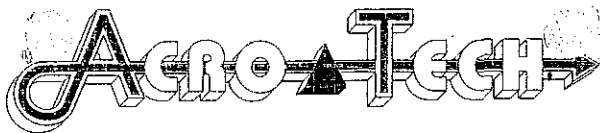
Article Sent To

Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$

Postmark  
Here

Name (Please Print Clearly) (To be completed by mailer)  
 Reggie D Huff  
 Street, Apt. No., or PO Box No.  
 51377 SW Old Portland Rd  
 City, State, ZIP+4  
 Scappoose OR 97056

PS Form 3800, July 1999 See Reverse for Instructions



State of Oregon  
Department of Environmental Quality  
Roger Dilts - Enforcement Section  
811 SW Sixth Ave.  
Portland, OR 97204-1390

August 9, 2000

RE: Notice of Assessment of Civil Penalty  
No. WQ/-NWR-00-125 Columbia County

RECEIVED  
AUG 10 2000

STATEWIDE ENFORCEMENT SECTION  
DEPARTMENT OF ENVIRONMENTAL QUALITY

Dear Mr. Dilts:

Please accept this letter as an official notice of my intent to appeal the above case No. WQ/-NWR-00-125.

I am also requesting an informal meeting at your earliest convenience.

Respectfully,

Reggie D. Huff

RECEIVED

OCT 02 2000

EMPLOYMENT HEARINGS

Certified Mail #7099 3220 0005 3984 5864

EXHIBIT # 3

51377  
SW  
OLD  
PORTLAND  
SCOTT  
WOODS  
TAX  
J.WOODS  
L.BUNT

1 **Department's Rules Coordinator within twenty (20) days from the date of service of this**  
2 **Notice, and must be accompanied by a written "Answer" to the charges contained in this**  
3 **Notice.**

4 In the written Answer, Respondent must admit or deny each allegation of fact contained in  
5 this Notice, and must affirmatively allege any and all affirmative claims or defenses to the  
6 assessment of this civil penalty that Respondent may have and the reasoning in support thereof.

7 Except for good cause shown:

- 8 1. Factual matters not controverted will be presumed admitted;
- 9 2. Failure to raise a claim or defense will be presumed to be a waiver of such claim or  
10 defense;
- 11 3. New matters alleged in the Answer will be presumed to be denied unless admitted  
12 in subsequent pleading or stipulation by the Department or Commission.

13 Send the request for hearing and Answer to: **DEQ Rules Coordinator, Office of the**  
14 **Director, 811 S.W. Sixth Avenue, Portland, Oregon 97204.** Following receipt of a request for  
15 hearing and an Answer, the Department will notify Respondent of the date, time and place of the  
16 hearing.

17 Failure to file a timely request for hearing and Answer will result in the entry of a Default  
18 Order for the relief sought in this Notice.

19 Failure to appear at a scheduled hearing or meet a required deadline will result in a  
20 dismissal of the request for hearing and also an entry of a Default Order.

21 The Department's case file at the time this Notice was issued may serve as the record for  
22 purposes of entering the Default Order.

#### 23 V. OPPORTUNITY FOR INFORMAL DISCUSSION

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

VI. PAYMENT OF CIVIL PENALTY

The civil penalty is due and payable ten (10) days after an Order imposing the civil penalty becomes final by operation of law or on appeal. Respondent may pay the penalty before that time. Respondent's check or money order in the amount of \$4,200 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.**

Date

8/11/00

Langdon Marsh, Director



**EXHIBIT 1**  
**WQ/I-NWR-00-125**

**FINDINGS AND DETERMINATION OF RESPONDENT'S CIVIL PENALTY  
PURSUANT TO OREGON ADMINISTRATIVE RULE (OAR) 340-012-0045**

**VIOLATION:**                    Causing pollution of waters of the state

**CLASSIFICATION:**            This is a Class 1 violation pursuant to OAR 340-012-0055(b).

**MAGNITUDE:**                The magnitude of the violation is moderate pursuant to OAR 340-012-0045(1)(a)(B), because there is no selected magnitude for the violation.

**CIVIL PENALTY FORMULA:**    The formula for determining the amount of penalty of each violation is:  
$$BP + [(0.1 \times BP) \times (P + H + O + R + C)] + EB$$

"BP" is the base penalty which is \$3,000 for a Class 1 moderate magnitude violation in the matrix listed in OAR 340-012-0042(1).

"P" is Respondent's prior significant action(s) and receives a value of 0.

"H" is the past history of Respondent in taking all feasible steps or procedures necessary to correct any prior significant action(s) and receives a value of 0.

"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, because the violation was repeated over ten days.

"R" is the cause of the violation and receives a value of 2, because the violation resulted from the Respondent's negligence. Respondent determined that the waste could be disposed of into a sanitary sewer, but failed to take reasonable steps to determine whether the storm drain in which he disposed of the wastes led to a sanitary sewer.

"C" is Respondent's cooperativeness in correcting the violation and receives a value of 0, because the violation could not be corrected.

"EB" is the approximate dollar sum of the economic benefit that the Respondent gained through noncompliance, and receives a value of 0, because Respondent did not delay or avoid any costs in committing the violation.

**PENALTY CALCULATION:**

$$\begin{aligned} \text{Penalty} &= BP + [(0.1 \times BP) \times (P + H + O + R + C)] + EB \\ &= \$3,000 + [(0.1 \times \$3,000) \times (0 + 0 + 2 + 2 + 0)] + \$0 \\ &= \$3,000 + [\$300 \times 4] + \$0 \\ &= \$3,000 + \$1,200 + \$0 \\ &= \$4,200 \end{aligned}$$





# Oregon

John A. Kitzhaber, M.D., Governor

Department of Environmental Quality

811 SW Sixth Avenue  
Portland, OR 97204-1390  
(503) 229-5696  
TDD (503) 229-6993

*end file*

October 30, 2000

CERTIFIED MAIL  
7099 3220 0004 8966 6052

RECEIVED  
NOV 16 2000

Mr. Reggie D. Huff  
51377 S.W. Old Portland Road  
Scappoose, OR 97056

**Employment Hearings**

Re: Amended Notice of Assessment  
of Civil Penalty  
No. WQ/I-NWR-00-125  
Columbia County

Dear Mr. Huff:

On August 1, 2000, the Department of Environmental Quality (the Department) issued you a Notice of Assessment of Civil Penalty for your disposal of 400-500 gallons of waste antifreeze solution down a dry well at 51377 S.W. Old Portland Road in Scappoose. The Department alleged that this conduct was a Class I violation because you caused pollution of waters of the state.

The Department's subsequent review of the evidence shows that the dry well is designed to allow storm water to percolate through the subsurface soils to groundwater and that the groundwater is deep in that area. Because it appears that your conduct would be better described as the Class II violation of placing the wastes in a location where such wastes are likely to escape or be carried into the waters of the state by any means, the Department has issued the attached Amended Notice of Assessment of Civil Penalty.

The Amended Notice assesses a civil penalty of \$1,400. In determining the amount of the penalty, I used the procedures set forth in Oregon Administrative Rule (OAR) 340-012-0045. The Department's findings and civil penalty determination are attached to the Amended Notice as Amended Exhibit I.

Because you have already submitted a written answer and because we have already discussed the facts and mitigating information, no action is required of you at this time. However, you may amend your answer in response to the Amended Notice if you wish within twenty (20) days of the date of the Amended Notice. Also pursuant to your request, we will ask that a date and time

EXHIBIT #

4

DEQ-1

Reggie D. Huff  
Case No. WQ/I-NWR-00-125  
Page 2

be set for a contested case hearing. The Hearing Officer will contact both of us to determine a mutually convenient time.

If you have any questions about this action, please contact Susan Greco with the Department's Enforcement Section in Portland at 229-5152 or toll-free at 1-800-452-4011, enforcement extension 5152.

Sincerely,



Lydia Taylor  
Interim Director

Enclosures

cc: Anne Cox, Northwest Region, DEQ  
WQ Division, DEQ  
Department of Justice  
Environmental Protection Agency  
Environmental Quality Commission  
Columbia County District Attorney



1 witnesses. **The request for hearing must be made in writing, must be received by the**  
2 **Department within twenty (20) days from the date of service of this Notice, and must be**  
3 **accompanied by a written "Answer" to the charges contained in this Notice.**

4 In the written Answer, Respondent shall admit or deny each allegation of fact contained in  
5 this Notice, and shall affirmatively allege any and all affirmative claims or defenses to the  
6 assessment of this civil penalty that Respondent may have and the reasoning in support thereof.

7 Except for good cause shown:

8 1. Factual matters not controverted shall be presumed admitted;

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

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

13 Send the request for hearing and Answer to: **Deborah Nesbit, Northwest Region Office,**  
14 **2020 S.W. Fourth Avenue, Portland, Oregon 97201.** Following receipt of a request for hearing  
15 and an Answer, Respondent will be notified of the date, time and place of the hearing.

16 Failure to file a timely request for hearing and Answer may result in the entry of a Default  
17 Order for the relief sought in this Notice.

18 Failure to appear at a scheduled hearing or meet a required deadline may result in a  
19 dismissal of the request for hearing and also an entry of a Default Order.

20 The Department's case file at the time this Notice was issued may serve as the record for  
21 purposes of entering the Default Order.

22 V. OPPORTUNITY FOR INFORMAL DISCUSSION

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

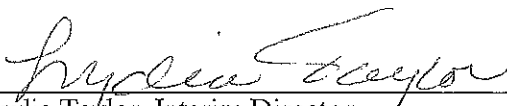
26 ////

27 ////

VI. PAYMENT OF CIVIL PENALTY

The civil penalty is due and payable ten (10) days after an Order imposing the civil penalty becomes final by operation of law or on appeal. Respondent may pay the penalty before that time. Respondent's check or money order in the amount of \$1,400 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.**

10/30/00  
Date

  
Lydia Taylor, Interim Director

## AMENDED EXHIBIT 1

### FINDINGS AND DETERMINATION OF RESPONDENT'S CIVIL PENALTY PURSUANT TO OREGON ADMINISTRATIVE RULE (OAR) 340-012-0045

VIOLATION: Placing wastes such that the wastes are likely to enter public waters by any means.

CLASSIFICATION: This is a Class II violation pursuant to OAR 340-012-0055(2)(c).

MAGNITUDE: The magnitude of the violation is moderate pursuant to OAR 340-012-0045(1)(a)(B), because there is no selected magnitude for this violation.

CIVIL PENALTY FORMULA: The formula for determining the amount of penalty of each violation is:  
$$BP + [(0.1 \times BP) \times (P + H + O + R + C)] + EB$$

"BP" is the base penalty, which is \$1000 for a Class II moderate magnitude violation in the matrix listed in OAR 340-012-0042.

"P" is Respondent's prior significant action(s) and receives a value of 0.

"H" is the past history of Respondent in taking all feasible steps or procedures necessary to correct any prior significant action(s) and receives a value of 0.

"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 because the violation was repeated over approximately ten days.

"R" is the cause of the violation and receives a value of 2 because the violation resulted from the Respondent's negligence. Respondent determined that the waste could be disposed of into a sanitary sewer, but failed to take reasonable steps to determine whether the storm drain in which he disposed of the wastes led to a sanitary sewer.

"C" is Respondent's cooperativeness in correcting the violation and receives a value of 0 because the violation could not be corrected.

"EB" is the approximate dollar sum of the economic benefit that the Respondent gained through noncompliance according to OAR 340-012-0045(1)(c)(F), and receives a value of 0 because Respondent did not delay or avoid any costs in committing the violation.

#### PENALTY CALCULATION:

$$\begin{aligned} \text{Penalty} &= BP + [(0.1 \times BP) \times (P + H + O + R + C)] + EB \\ &= \$1000 + [(0.1 \times \$1000) \times (0 + 0 + 2 + 2 + 0)] + (\$0) \\ &= \$1000 + [(\$100 \times 4)] + \$0 \\ &= \$1000 + \$400 + \$0 \\ &= \$1400 \end{aligned}$$



CITY OF SCAPPOOSE

33568 E. COLUMBIA AVE.  
P.O. DRAWER "P"  
SCAPPOOSE, OREGON 97056  
(503) 543-7146  
FAX: (503) 543-2955

December 10, 1999

To whom it may concern:

I had a conversation with Reggie D. Huff in the Spring of 1999 regarding the discharge of 500 gallons of 10% antifreeze solution into the Cities sanitary sewer system. I approved this discharge, but recommend that it be done in small amounts over a weeks time. Any questions regarding this matter, please contact Steve Wabschall at (503) 543-7183.

Regards,

Steve Wabschall  
Operations Superintendent

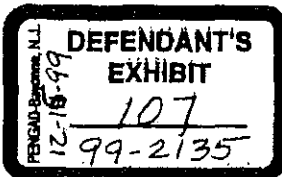


EXHIBIT # 6

*Our goal is to provide courteous, efficient service with team leadership and community involvement, in order to enhance the livability and well being of our citizens.*



# EXHIBIT 7

*file*



# Oregon

John A. Kitzhaber, M.D., Governor

Department of Environmental Quality  
Northwest Region  
2020 SW Fourth Avenue  
Suite 400  
Portland, OR 97201-4987  
(503) 229-5263 Voice  
TTY (503) 229-5471

April 26, 2000

Reggie D. Huff  
51377 Old Portland Road  
Scappoose, Oregon 97056

**RECEIVED**  
FEB 13 2001

Employment Hearings

Re: WQ- Columbia County  
51377 Old Portland Road  
Improper disposal of wastewater  
WQ-NWR-00-44  
NOTICE OF NONCOMPLIANCE

Dear Mr. Huff:

As documented in a December 1999 court transcript, you admitted that in the spring of 1999, you dumped about 450 gallons of wastewater from an engine cooling system into a storm drain in the parking lot of property at 51377 Old Portland Road, Scappoose. Other testimony in court indicates the city had instructed you to dispose of the material in small quantities to sanitary sewer. The associated building on the property is in fact connected to sanitary sewer.

The Department finds the following violations have occurred as a result of this incident:

Oregon Revised Statute (ORS) 468B.025 Except as provided in ORS 468B.050 or 468B.053, no person shall ...cause to be placed any wastes in a location where such wastes are likely to escape or be carried into the waters of the state by any means. The definition of "waters of the state" includes wells and groundwater, as well as surface waters. This is a Class II violation of Oregon's Water Quality laws and regulations.

Oregon Administrative Rule (OAR) 340-0045-0015—Without first obtaining a permit, no person shall discharge wastes from an industrial or commercial establishment to waters of the state. This is a Class I violation.

Oregon Administrative Rule (OAR) 340-044-0015(1) After the effective date of these rules, no person shall construct, place in operation, or operate any waste disposal well without first obtaining a WPCF (Water Pollution Control Facilities) permit from the Department unless the waste disposal well is exempt by section (2) of this rule. This is a Class I violation.

EXHIBIT # 7

These are serious violations of Oregon environmental law. Therefore, we are referring this violation to the Department's Enforcement Section with a recommendation to initiate a formal enforcement action. A formal enforcement action may include a civil penalty assessment for each day of violation.

Should you have any questions, please contact Anne Cox at (503) 229-6653.

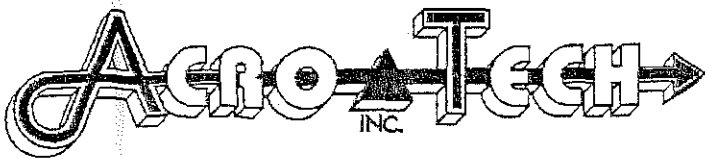
Sincerely,



Robert P. Baumgartner  
Water Quality Manager  
Northwest Region

cc: DEQ/Enforcement  
DEQ/HQ/WQ/Barbara Priest  
Steve Wabschall, Operation Superintendent, City of Scappoose  
Hal Wilson, Land Development Services, County Courthouse, St. Helens

# EXHIBIT 8



51377 SW Old Portland Rd.  
Scappoose, OR 97056  
(503)543-8220; Fax: (503)543-8221

Department of Environmental Quality  
Northwest Region  
2020 SW Fourth Ave.  
Suite 400  
Portland, OR 97201-4987  
(503)229-5263

DEPT OF ENVIRONMENTAL QUALITY  
RECEIVED

MAY 08 2000

ATT: Ms. Cox

May 3, 2000

NORTHWEST REGION

Dear Ms. Cox:

We are in receipt of a letter dated April 26, 2000 from Mr. Robert P. Baumgartner. As per our phone conversation of 4/27/2000 I am responding to the letter to you directly.

The underlying facts, as presented in the letter, are not in dispute. I did, in fact, dump 450-500 gallons of wastewater in the storm drain of our parking lot, divided into 5-6 episodes, over approximately a 10 day period. However, there are more facts that may be relevant which I am respectfully submitting at this time.

First, I actively sought approval from the appropriate authorities. I first called someone at DEQ. I was told that this might be a substance that could be handled by the local sewer system. I then contacted Steve Wabschall at the Scappoose Water Department, and received approval as noted in the letter.

The concentration of ethylene glycol was highly diluted originally at 10-11%. The solution was exposed to the outside atmosphere for over two years prior to dumping. Although I am not a chemist I understand that ethylene glycol is in the family of alcohol and in the exposed state would experience some evaporation as well as a tendency to become inert due to oxidation in a relatively short period of time.

You asked if the water was drinkable, besides not being appealing to look at. While I cannot speak directly to that question, my sense is that someone could drink the solution without getting deathly ill. That being said, I will admit that I personally would not want to drink it given the choice.

I must apologize, and I am somewhat embarrassed to admit that I was apparently ignorant as to the definition of a sewer. After years of watching TV shows like the "Honeymooners", where Ed Norton spoke of working "down in the sewer", and other movies depicting all kinds of goings on in the city's sewer system down under manhole covers, I believed I understood what the city sewer system is. Add to this the fact that I have personally witnessed storm drains draining into this "sewer system" and you get the makings of an honest mistake.

ACRO-TECH and I myself are committed to developing products that help the environment. I pride myself in the fact that, on a highly competitive basis, we were awarded a research contract by the EPA in 1992 for one of our innovations. I have real concerns about MTBE, which you and I discussed. I would never intentionally violate environmental laws, or their reasonable tenets.

Lastly, the people who filed the complaint against us did not do so out of concern for the environment. In fact, I can assure you their intentions were less than honorable. I have enclosed a copy of our latest offering circular. Please read pages 9-11. They will give you an overview of their intentions.

I first learned about our mistake in a meeting I had with Mr. Wabschall and other city employees in early December 1999. One of the employees spoke of firsthand knowledge that our storm drain was not tied into any drainage system, but was, in fact, a "ground trap".

EXHIBIT #

8

In light of these facts I have some questions as to whether this is a violation under the statutes referenced in the letter. In any event, I would have reservations about the third statute referenced.

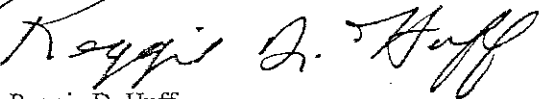
If I have, in fact, violated the DEQ statutes all I can do is throw myself upon your mercy and tell you I am sincerely sorry. It was an accident, but I am still responsible, and I promise it will not happen again.

Even if it is not a violation, I still beg your forgiveness for the mistake. I am generally a thorough person, and it won't happen again.

Your fair review of these facts is most appreciated and respected.

Please call or write if you have any further questions.

Sincerely,

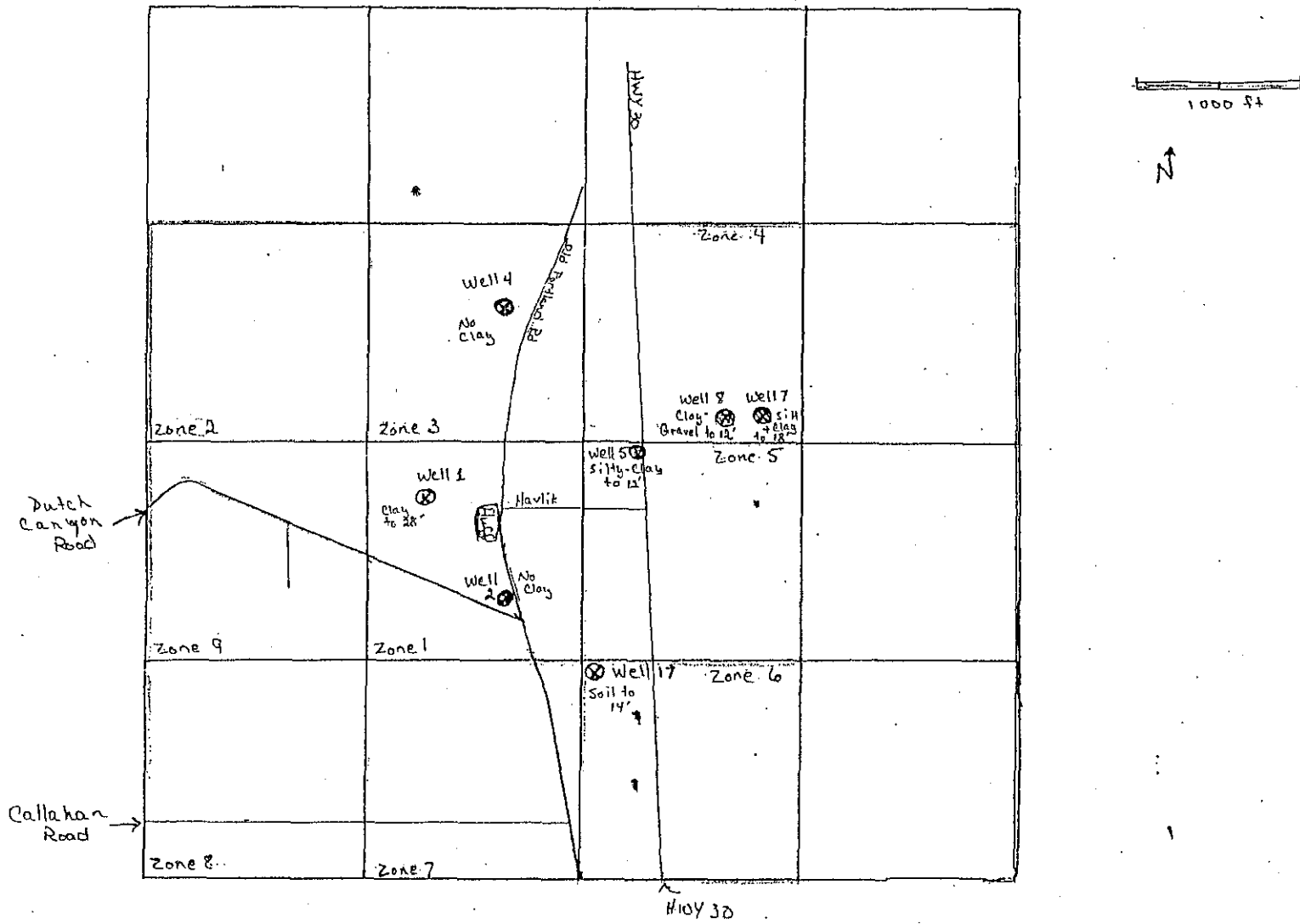
A handwritten signature in cursive script that reads "Reggie D. Huff". The signature is written in dark ink and is positioned above the typed name.

Reggie D. Huff  
President

RDH/lgh  
Enclosure

Reggie Huff

Section 13, T3N, R2W



Well Records within Quarter-Quarter of Section, "Zones" 1 - 9.

**Zone 1:**

- COLU2944 (Well 1): Clay to 28', then 5' boulders, 13' clay, and WB sand.
- \*COLU50410 (Well 2): [Mon. well] No clay to 148'.
- COLU 3105: Clay to 35', then 43 ft. sandy clay.

**Zone 2:**

No wells specifically located in zone.

**Zone 3:**

COLU3109 (Well 4): No clay.

**Zone 4:**

- COLU726 (Well 7): Silt-clay, silt to 18'; Water found at 10'.
- COLU849 (Well 8): Clay-gravel to 12'; Water found at 12'.
- COLU3102: Clay to 25'; Water found at 45'.

**Zone 5:**

- \*COLU50690 (Well 5): Silty clay to 12'.

**Zone 6:**

COLU3110 (Well 17): "Soil" to 14'.

**Zone 7:**

- COLU3087 & COLU3084: Clay to 25'.
- COLU3107: Clay to 19'.

**Zone 8:**

COLU3082: Silty clay & clay to 26'.

**Zone 9:**

COLU3106: Clay(?) to 25'.

**Zone 1 + 9 (N1/2-SW1/4):**

- \*COLU100: Clay to 22'.
- COLU3090: Clay to 30'.
- COLU3092: Clay to 11'.

**Zone 8 + 9 (S1/2-SW1/4):**

- COLU3086: Clay to 20'.
- COLU3095: Clay to 20'.

EXHIBIT 9

# TopoZone.com

## Find Super Products.

Type & Click

Get a Map

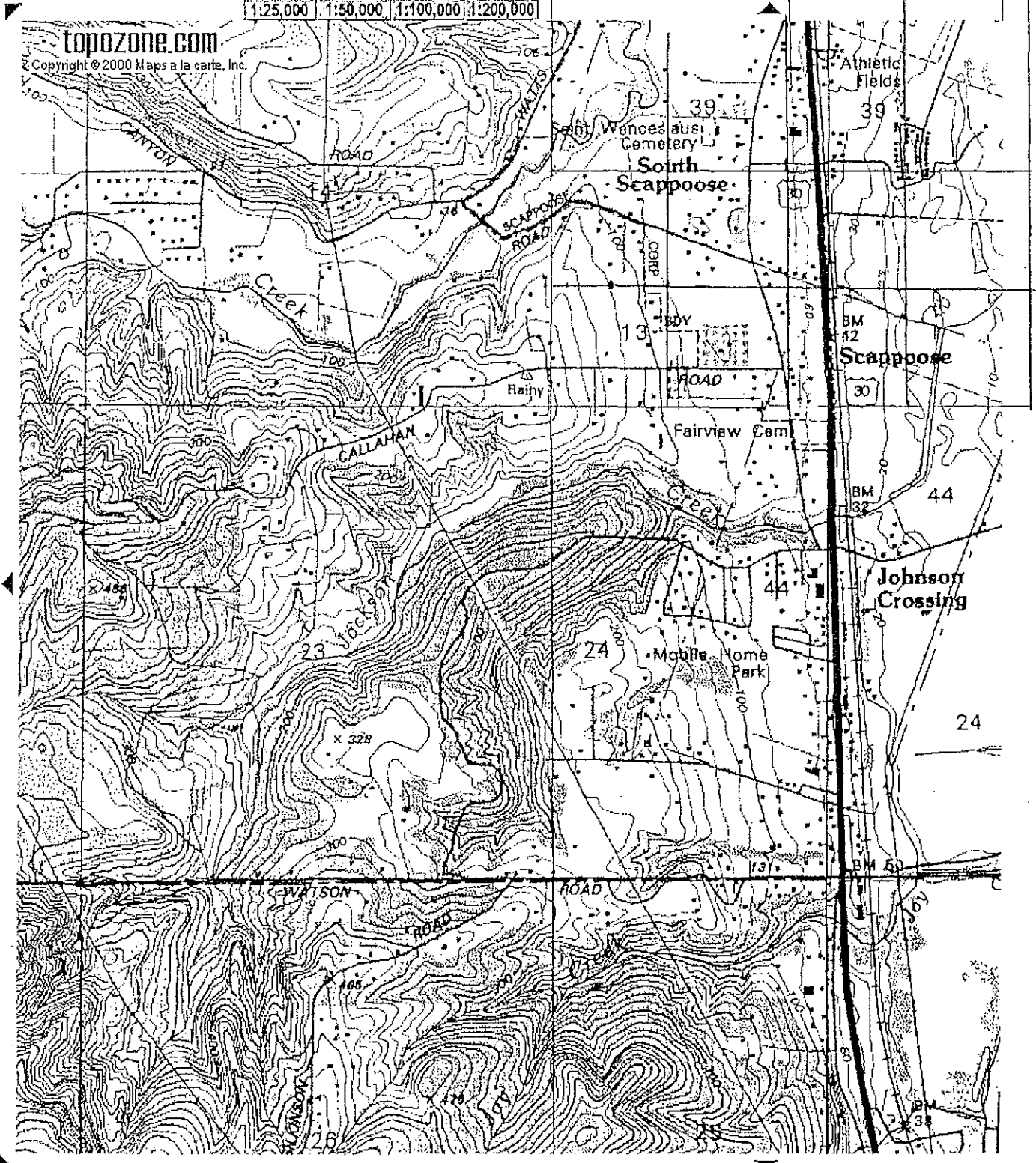
What's New?

Partners

Info

Map target is 45.7337°N, 122.8762°W - UTM Zone 10, N 5064249, E 509632  
Exact center of display is UTM Zone 10, N 5063871, E 509524

Show Quad Names





STATE OF OREGON  
MONITORING WELL REPORT  
(as required by ORS 537.765 & OAR 690-240-095)

COLU by map attached  
50410 WELL # 104415  
Start Card # 87597

OWNERS: GEORGE B. & MIKE D. HAYEMEN

(1) OWNER/PROJECT: WELL NO. 104415  
Name: ~~XXXXXXXXXXXXXXXXXXXX~~  
Address: P.O. Box # 1087  
City: Scappoose, State OR, Zip 97056

(6) LOCATION OF WELL By legal description  
Well Location: County Columbia  
Township 3N (N or S) Range 2W (E or W) Section 13  
1. NE 1/4 of SW 1/4 of above section.  
2. Street address of well location: Intersection of Dutchman's Rd & Old Hwy 50  
3. Tax lot number of well location: 0203302 #1000 Scappoose OR  
4. ATTACH MAP WITH LOCATION IDENTIFIED.

(2) TYPE OF WORK:  
 New construction  Repair  Recondition  
 Conversion  Deepening  Abandonment

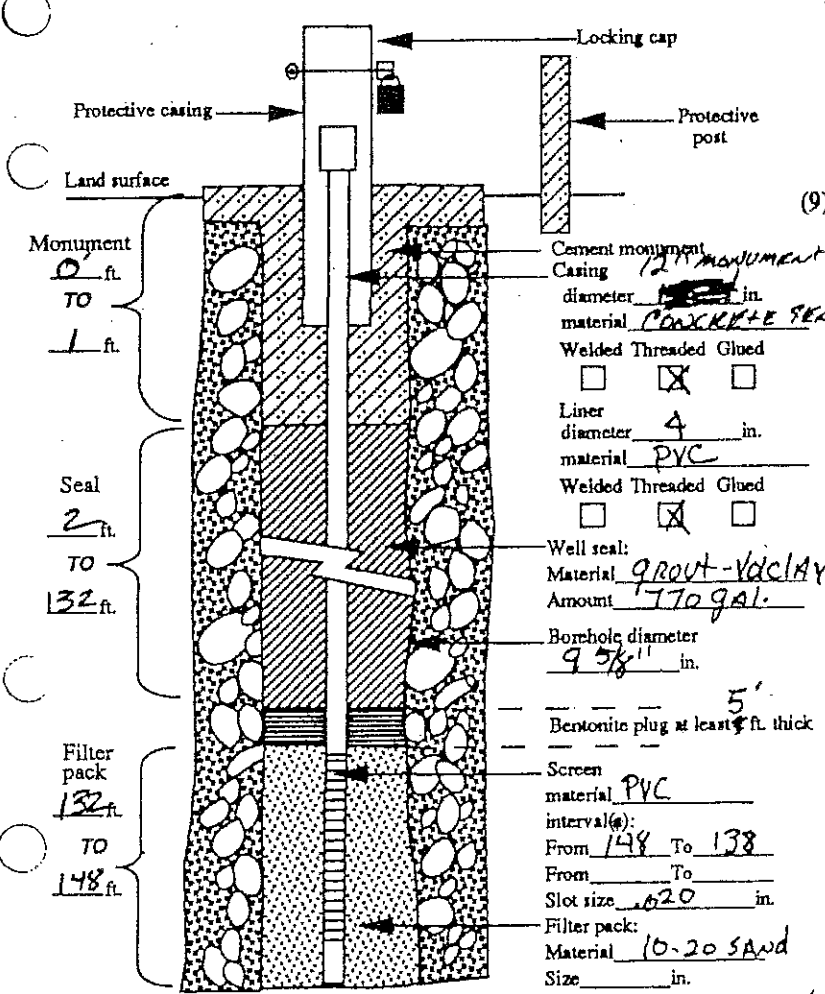
(7) STATIC WATER LEVEL:  
52 Ft. below land surface. Date 8-14-96  
Artesian Pressure \_\_\_\_\_ lb/sq. in. Date \_\_\_\_\_

(3) DRILLING METHOD  
 Rotary Air  Rotary Mud  Cable  
 Hollow Stem Auger  Other \_\_\_\_\_

(4) BORE HOLE CONSTRUCTION  
Special Standards Yes No    
Depth of completed well 148 ft.

(8) WATER BEARING ZONES:  
Depth at which water was first found 52'

From	To	Est. Flow Rate	SWL
76'	80'	5-6 gpm	
140'	148'	50+	



(9) WELL LOG: Ground elevation \_\_\_\_\_

Material	From	To	SWL
SAND, GRAVEL, SILT	0	76'	
Cobbles			
SAND, GRAVEL, SILT	76'	82'	
Cobbles - WET			
SAND, GRAVEL, COBBLES	82'	140'	✓
WET SILT			
SAND, GRAVEL + COBBLES NO SILT			
WET	140'	148'	

(5) WELL TEST:  
 Pump  Bailor  Air  Flowing Artesian  
Permeability \_\_\_\_\_ Yield 50+ GPM  
Conductivity \_\_\_\_\_ PH \_\_\_\_\_  
Temperature of water 56 °F Depth artesian flow found \_\_\_\_\_ ft.  
Was water analysis done?  Yes  No  
By whom? \_\_\_\_\_  
Depth of strata to be analyzed. From \_\_\_\_\_ ft to \_\_\_\_\_ ft.  
Remarks: \_\_\_\_\_

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WATER RESOURCES DEPT.  
SALEM OREGON

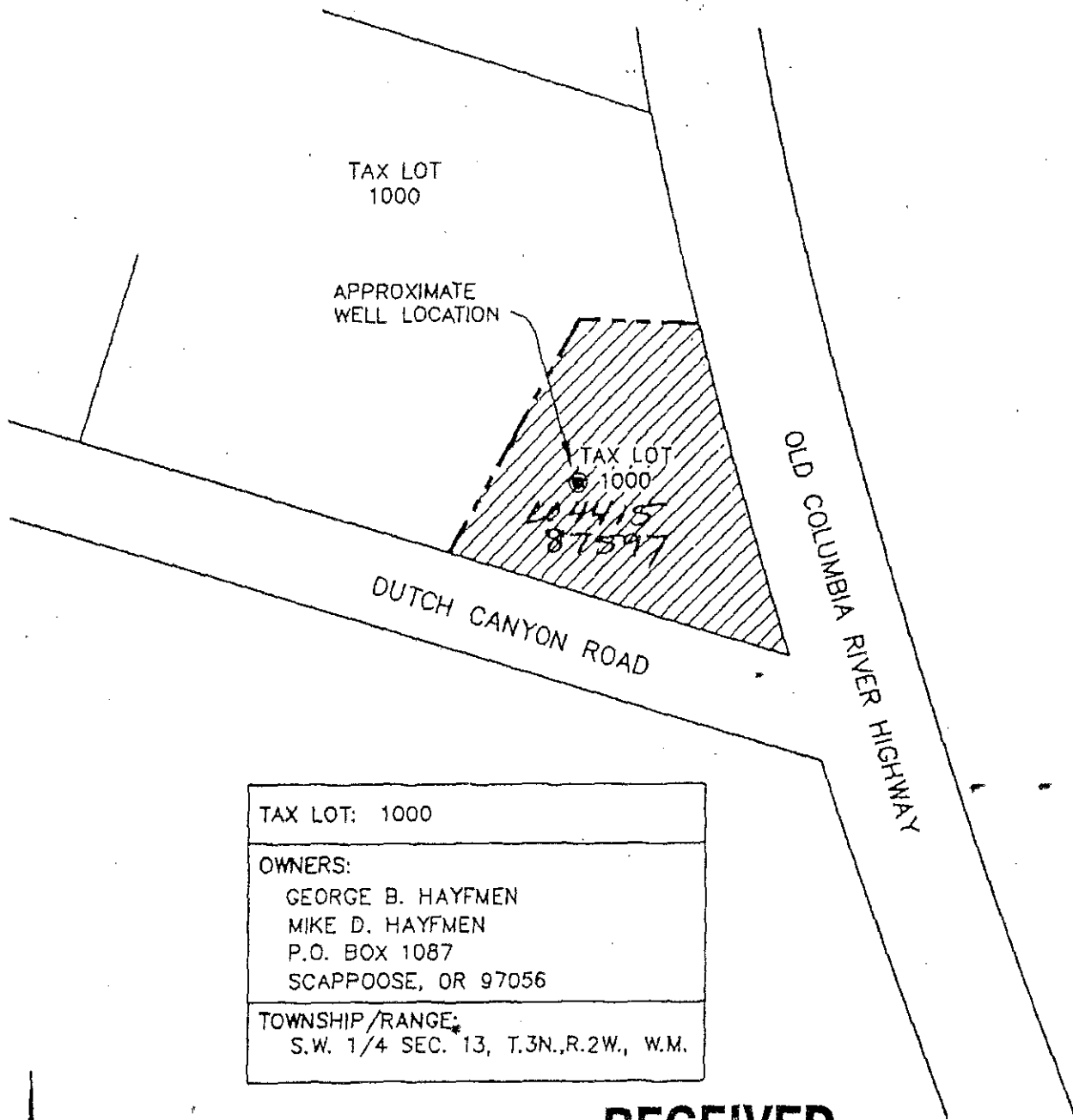
Date started 8-12-96 Completed 8-14-96

(unbonded) Monitor Well Constructor Certification:  
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to the best knowledge and belief.  
Signed George B. Hayemen MWC Number 10449 Date 8-23-96

(bonded) Monitor Well Constructor Certification:  
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.  
Signed Travis Thornton MWC Number \_\_\_\_\_ Date 8-23-96

Name of supervising Geologist/Engineer TRAVIS THORNTON  
GEOTECHNICAL RESOURCES - OR.





TAX LOT: 1000
OWNERS: GEORGE B. HAYFMEN MIKE D. HAYFMEN P.O. BOX 1087 SCAPPOOSE, OR 97056
TOWNSHIP/RANGE: S.W. 1/4 SEC. 13, T.3N.,R.2W., W.M.

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MAR 31 1997

WATER RESOURCES DEPT.  
SALEM, OREGON

DESIGNED BY: PAB	CHECKED BY: RW
DRAWN BY: PAB	SCALE: N.T.S
FILE: 40751001\01\592_OBS.DWG	

PROPERTY MAP  
OBSERVATION WELL SITE  
SCAPPOOSE, OREGON



DATE: 11/96
FIGURE: 1

MONITORING WELL REPORT

Required by ORS 537.765 & OAR 690-240-095

COLL 50409

WELL I.D.# 104415

Start Card # 94126

Instructions for completing this report are on the last page of this form.

1) OWNER/PROJECT:

WELL NO. 104415

Name: George B. Miller, P.D. Box #1087, Paymen, Scappoose, OR

(6) LOCATION OF WELL By legal description

Well Location: County Columbia, Township 3 N, Range 2 W, Section 13, NE 1/4 of SW 1/4 of above section. Address: Patch Canyon Rd & Old Highway 50, Scappoose, OR. Tax lot number: 03003802

(2) TYPE OF WORK:

- Conversion, Abandonment

(3) DRILLING METHOD

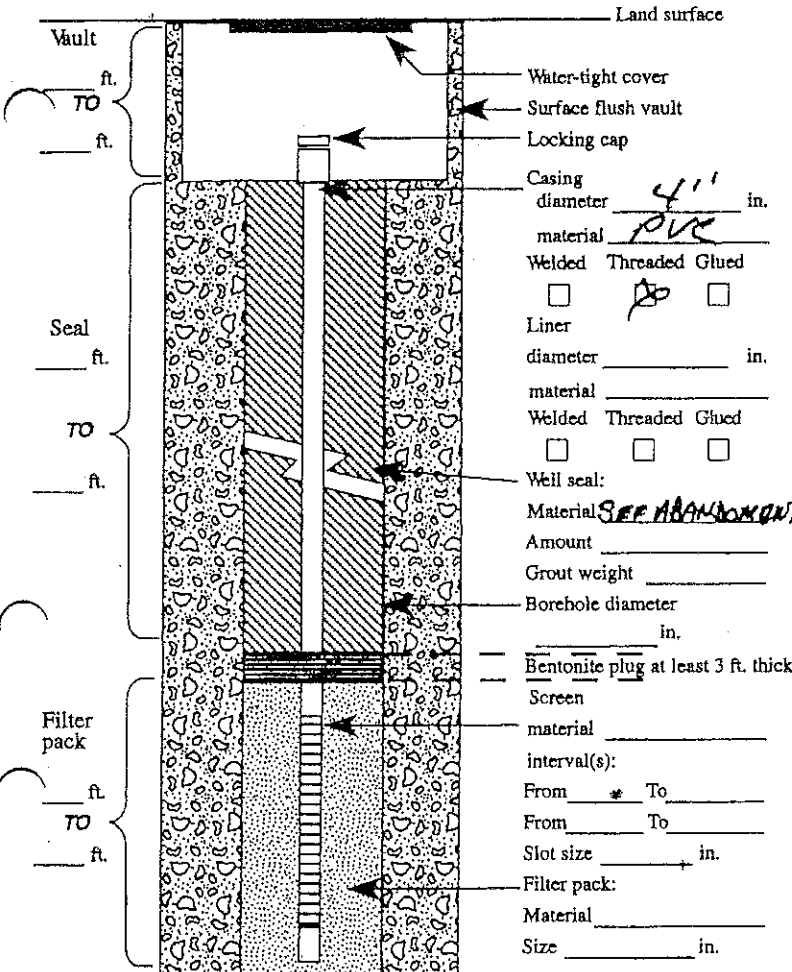
- Other

(7) STATIC WATER LEVEL:

n/a

(4) BORE HOLE CONSTRUCTION

Special Standards Yes No, Depth of completed well 150 ft.



(8) WATER BEARING ZONES:

Table with columns: From, To, Est. Flow Rate, SWL. n/a

(9) WELL LOG:

Table with columns: Material, From, To, SWL. Includes 'Volclay grout' and 'gROUT casing in place'.

RECEIVED MAR 31 1997 WATER RESOURCES DEPT. SALEM, OREGON

(5) WELL TEST

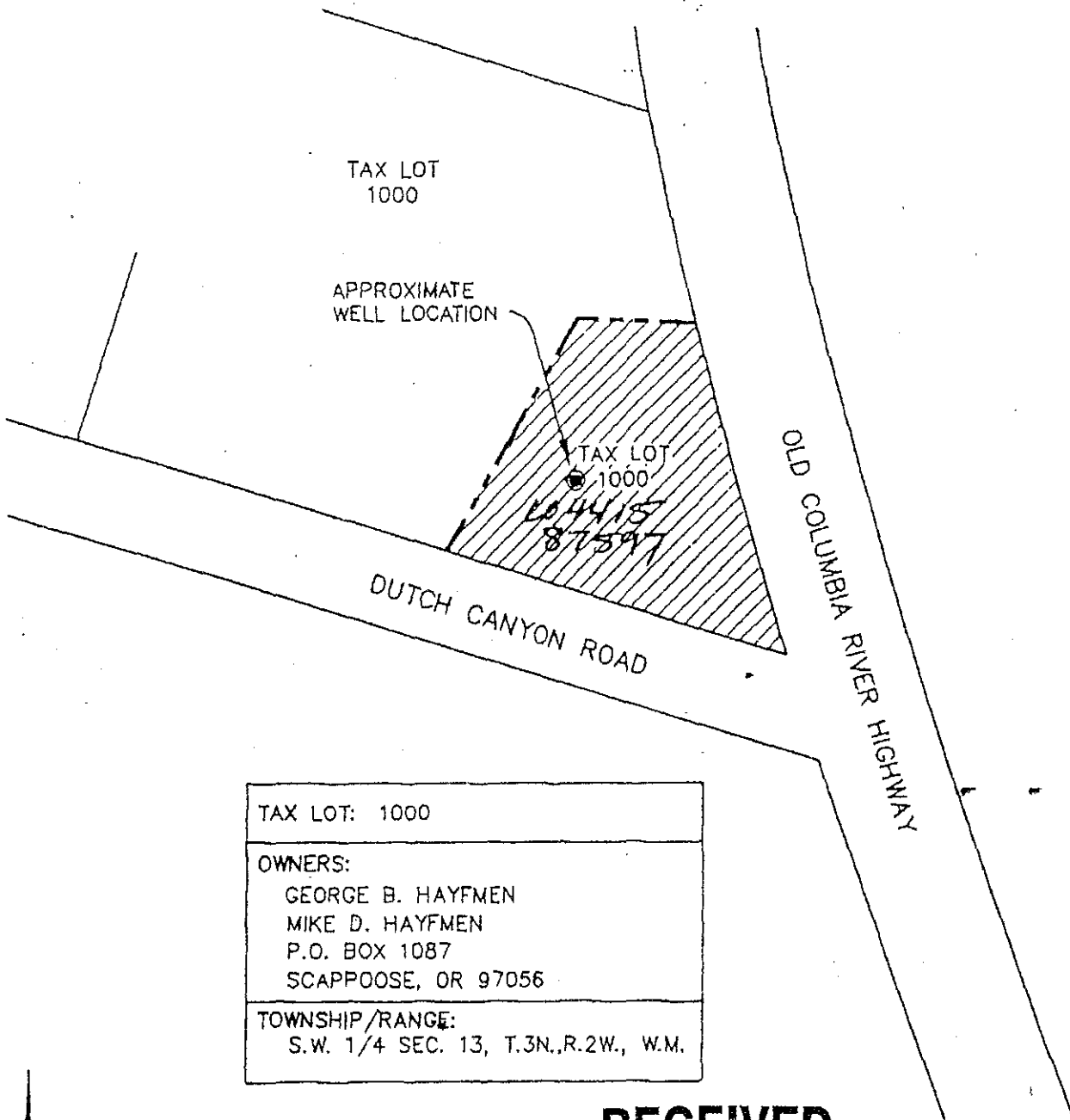
Pump, Bailer, Air, Flowing Artesian, Permeability, Yield, GPM, Conductivity, PH, Temperature of water, Depth artesian flow found, Was water analysis done?, By whom?, Depth of strata to be analyzed, Remarks:

(unbonded) Monitor Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Signed: Rodney Labadie, MWC Number 10329, Date 10-14-96

(bonded) Monitor Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. Signed: Ron Weigel, MWC Number 10024, Date 10-14-96

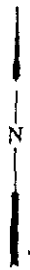



TAX LOT: 1000
OWNERS: GEORGE B. HAYFMEN MIKE D. HAYFMEN P.O. BOX 1087 SCAPPOOSE, OR 97056
TOWNSHIP/RANGE: S.W. 1/4 SEC. 13, T.3N.,R.2W., W.M.

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MAR 31 1997

WATER RESOURCES DEPT.  
SALEM, OREGON



DESIGNED BY: PB	CHECKED BY: RW	PROPERTY MAP OBSERVATON WELL SITE SCAPPOOSE , OREGON		DATE: 11/96
DRAWN BY: PAB	SCALE: N.T.S			FIGURE: 1
FILE: 40751001\01\59Z_DBS.DWG				

NOTICE TO WATER WELL CONTRACTOR  
 The original and first copy of this report are to be filed with the  
 STATE ENGINEER, SALEM, OREGON 97310  
 within 30 days from the date of well completion.

WATER WELL REPORT  
 STATE OF OREGON  
 (Please type or print)  
 (Do not write above this line)

RECEIVED  
 JUN 30 1976  
 WATER RESOURCES DEPT.

State Well No. 3N-2W-13-CA  
 State Permit No. 3105

(1) OWNER:

Name Wilhelm Rickert  
 Address Route 1, Box 112, Scappoose, Ore.  
97056

(2) TYPE OF WORK (check):

New Well  Deepening  Reconditioning  Abandon   
 If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary  Driven   
 Cable  Jetted   
 Dug  Bored

(4) PROPOSED USE (check):

Domestic  Industrial  Municipal   
 Irrigation  Test Well  Other

CASING INSTALLED:

Threaded  Welded   
6" Diam. from 0 ft. to 160 ft. Gage 250  
 " Diam. from " ft. to " ft. Gage  
 " Diam. from " ft. to " ft. Gage

PERFORATIONS:

Perforated?  Yes  No  
 Type of perforator used  
 Size of perforations in. by in.  
 perforations from " ft. to " ft.  
 perforations from " ft. to " ft.  
 perforations from " ft. to " ft.

(7) SCREENS:

Well screen installed?  Yes  No  
 Manufacturer's Name  
 Type Model No.  
 Diam. Slot size Set from " ft. to " ft.  
 Diam. Slot size Set from " ft. to " ft.

(8) WELL TESTS:

Drawdown is amount water level is lowered below static level  
 Was a pump test made?  Yes  No If yes, by whom?  
 Pumped: 25 gal./min. with total drawdown after 1 hrs.  
 " " " " " "  
 " " " " " "  
 Bailor test gal./min. with ft. drawdown after hrs.  
 Artesian flow g.p.m.  
 Temperature of water Depth artesian flow encountered ft.

(9) CONSTRUCTION:

Well seal—Material used Cement  
 Well sealed from land surface to 18 ft.  
 Diameter of well bore to bottom of seal 9 in.  
 Diameter of well bore below seal 6 in.  
 Number of sacks of cement used in well seal 3 sacks  
 Number of sacks of bentonite used in well seal \_\_\_\_\_ sacks  
 Brand name of bentonite \_\_\_\_\_  
 Number of pounds of bentonite per 100 gallons \_\_\_\_\_  
 of water \_\_\_\_\_ lbs./100 gals.  
 Was a drive shoe used?  Yes  No Plugs \_\_\_\_\_ Size: location \_\_\_\_\_ ft.  
 Did any strata contain unusable water?  Yes  No  
 Type of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
 Method of sealing strata off \_\_\_\_\_  
 Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
 Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(10) LOCATION OF WELL:

SALEM, OREGON  
 County Columbia Driller's well number \_\_\_\_\_  
NE 1/4 SW 1/4 Section 13 T. 3N R. 2W W.M.  
 Bearing and distance from section or subdivision corner \_\_\_\_\_

(11) WATER LEVEL: Completed well.

Depth at which water was first found 70 ft.  
 Static level 84 ft. below land surface. Date 6-23-76  
 Artesian pressure \_\_\_\_\_ lbs. per square inch. Date \_\_\_\_\_

(12) WELL LOG:

Diameter of well below casing 6  
 Depth drilled 240 ft. Depth of completed well 240 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated with at least one entry for each change of formation. Report each change position of Static Water Level and indicate principal water-bearing strata

MATERIAL	From	To	SWI
Top Soil	0	3	
Brown Clay	3	35	
Sandy Brown clay	35	78	
Glue clay	78	135	
Soft brown rock	135	176	
Black basalt	176	194	
Gray basalt	194	225	
Gray basalt, fractured water	225	230	84
Gray basalt	230	240	

Work started 6-22 1976 Completed 6-23 1976  
 Date well drilling machine moved off of well 6-23- 1976

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.  
 [Signed] David Donnelly Date 6-25- 1976  
 (Drilling Machine Operator)  
 Drilling Machine Operator's License No. 883

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
 Name S & M Drilling & Supply, Inc.  
 (Person, firm or corporation) (Type or print)  
 Address 399 S.E. Walnut St., Canby, Ore.  
 [Signed] Walter Mac  
 (Water Well Contractor)  
 Contractor's License No. 497 Date 6-25, 1976

COLL  
50077

WELL

14

STATE OF OREGON  
GEOTECHNICAL HOLE REPORT  
(as required by OAR 690-240-035)

(1) OWNER/PROJECT: Hole Number B-1  
Name Scappoose School District  
Address 33700 SE High School Way  
City Scappoose State OR Zip \_\_\_\_\_

(2) TYPE OF WORK  
 New  Deepening  Alteration (repair/recondition)  Abandonment

(3) CONSTRUCTION:  
 Rotary Air  Hand Auger  Hollow Stem Auger  
 Rotary Mud  Cable Tool  Push Probe  Other

(4) TYPE OF HOLE:  
 Uncased Temporary  Cased Permanent  
 Uncased Permanent  Slope Stability  Other

(5) USE OF HOLE:  
Geotechnical

(6) BORE HOLE CONSTRUCTION:  
Special Construction approval  Yes  No Depth of Completed Hole \_\_\_\_\_ ft.

HOLE			SEAL			Sacks or pounds
Diameter	From	To	Material	From	To	
			N/A			

Backfill placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_  
Filter Pack placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Size of pack \_\_\_\_\_

(7) CASING/SCREEN:

	Diameter	From	To	Gauge				
					Steel	Plastic	Welded	Threaded
Casing:					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Screen:					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Slot size \_\_\_\_\_

(8) WELL TEST: \*  
 Pump  Bailer  Air  Flowing Artesian  
Permeability \_\_\_\_\_ Yield \_\_\_\_\_ GPM \_\_\_\_\_  
Conductivity \_\_\_\_\_ PH \_\_\_\_\_  
Temperature of water N/A °F/C Depth artesian flow found \_\_\_\_\_ ft.  
Was water analysis done?  Yes  No  
By whom? \_\_\_\_\_  
Depth of strata analyzed. From \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Remarks: \_\_\_\_\_

(9) LOCATION OF HOLE by legal description:  
County Columbia Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
Township 3 N or S Range 2 E or W. WM.  
Section 13 NW 1/4 NE 1/4

Tax Lot NONE Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
Street Address of Well (or nearest address) 33700 SE High School Way Scappoose, OR  
Available Per Columbia County  
Map with location identified must be attached tax arstest 0801

(10) STATIC WATER LEVEL:  
\_\_\_\_\_ ft. below land surface. Date 1/13/96  
Artesian pressure \_\_\_\_\_ lb. per square inch. Date \_\_\_\_\_

(11) SUBSURFACE LOG:  
Ground Elevation \_\_\_\_\_

Material Description	From	To	SWL
Brown, moist to very moist, dense, slightly silty to silty, sandy gravel w/occass. cobbles.	0'	12'	
Gray-brown, saturated, very dense, silty, sandy gravel w/occasional cobbles.	12'	25.5'	

Date Started 1/13/96 Date Completed 1/13/96

(12) ABANDONMENT LOG:

Material Description	From	To	Sacks or Pounds
Bentonite chips & Bentonite powder	0'	25.5'	2 sacks
Native			1 sack

Date started 1/13/96 Date Completed 1/13/96

Professional Certification

(to be signed by a licensed water supply or monitoring well constructor, or registered geologist or civil engineer).

I accept responsibility for the construction, alteration, or abandonment work performed on during the construction dates reported above. All work performed during this time is in compliance with Oregon geotechnical hole construction standards. This report is true to the best of my knowledge and belief.

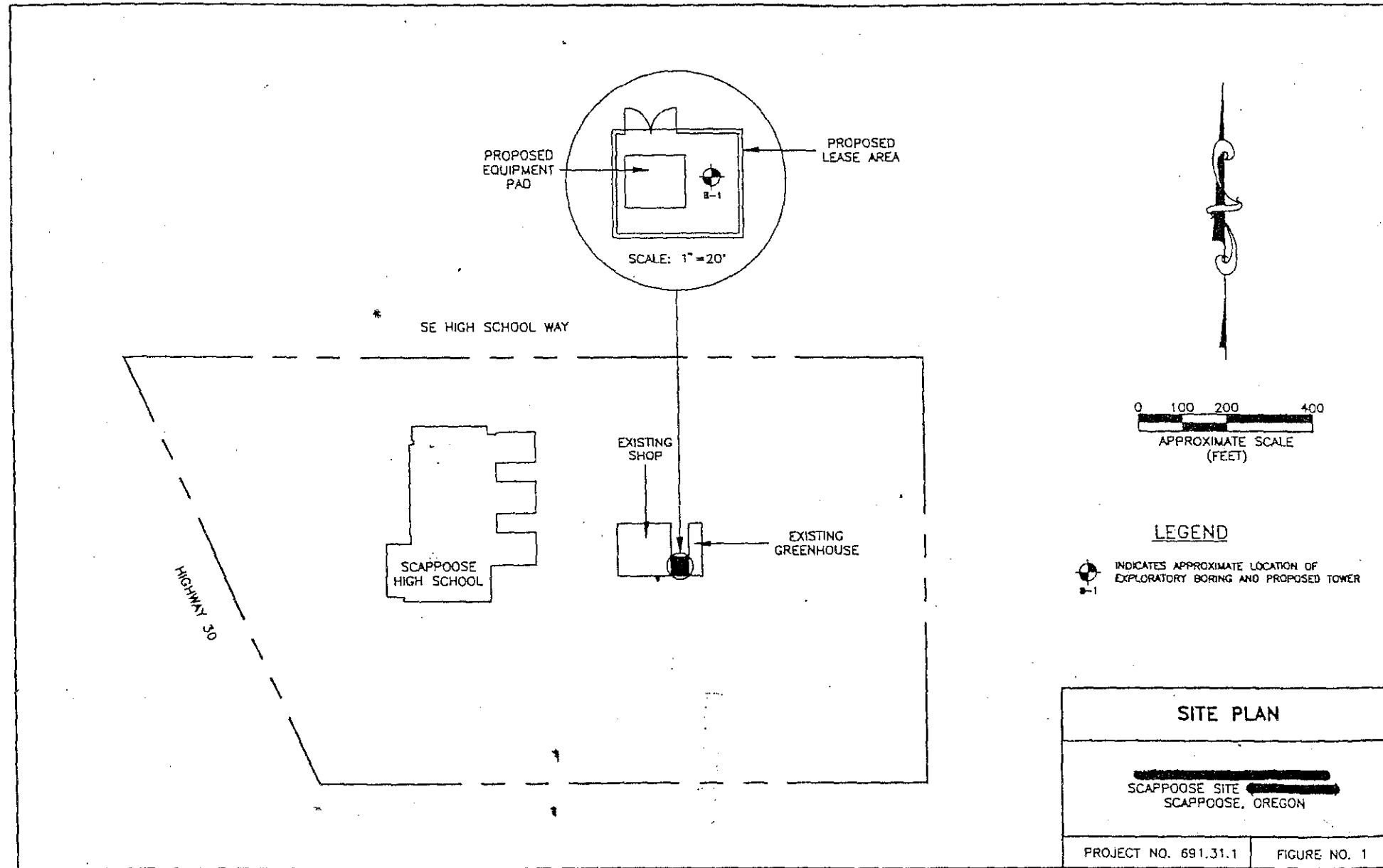
License or Registration Number 10013

Signed Randy L. Clisman Date 2/13/96

Affiliation Clisman Drilling, Inc.

THIS REPORT MUST BE SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK

ORIGINAL & FIRST COPY-WATER RESOURCES DEPARTMENT SECOND COPY-CONSTRUCTOR THIRD COPY-CUSTOMER



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MAY 26 2000

STATE OF OREGON  
GEOTECHNICAL HOLE REPORT  
(as required by OAR 690-240-035)

colu  
51328

most likely in  
NW of NE

WATER RESOURCES DEPT  
SALEM, OREGON

(1) OWNER/PROJECT: Hole Number #1  
Name Scoopoose School Dist 15  
Address 33700 SE High School Way  
City Scoopoose State OR Zip \_\_\_\_\_

(2) TYPE OF WORK  
 New  Deepening  Alteration (repair/recondition)  Abandonment

(3) CONSTRUCTION:  
 Rotary Air  Hand Auger  Hollow Stem Auger  
 Rotary Mud  Cable Tool  Push Probe  Other

(4) TYPE OF HOLE:  
 Uncased Temporary  Cased Permanent  
 Uncased Permanent  Slope Stability  Other

(5) USE OF HOLE: Well Tower

(6) BORE HOLE CONSTRUCTION:  
Special Construction approval  Yes  No Depth of Completed Hole 27' ft.

HOLE			SEAL			Sacks or pounds
Diameter	From	To	Material	From	To	
<u>8 1/4"</u>	<u>0</u>	<u>27'</u>	<u>Denbark</u>	<u>27'</u>	<u>0</u>	<u>9</u>

Backfill placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_  
Filter Pack placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Size of pack \_\_\_\_\_

(7) CASING/SCREEN:

Diameter	From	To	Gauge	Steel			
				Plastic	Welded	Threaded	
Casing:				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Screen:				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Slot size				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(8) WELL TEST:  
 Pump  Bailer  Air  Flowing Artesian  
Permeability \_\_\_\_\_ Yield \_\_\_\_\_ GPM \_\_\_\_\_  
Conductivity \_\_\_\_\_ PH \_\_\_\_\_  
Temperature of water \_\_\_\_\_ °F/C Depth artesian flow found \_\_\_\_\_ ft.  
Was water analysis done?  Yes  No  
By whom? \_\_\_\_\_  
Depth of strata analyzed. From \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Remarks: \_\_\_\_\_

(9) LOCATION OF HOLE by legal description:  
County Columbia Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
Township 3 N or S Range 2 W E or W WM.    
Section 13 NW 1/4 SW 1/4  
Tax Lot 101 Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
Street Address of Well (or nearest address) 33700 SE High School Way

Map with location identified must be attached

(10) STATIC WATER LEVEL:  
None ft. below land surface. Date 4-26-00  
Artesian pressure \_\_\_\_\_ lb. per square inch. Date \_\_\_\_\_

(11) SUBSURFACE LOG:  
Ground Elevation \_\_\_\_\_

Material Description	From	To	SWL
<u>Gravel</u>	<u>0</u>	<u>27</u>	

Date Started 4-26-00 Date Completed 4-26-00

(12) ABANDONMENT LOG:

Material Description	From	To	Sacks or Pounds
<u>Bastone Chips</u>	<u>27</u>	<u>0</u>	<u>3</u>

Date started 4-26-00 Date Completed 4-26-00

Professional Certification  
(to be signed by a licensed water supply or monitoring well constructor, or Oregon registered geologist or civil engineer).

I accept responsibility for the construction, alteration, or abandonment work performed during the construction dates reported above. All work performed during this time is in compliance with Oregon's geotechnical hole construction standards. This report is true to the best of my knowledge and belief.

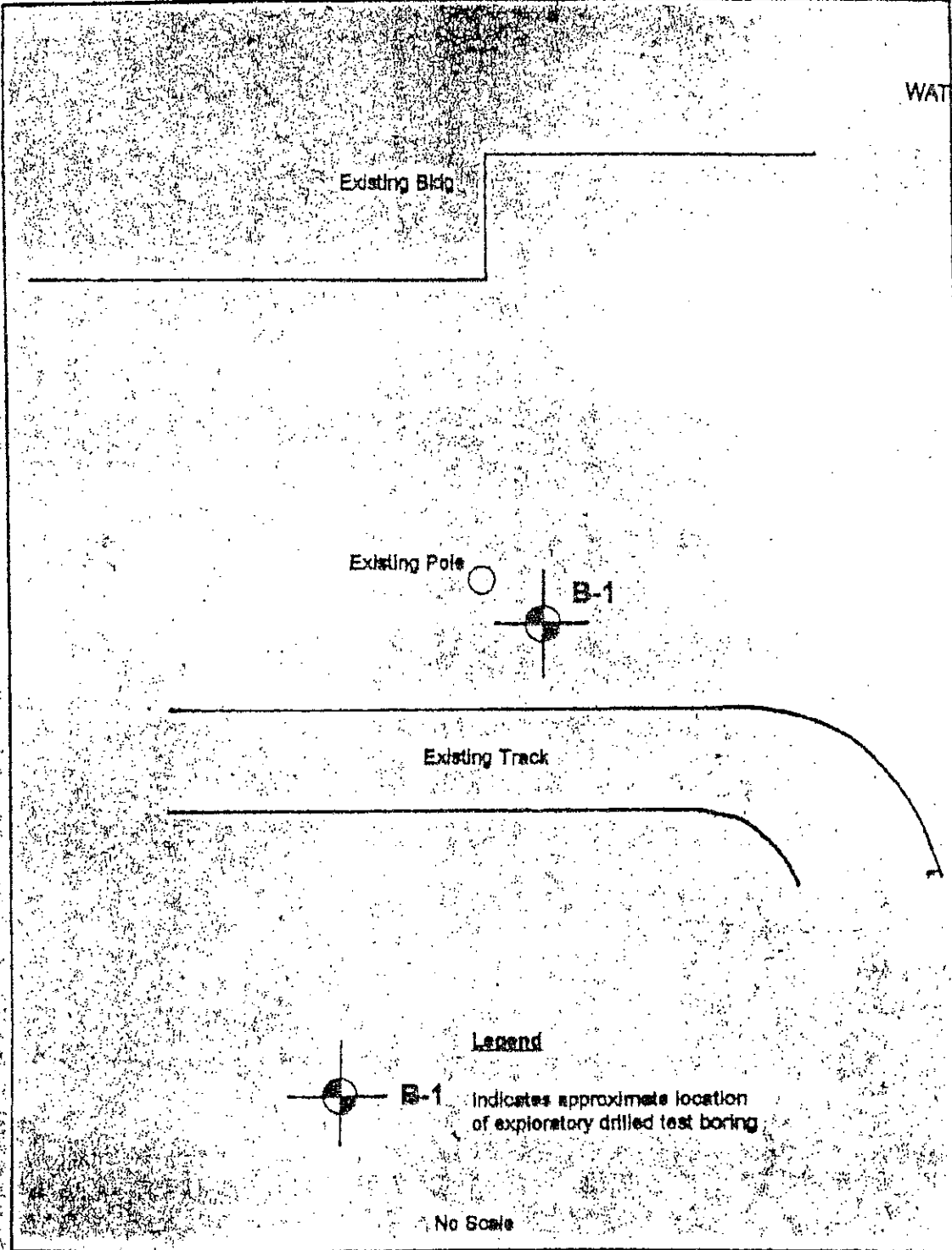
License or Registration Number 10013  
Signed Larry L. Cushman Date 5/24/00  
Affiliation \_\_\_\_\_

THIS REPORT MUST BE SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK

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MAY 26 2000

WATER RESOURCES DEP  
SALEM, OREGON



**SITE EXPLORATION MAP**

Project No. 110.119.G

**PROPOSED SCAPOOSE CELL SITE**

Figure No. 2



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NOV 07 2000

STATE OF OREGON  
GEOLOGICAL HOLE REPORT  
(as required by OAR 690-240-035)

(1) OWNER/PROJECT: Hole Number B/1  
Name SCAPPOOSE HIGH SCHOOL  
Address 33700 SE HIGH SCHOOL WAY  
City SCAPPOOSE State OR Zip 97056

(2) TYPE OF WORK  
 New  Deepening  Alteration (repair/recondition)  Abandonment

(3) CONSTRUCTION:  
 Rotary Air  Hand Auger  Hollow Stem Auger  
 Rotary Mud  Cable Tool  Push Probe  Other

(4) TYPE OF HOLE:  
 Uncased Temporary  Cased Permanent  
 Uncased Permanent  Slope Stability  Other

(5) USE OF HOLE:  
GEOTECH

(6) BORE HOLE CONSTRUCTION:  
Special Construction approval  Yes  No Depth of Completed Hole 22 ft.

HOLE			SEAL			Sacks or pounds
Diameter	From	To	Material	From	To	
8"	22	0	BENT CHIPS	22	0	11

Backfill placed from 22 ft. to 0 ft. Material BENT CHIPS  
Filter Pack placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Size of pack \_\_\_\_\_

(7) CASING/SCREEN:

Diameter	From	To	Gauge	Material			
				Steel	Plastic	Welded	Threaded
Casing:				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Screen:				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Slot size				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(8) WELL TEST:  
 Pump  Bailor  Air  Flowing Artesian  
Permeability \_\_\_\_\_ Yield \_\_\_\_\_ GPM \_\_\_\_\_  
Conductivity \_\_\_\_\_ PH \_\_\_\_\_ \*  
Temperature of water \_\_\_\_\_ °F/C. Depth artesian flow found \_\_\_\_\_ ft.  
Was water analysis done?  Yes  No  
By whom? JOHN  
Depth of strata analyzed. From \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Remarks: \_\_\_\_\_

(9) LOCATION OF HOLE by legal description:  
County COLUMBIA Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
Township 3 N or S Range 2 E of SECTION  
Section 13 NE 1/4 NE 1/4  
Tax Lot 00101 Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
Street Address of Well (or nearest address) \_\_\_\_\_  
SAME

Map with location identified must be attached

(10) STATIC WATER LEVEL:  
\_\_\_\_\_ ft. below land surface. Date \_\_\_\_\_  
Artesian pressure \_\_\_\_\_ lb. per square inch. Date \_\_\_\_\_

(11) SUBSURFACE LOG:  
Ground Elevation \_\_\_\_\_

Material Description	From	To	SWL
SAND GRAVEL & COBBLES	0	22	

Date Started 10/17/00 Date Completed 10/17/00

(12) ABANDONMENT LOG:

Material Description	From	To	Sacks or Pounds
BENT CHIPS	22	0	11

Date started 10/17/00 Date Completed 10/17/00

Professional Certification  
(to be signed by a licensed water supply or monitoring well constructor, or Oregon registered geologist or civil engineer).

I accept responsibility for the construction, alteration, or abandonment work performed during the construction dates reported above. All work performed during this time is in compliance with Oregon's geotechnical hole construction standards. This report is true to the best of my knowledge and belief.

License or Registration Number 10306  
Signed [Signature] Date 10/23/00  
Affiliation SUBSURFACE TECH.

THIS REPORT MUST BE SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK

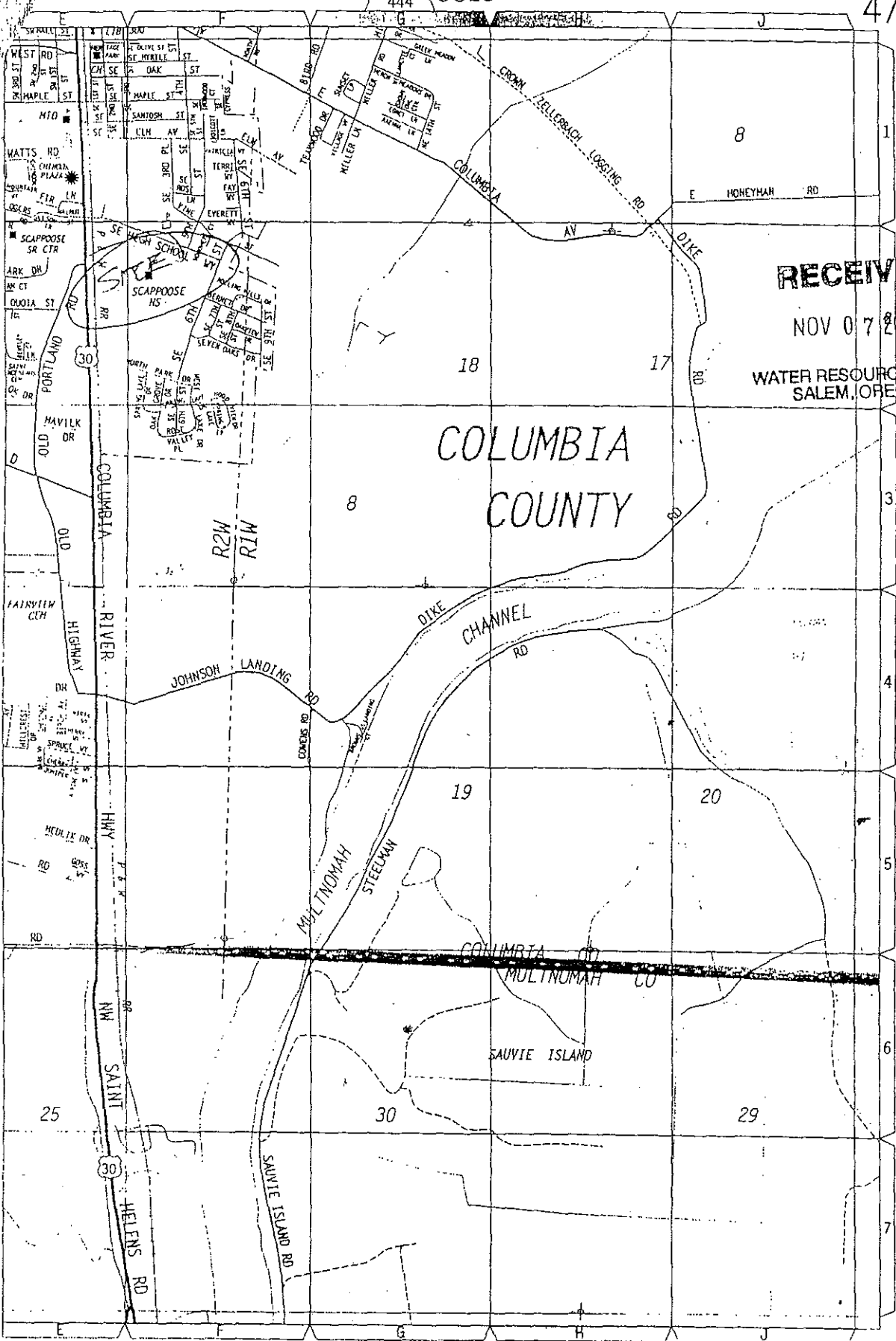
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NOV 07 2000

WATER RESOURCES DEPT.  
SALEM, OREGON

# COLUMBIA COUNTY



SEE 475 MAP

COLU 51429

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**RECEIVED**

NOV 07 2000

WATER RESOURCES DEPT.  
SALEM, OREGON

Hiway 30

HIGH  
SCHOOL

FOOTBALL  
FIELD

1/2 - 3/11

4/11

1' - 100'

NOTICE TO WATER WELL CONTRACTOR

The original and first copy of this report are to be filed with the

STATE ENGINEER, SALEM, OREGON 97310  
within 30 days from the date of well completion.

WATER WELL REPORT

STATE OF OREGON

(Please type or print)

(Do not write above this line)

RECEIVED

NOV 2 1976

State Well No.

State Permit No.

SALEM, OREGON

3W/2W-13

(1) OWNER:

Name LEONARD M. WULFF JR.  
Address RT. 1 BOX 707 SCARPOOSE, OR. 97058

(2) TYPE OF WORK (check):

New Well  Deepening  Reconditioning  Abandon

If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary  Driven   
Cable  Jetted   
Dug  Bored

(4) PROPOSED USE (check):

Domestic  Industrial  Municipal   
Irrigation  Test Well  Other

CASING INSTALLED:

Threaded  Welded

6" Diam. from 0 ft. to 92 ft. Gage 250  
" Diam. from ft. to ft. Gage  
" Diam. from ft. to ft. Gage

PERFORATIONS:

Perforated?  Yes  No

Type of perforator used

Size of perforations in. by in.  
perforations from ft. to ft.  
perforations from ft. to ft.  
perforations from ft. to ft.

(7) SCREENS:

Well screen installed?  Yes  No

Manufacturer's Name  
Type Model No.  
Diam. Slot size Set from ft. to ft.  
Diam. Slot size Set from ft. to ft.

(8) WELL TESTS:

Drawdown is amount water level is lowered below static level

Was a pump test made?  Yes  No If yes, by whom?  
Flow: gal./min. with ft. drawdown after hrs.  
" " " " " "  
" " " " " "  
Bailer test 1.3 gal./min. with 20 ft. drawdown after 1 hrs.  
Artesian flow g.p.m.  
Temperature of water °C Depth artesian flow encountered ft.

(9) CONSTRUCTION:

Well seal—Material used BENTONITE  
Well sealed from land surface to 30 ft.  
Diameter of well bore to bottom of seal 10 in.  
Diameter of well bore below seal 6 in.  
Number of sacks of cement used in well seal 5 sacks  
Number of sacks of bentonite used in well seal 5 sacks  
Brand name of bentonite INTERNATIONAL  
Number of pounds of bentonite per 100 gallons of water 100 lbs./100 gals.  
Was a drive shoe used?  Yes  No Plugs Size: location ft.  
Did any strata contain unusable water?  Yes  No  
Type of water depth of strata  
Method of sealing strata off  
Well gravel packed?  Yes  No Size of gravel:  
Placed from ft. to ft.

(10) LOCATION OF WELL:

County COLUMBIA Driller's well number  
NE 1/4 NE 1/4 Section 13 T. 3N R. 2W W.M.  
Bearing and distance from section or subdivision corner S.W. CORNER

(11) WATER LEVEL: Completed well.

Depth at which water was first found 69 ft.  
Static level 57 ft. below land surface. Date 9-9-76  
Artesian pressure lbs. per square inch. Date

(12) WELL LOG:

Diameter of well below casing 6"

Depth drilled 92 ft. Depth of completed well 92 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
TOP SOIL	0	1	
CLAY BROWN	1	11	
CLAY BROWN W/ GRAVEL	11	69	
GRAVEL W/ CLAY - GRAY	69	79	57
SAND COARSE W/ CLAY GRAY	79	86	57
GRAVELY SAND W/ CLAY	86	90	57
GRAVEL MED. W/ COARSE SAND	90	92	57

Work started 8-18-1976 Completed 9-8-1976

Date well drilling machine moved off of well 9-10-1976

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.

[Signed] Ron J. Edgell Date 9-12-1976  
(Drilling Machine Operator)

Drilling Machine Operator's License No. 589

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Name RON EDGELL PUMP & WELL DRILLING  
(Person, firm or corporation) (Type or print) 98611

Address P.O. BOX 695 CASTLE ROCK, W.A.

[Signed] Ron J. Edgell  
(Water Well Contractor)

Contractor's License No. 515 Date 9-12-1976

NOTICE TO WATER WELL CONTRACTOR  
The original and first copy  
of this report are to be  
filed with the

WATER WELL REPORT

RECEIVED

NE-NE

STATE ENGINEER, SALEM, OREGON 973  
within 30 days from the date  
of well completion.

STATE OF OREGON  
(Please type or print)

NOV 2 1976

State Well No. 3W/2W-13a

State Permit No. \_\_\_\_\_

(Do not write above this line) **LAND RESOURCES DEPT.**

SALEM, OREGON

(1) OWNER:

Name WINSTON A. ROBERTS  
Address RT. 1 BOX 72 SCAPPOOSE, OR 97136

(2) TYPE OF WORK (check):

New Well  Deepening  Reconditioning  Abandon

If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary  Driven   
Cable  Jetted   
Dug  Bored

(4) PROPOSED USE (check):

Domestic  Industrial  Municipal   
Irrigation  Test Well  Other

CASING INSTALLED:

Threaded  Welded

6" Diam. from 0 ft. to 91 ft. Gage 250  
" Diam. from " ft. to " ft. Gage \_\_\_\_\_  
" Diam. from " ft. to " ft. Gage \_\_\_\_\_

PERFORATIONS:

Perforated?  Yes  No.

Type of perforator used \_\_\_\_\_

Size of perforations in. by in.  
perforations from " ft. to " ft.  
perforations from " ft. to " ft.  
perforations from " ft. to " ft.

(7) SCREENS:

Well screen installed?  Yes  No

Manufacturer's Name \_\_\_\_\_  
Type \_\_\_\_\_ Model No. \_\_\_\_\_  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(8) WELL TESTS:

Drawdown is amount water level is lowered below static level

Was a pump test made?  Yes  No If yes, by whom?  
Gal./min. with " ft. drawdown after " hrs.  
" " " " "  
" " " " "  
Ballor test 13 gal./min. with 20 ft. drawdown after 1 hrs.  
Artesian flow g.p.m. \_\_\_\_\_  
Temperature of water 51° Depth artesian flow encountered \_\_\_\_\_ ft.

(9) CONSTRUCTION:

Well seal—Material used BENTONITE  
Well sealed from land surface to 25 ft.  
Diameter of well bore to bottom of seal 10 in.  
Diameter of well bore below seal 6 in.  
Number of sacks of cement used in well seal \_\_\_\_\_ sacks  
Number of sacks of bentonite used in well seal 4 sacks  
Brand name of bentonite INTERNATIONAL  
Number of pounds of bentonite per 100 gallons of water 100 lbs./100 gals.  
Was a drive shoe used?  Yes  No Plugs \_\_\_\_\_ Size: location \_\_\_\_\_ ft.  
Did any strata contain unusable water?  Yes  No  
Type of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
Method of sealing strata off \_\_\_\_\_  
Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(10) LOCATION OF WELL:

County COOS Driller's well number \_\_\_\_\_  
NE 1/4 NE 1/4 Section 13 T. 3N R. 2W W.M. \_\_\_\_\_  
Bearing and distance from section or subdivision corner \_\_\_\_\_

(11) WATER LEVEL: Completed well.

Depth at which water was first found 70 ft.  
Static level 57 ft. below land surface. Date 9-21-76  
Artesian pressure \_\_\_\_\_ lbs. per square inch. Date \_\_\_\_\_

(12) WELL LOG:

Diameter of well below casing 6"

Depth drilled 91 1/2 ft. Depth of completed well 91 1/2 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata

MATERIAL	From	To	SWL
TOP SOIL	0	1	
CLAY BROWN	1	12 1/2	
CLAY BROWN w/ GRAVEL	12 1/2	20	
GRAVEL w/ CLAY BROWN	20	28	57
SAND COARSE w/ CLAY BROWN	28	46	57
GRAVEL + SAND w/ CLAY BROWN	46	89	57
GRAVEL MED. + SAND COARSE	89	91 1/2	57
WATER BEARING			

Work started 8-19 1976 Completed 9-21 1976  
Date well drilling machine moved off of well 9-21 1976

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.

[Signed] Ron Edbell Date 9-24, 1976  
(Drilling Machine Operator)

Drilling Machine Operator's License No. 589

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Name RON EDBELL PUMP & WELL DRILLING  
(Person, firm or corporation) (Type or print)

Address P.O. BOX 615 CASTLE ROCK, W.V. 26011

[Signed] Ron Edbell  
(Water Well Contractor)

Contractor's License No. 515 Date 9-21, 1976

NOTICE TO WATER WELL CONTRACTOR  
The original and first copy  
of this report are to be  
filed with the  
STATE ENGINEER, SALEM, OREGON 97310  
within 30 days from the date  
of well completion.

**WATER WELL REPORT**

STATE OF OREGON  
(Please type or print)

**RECEIVED**

MAY 24 1967

State Well No. 3N/1E-7E

State Permit No. 261

NE-NE  
2W-13A

COLU  
3108

**(1) OWNER:**

Name Lewis Senger  
Address Box 1750 Scappoose Ore.

**(2) LOCATION OF WELL:**

County Col Driller's well number 66  
1/4 Section 18 T. 3N R. 1W W.M.  
Bearing and distance from section or subdivision corner

**(3) TYPE OF WORK (check):**

Well  Deepening  Reconditioning  Abandon   
If abandonment, describe material and procedure in Item 12.

**(4) PROPOSED USE (check):**

Domestic  Industrial  Municipal   
Irrigation  Test Well  Other

**(5) TYPE OF WELL:**

Rotary  Driven   
Cable  Jetted   
Dug  Bored

**(6) CASING INSTALLED:**

Threaded  Welded   
6" Diam. from 0 ft. to 59 ft. Gage 17"  
" Diam. from " ft. to " ft. Gage  
" Diam. from " ft. to " ft. Gage

**(7) PERFORATIONS:**

Perforated?  Yes  No  
Type of perforator used  
Size of perforations in. by in.  
perforations from " ft. to " ft.  
perforations from " ft. to " ft.  
perforations from " ft. to " ft.  
perforations from " ft. to " ft.

**(8) SCREENS:**

Well screen installed?  Yes  No  
Manufacturer's Name \_\_\_\_\_ Model No. \_\_\_\_\_  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

**(9) CONSTRUCTION:**

Well seal—Material used in seal Bestonite  
Depth of seal 18 ft. Was a packer used? Sand  
Diameter of well bore to bottom of seal 11" in.  
Were any loose strata cemented off?  Yes  No Depth \_\_\_\_\_  
Was a drive shoe used?  Yes  No  
Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Did any strata contain unusable water?  Yes  No  
Type of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
Method of sealing strata off \_\_\_\_\_

**(10) WATER LEVELS:**

Static level 9 ft. below land surface Date 5/9/67  
Artesian pressure \_\_\_\_\_ lbs. per square inch Date \_\_\_\_\_

**(11) WELL TESTS:**

Drawdown is amount water level is lowered below static level  
Was a pump test made?  Yes  No If yes, by whom?  
Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
" " " " " "  
" " " " " "  
" " " " " "  
Bailer test 45 gal./min. with 25 ft. drawdown after 1 hrs.  
Artesian flow \_\_\_\_\_ g.p.m. Date \_\_\_\_\_  
Temperature of water \_\_\_\_\_ Was a chemical analysis made?  Yes  No

**(12) WELL LOG:**

Diameter of well below casing \_\_\_\_\_  
Depth drilled 60 ft. Depth of completed well 60 ft.  
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Black soil	0	3
St. Br. clay	3	7
" " " med gravel	7	21
St. Br. sand + med + fine gravel	21	35
St. Br. sand course	35	60

Work started April 1 1967 Completed May 3 1967  
Date well drilling machine moved off of well May 4 1967

**(13) PUMP:**

Manufacturer's Name Youlds  
Type: Sub H.P. 5

**Water Well Contractor's Certification:**

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME SVEND A. HALD  
(Person, firm or corporation) (Type or print)  
Address Box 1267 St. Helens Ore.

Drilling Machine Operator's License No. 144

[Signed] Svend A. Hald  
(Water Well Contractor)

Contractor's License No. 261 Date 5/9/67, 1967

STATE OF OREGON  
WATER SUPPLY WELL REPORT  
(as required by ORS 537.765)

Colu  
50483

RECEIVED

JUL 30 1997

L16003

WATER RESOURCES DEPT.  
SALEM, OREGON

(START CARD) # 097811

Instructions for completing this report are on the last page of this form.

(1) OWNER: Well Number \_\_\_\_\_  
Name Stephen & Judie Ingham  
Address 51836 SE, 6th St  
City Scappoose State OR Zip 97056

(2) TYPE OF WORK  
 New Well  Deepening  Alteration (repair/recondition)  Abandonment

(3) DRILL METHOD:  
 Rotary Air  Rotary Mud  Cable  Auger  
 Other

(4) PROPOSED USE:  
 Domestic  Community  Industrial  Irrigation  
 Thermal  Injection  Livestock  Other

(5) BORE HOLE CONSTRUCTION:  
Special Construction approval  Yes  No Depth of Completed Well 68 ft.  
Explosives used  Yes  No Type \_\_\_\_\_ Amount \_\_\_\_\_

HOLE			SEAL			Sacks or pounds
Diameter	From	To	Material	From	To	
10	0	18	Bentonite	0	18	15

How was seal placed: Method  A  B  C  D  E  
 Other Rotated  
Backfill placed from 0 ft. to 18 ft. Material Bentonite  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Size of gravel \_\_\_\_\_

(6) CASING/LINER:

Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing: <u>6</u>	<u>hd'</u>	<u>68</u>	<u>450</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Liner:				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Final location of shoe(s) 68

(7) PERFORATIONS/SCREENS:

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
						<input type="checkbox"/>	<input type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour

Yield gal/min	Drawdown	Drill stem at	Flowing Artesian Time
<u>50</u>		<u>45</u>	<u>1 hr.</u>

Temperature of water 51 Depth Artesian Flow Found \_\_\_\_\_  
Was a water analysis done?  Yes By whom \_\_\_\_\_  
Did any strata contain water not suitable for intended use?  Too little  
 Salty  Muddy  Odor  Colored  Other \_\_\_\_\_  
Depth of strata: \_\_\_\_\_

(9) LOCATION OF WELL by legal description:  
County Columbia Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
Township 3 N or S Range 2 E or W WM.  
Section 13 NE 1/4 NE 1/4  
Tax Lot 00104 Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
Street Address of Well (or nearest address) 51836 S.E. 6th St. Scappoose, OR

(10) STATIC WATER LEVEL:  
11 ft. below land surface. Date 7-19-97  
Artesian pressure \_\_\_\_\_ lb. per square inch. Date \_\_\_\_\_

(11) WATER BEARING ZONES:  
Depth at which water was first found 11

From	To	Estimated Flow Rate	SWL
<u>11</u>	<u>68</u>	<u>50</u>	<u>11</u>

(12) WELL LOG:  
Ground Elevation \_\_\_\_\_

Material	From	To	SWL
<u>Red Clay</u>	<u>0</u>	<u>8</u>	
<u>Medium to large Round Gravel</u>	<u>8</u>	<u>13</u>	<u>11</u>
<u>Brown Clay</u>	<u>13</u>	<u>16</u>	
<u>Medium to large Round Gravel</u>	<u>16</u>	<u>30</u>	
<u>Same, but with Brown Silt</u>	<u>30</u>	<u>36</u>	
<u>Medium to large Round Gravel</u>	<u>36</u>	<u>77</u>	
<u>Coarse Course Pointed Sand</u>	<u>77</u>	<u>79</u>	

Date started 7-18-97 Completed 7-19-97  
(unbonded) Water Well Constructor Certification:  
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.

Signed \_\_\_\_\_ WWC Number \_\_\_\_\_ Date \_\_\_\_\_

(bonded) Water Well Constructor Certification:  
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.  
Signed [Signature] WWC Number 1679 Date 7-20-97

NOTICE TO WATER WELL CONTRACTOR  
The original and first copy of this report are to be filed with me.

WATER RESOURCES DEPARTMENT  
SALEM, OREGON, 97310  
within 30 days from the date of well completion.

WATER WELL REPORT

STATE OF OREGON  
(Please type or print)

RECEIVED 10  
3N/2W-13ad  
MAY 9 1978  
State Well No. ...  
State Permit No. SE-NE

WATER RESOURCES DEPT.

(1) OWNER:  
Name Fred & Maryellen Bernet  
Address Route 1 Box 136 Scappoose Oregon 97056

(2) TYPE OF WORK (check):  
New Well  Deepening  Reconditioning  Abandon   
If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL: (4) PROPOSED USE (check):  
Rotary  Driven  Domestic  Industrial  Municipal   
Cable  Jetted  Irrigation  Test Well  Other   
Dug  Bored

CASING INSTALLED:  
6" Diam. from 0 ft. to 63 ft. Gage 250  
" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_  
" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_

PERFORATIONS:  
Perforated?  Yes  No.  
Type of perforator used \_\_\_\_\_  
Size of perforations in. by in. \_\_\_\_\_  
perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(7) SCREENS:  
Well screen installed?  Yes  No.  
Manufacturer's Name \_\_\_\_\_ Model No. \_\_\_\_\_  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(8) WELL TESTS:  
Drawdown is amount water level is lowered below static level.  
Was a pump test made?  Yes  No. If yes, by whom?  
Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
aw Water test 40 gal./min. with 10 ft. drawdown after 1 hrs.  
Artesian flow \_\_\_\_\_ g.p.m.  
Temperature of water \_\_\_\_\_ Depth artesian flow encountered \_\_\_\_\_ ft.

(9) CONSTRUCTION:  
Well seal—Material used cement  
Well sealed from land surface to 35 ft.  
Diameter of well bore to bottom of seal 9 in.  
Diameter of well bore below seal 6 in.  
Number of sacks of cement used in well seal 5 sacks  
How was cement grout placed? poured

Was a drive shoe used?  Yes  No Plugs \_\_\_\_\_ Size: location \_\_\_\_\_ ft.  
Did any strata contain unusable water?  Yes  No  
\_\_\_\_\_ of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
Method of sealing strata off \_\_\_\_\_  
Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(10) LOCATION OF WELL:  
County Columbia Driller's well number \_\_\_\_\_  
SE 1/4 NE 1/4 Section 13 T. 3N R. 2W W.M.  
Bearing and distance from section or subdivision corner \_\_\_\_\_

(11) WATER LEVEL: Completed well.  
Depth at which water was first found 50 ft.  
Static level 35 ft. below land surface. Date 4-13-78  
Artesian pressure \_\_\_\_\_ lbs. per square inch. Date \_\_\_\_\_

(12) WELL LOG: Diameter of well below casing 6  
Depth drilled 65 ft. Depth of completed well 65 ft.  
Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
<u>Topsoil</u>	<u>0</u>	<u>2</u>	
<u>Brown Silty Sand</u>	<u>2</u>	<u>28</u>	
<u>Brown Sand Gravel</u>	<u>28</u>	<u>50</u>	
<u>Gravel</u>	<u>50</u>	<u>65</u>	

Work started 4-12 1978 Completed 4-13 1978  
Date well drilling machine moved off of well 4-13 1978

Drilling Machine Operator's Certification:  
This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.  
[Signed] Ralph Turner Date 4-20 1978  
(Drilling Machine Operator)  
Drilling Machine Operator's License No. 254

Water Well Contractor's Certification:  
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
Name Turner Drilling Co., Inc.  
(Person, firm or corporation) (Type or print)  
Address Rt 1 Box 141 Hillsboro Ore  
[Signed] Ralph Turner  
(Water Well Contractor)  
Contractor's License No. 247 Date 4-20 1978



NOTICE TO WATER WELL CONTRACTOR  
The original and first copy  
of this report are to be  
filed with the

STATE ENGINEER, SALEM, OREGON 97310  
within 30 days from the date  
of well completion.

WATER WELL REPORT

STATE OF OREGON NOV 2 1976 State Well No. 3W/2W13ad

(Please type or print)  
WATER RESOURCES DEPT Permit No. \_\_\_\_\_  
SALEM, OREGON

RECEIVED

(12)

(1) OWNER:

Name CARL J. ANDERSON  
Address Box 78 Scarpouse, OR 97056

(2) TYPE OF WORK (check):

New Well  Deepening  Reconditioning  Abandon   
If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary  Driven   
Cable  Jetted   
Dug  Bored

(4) PROPOSED USE (check):

Domestic  Industrial  Municipal   
Irrigation  Test Well  Other

CASING INSTALLED:

Threaded  Welded   
6" Diam. from 0 ft. to 94 ft. Gage 250  
" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_  
" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_

PERFORATIONS:

Perforated?  Yes  No.

Type of perforator used \_\_\_\_\_  
Size of perforations in. by in.  
perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(7) SCREENS:

Well screen installed?  Yes  No

Manufacturer's Name \_\_\_\_\_  
Type \_\_\_\_\_ Model No. \_\_\_\_\_  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(8) WELL TESTS:

Drawdown is amount water level is  
lowered below static level

Was a pump test made?  Yes  No If yes, by whom?  
Yield: gal./min. with ft. drawdown after hrs.  
" " " " " "  
" " " " " "  
Ballor test 14 gal./min. with 20 ft. drawdown after 1 hrs.  
Artesian flow g.p.m.  
Temperature of water \_\_\_\_\_ Depth artesian flow encountered \_\_\_\_\_ ft.

(9) CONSTRUCTION:

Well seal—Material used BENTONITE  
Well sealed from land surface to 22 ft.  
Diameter of well bore to bottom of seal 10 in.  
Diameter of well bore below seal 6 in.  
Number of sacks of cement used in well seal \_\_\_\_\_ sacks  
Number of sacks of bentonite used in well seal 4 sacks  
Brand name of bentonite INTERNATIONAL  
Number of pounds of bentonite per 100 gallons  
of water 100 lbs./100 gals.  
Was a drive shoe used?  Yes  No Plugs \_\_\_\_\_ Size: location \_\_\_\_\_ ft.  
Did any strata contain unusable water?  Yes  No  
Type of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
Method of sealing strata off \_\_\_\_\_  
Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
Gravel: placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(10) LOCATION OF WELL:

County COLUMBIA Driller's well number \_\_\_\_\_  
SE 1/4 NE 1/4 Section 13 T. 3N R. 2W W.M. \_\_\_\_\_  
Bearing and distance from section or subdivision corner \_\_\_\_\_

(11) WATER LEVEL: Completed well.

Depth at which water was first found 66 ft.  
Static level 58 ft. below land surface. Date 9-23-76  
Artesian pressure \_\_\_\_\_ lbs. per square inch. Date \_\_\_\_\_

(12) WELL LOG:

Diameter of well below casing 6"

Depth drilled 93 1/2 ft. Depth of completed well 93 1/2 ft.

Formation: Describe color, texture, grain size and structure of materials;  
and show thickness and nature of each stratum and aquifer penetrated;  
with at least one entry for each change of formation. Report each change in  
position of Static Water Level and indicate principal water-bearing strata

MATERIAL	From	To	SWL
TOP SOIL	0	1	
CLAY BROWN	1	2 1/2	
CLAY SANDY	2 1/2	8	
SAND W/CLAY	8	56	
SAND & GRAVEL W/CLAY	56	66	
SAND, FINE W/ GRAVEL BROWN	66	70	58
CLAY GRAY W/ GRAVEL	70	77	58
SANDSTONE GRAY	77	80	58
SAND GRAY	80	85	58
GRAVEL, MED. W/ SAND GRAY	85	93 1/2	58
WATER BEARING			

Work started 9-31-1976 Completed 9-23-1976

Date well drilling machine moved off of well 9-23-1976

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision.  
Materials used and information reported above are true to my  
best knowledge and belief.

[Signed] Don Edgell Date 9-24, 1976  
(Drilling Machine Operator)

Drilling Machine Operator's License No. 589

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is  
true to the best of my knowledge and belief.

Name BON EDGELL PUMP & WELL DRILLING  
(Person, firm or corporation) (Type or print)

Address P.O. BOX 695 CASTLE ROCK, WASH. 9861

[Signed] Don Edgell  
(Water Well Contractor)

Contractor's License No. 515 Date 9-24, 1976

STATE OF OREGON  
WATER WELL REPORT  
(as required by ORS 537.765)

Colu  
507

RECEIVED

JUN 12 1992

3N/2W/13aa

(START CARD) #

42312

(1) OWNER: Lawrence E. Grady  
Name 33933 Oakridge Drive  
Address Scappoose City OR State 97056 Zip

(2) TYPE OF WORK:  
 New Well  Deepen  Recondition  Abandon

(3) DRILL METHOD:  
 Rotary Air  Rotary Mud  Cable  
 Other

(4) PROPOSED USE:  
 Domestic  Community  Industrial  Irrigation  
 Thermal  Injection  Other

(5) BORE HOLE CONSTRUCTION:  
Special Construction approval  Yes  No Depth of Completed Well 42  
Explosives used  Yes  No Type \_\_\_\_\_ Amount \_\_\_\_\_

HOLE		SEAL		Amount sacks or pounds
Diameter	To	Material	To	
10	0	BENTONITE	0	11
6	19		44	

How was seal placed: Method  A  B  C  D  E  
 Other POURED

Backfill placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Size of gravel \_\_\_\_\_

(6) CASING/LINER:

Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
6	12	42	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

(7) PERFORATIONS/SCREENS:  
 Perforations Method \_\_\_\_\_  
 Screens Type \_\_\_\_\_ Material \_\_\_\_\_

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
						<input type="checkbox"/>	<input type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour  
 Pump  Bailer  Air  Flowing Artesian  
Yield gal/min 25 Drawdown \_\_\_\_\_ Drill stem at 30 Time 1 hr.

Temperature of Water 52 Depth Artesian Flow Found \_\_\_\_\_  
Was a water analysis done?  Yes By whom \_\_\_\_\_  
Did any strata contain water not suitable for intended use?  Too little  
 Salty  Muddy  Odor  Colored  Other \_\_\_\_\_  
Depth of strata: \_\_\_\_\_

(9) LOCATION OF WELL by legal description:  
County Columbia Longitude \_\_\_\_\_  
Township 3N N or S. Range 2W E or W. WM. \_\_\_\_\_  
Section 13 NE 1/4 NE 1/4 \_\_\_\_\_  
Tax Lot 403 Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
Street Address of Well (or nearest address) SAME  
Address correlates to NE-NE-SE 2

(10) STATIC WATER LEVEL:  
17 ft. below land surface. Date 5-28-92  
Artesian pressure \_\_\_\_\_ lb. per square inch. Date \_\_\_\_\_

(11) WATER BEARING ZONES:

Depth at which water was first found 24

From	To	Estimated Flow Rate	SWL
24	42	25	17

(12) WELL LOG:

Ground elevation \_\_\_\_\_

Material	From	To	SWL
SOIL	0	3	
SILTY CLAY	3	13	
CEMENTED GRAVEL	13	18	
GRAY CLAY	18	24	
BRN CLAY + GRAVEL	24	30	17
BRN SAND + GRAVEL	30	42	

Date started 5-27-92 Completed 5-28-92  
(unbonded) Water Well Constructor Certification:  
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.  
Signed \_\_\_\_\_ WWC Number \_\_\_\_\_ Date \_\_\_\_\_

(bonded) Water Well Constructor Certification:  
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.  
Signed Don Feagin WWC Number 715 Date 6-4-92

STATE OF OREGON  
**WATER WELL REPORT**  
 (as required by ORS 537.766)

**COLU**  
**045**

AUG 29 1990

3N/2W/13 66

WATER RESOURCES DEPARTMENT (START CARD) #

**20128**

**(1) OWNER:**

Name: Warren E. Wickham Well Number: \_\_\_\_\_  
 Address: 32140 G.P. West Road  
 City: Scappoose State: OR Zip: 97056

**(2) TYPE OF WORK:**

New Well  Deepen  Recundition  Abandon

**(3) DRILL METHOD**

Rotary Air  Rotary Mud  Cable  
 Other

**(4) PROPOSED USE:**

Domestic  Community  Industrial  Irrigation  
 Thermal  Injection  Other

**(5) BORE HOLE CONSTRUCTION:**

Special Construction approval Yes No Depth of Completed Well 145 ft.  
 Yes No   
 Explosives used  Type \_\_\_\_\_ Amount \_\_\_\_\_

HOLE			SEAL			Amount sacks or pounds
Diameter	From	To	Material	From	To	
10	0	20	Bentonite	0	20	16
6	20	145				

How was seal placed: Method  A  B  C  D  E

Other POURED

Backfill placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_

Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Size of gravel \_\_\_\_\_

**(6) CASING/LINER:**

Casing/Liner	Diameter	From	To	Gauge	Material			
					Steel	Plastic	Welded	Threaded
Casing	6	114	99	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Liner	4	5	145		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Final location of sheets) 99

**(7) PERFORATIONS/SCREENS:**

Perforations Method DRILL  
 Screens Type \_\_\_\_\_ Material \_\_\_\_\_

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
125	145		40	5/8		<input type="checkbox"/>	<input checked="" type="checkbox"/>

**(8) WELL TESTS: Minimum testing time is 1 hour**

Pump  Bailor  Air  Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
15		125	1 hr.

Temperature of water \_\_\_\_\_ Depth Artesian Flow Found \_\_\_\_\_

Was a water analysis done?  Yes By whom \_\_\_\_\_

Did any strata contain water not suitable for intended use?  Too little

Salty  Muddy  Odor  Colored  Other FINE SAND

Depth of strata: 26-39'

**(9) LOCATION OF WELL by legal description:**

County: Columbia Longitude \_\_\_\_\_  
 Township: 3N Nor S. Range: 2W E or W, WM.  
 Section: 13 NW 1/4 NW 1/4  
 Tax Lot: 51 Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
 Street Address of Well (or nearest address) \_\_\_\_\_

**(10) STATIC WATER LEVEL:**

80 ft. below land surface. Date 8-22-90  
 Artesian pressure \_\_\_\_\_ lb. per square inch. Date \_\_\_\_\_

**(11) WATER BEARING ZONES:**

Depth at which water was first found 21

From	To	Estimated Flow Rate	SWL
96	145	15	80

**(12) WELL LOG:**

Material	From	To	SWL
TOP SOIL	0	2	
BRN CLAY	2	6	
SILTY SAND	6	24	
SANDY CLAY, BRN	24	39	
SANDY CLAY, BLUE	39	43	
SANDY CLAY, BRN	43	52	
BRN CLAY + GRAVEL + SAND	52	96	
Weathered Rock + BRN CLAY	96	145	80

Date started 8-22-90 Completed 8-23-90

**(unbonded) Water Well Constructor Certification:**

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.

WWC Number \_\_\_\_\_  
 Signed \_\_\_\_\_ Date \_\_\_\_\_

**(bonded) Water Well Constructor Certification:**

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction, alteration dates reported above. Work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

WWC Number 715  
 Signed Dan Fealy Date 8-25-90

COLL 50342 NOV 21 1996

WELL I.D.# N/A (maybe NE-ND-N)

STATE OF OREGON WATER SUPPLY WELL REPORT WATER RESOURCES DEPT. (as required by ORS 537.765) SALEM, OREGON

(START CARD) # 92714

Instructions for completing this report are on the last page of this form.

(1) OWNER: Well Number CITY OF SCAPPOOSE (CENTURY WEST ENG. CORP.) Name 33568 EAST COLUMBIA AVENUE Address CITY SCAPPOOSE State OR Zip 97056

(2) TYPE OF WORK: [X] New Well [ ] Deepening [ ] Alteration (repair/recondition) [X] Abandonment

(3) DRILL METHOD: [X] Rotary Air [ ] Rotary Mud [ ] Cable [ ] Auger [ ] Other

(4) PROPOSED USE: [ ] Domestic [ ] Community [ ] Industrial [ ] Irrigation [ ] Thermal [ ] Injection [ ] Livestock [X] Other TEST

(5) BORE HOLE CONSTRUCTION: Special Construction approval [ ] Yes [X] No Depth of Completed Well -0- ft. Explosives used [ ] Yes [X] No Type Amount

Table with columns: HOLE (Diameter, From, To), SEAL (Material, From, To), Sacks or pounds. Includes entries for 10" and 6" diameters.

How was seal placed: Method [ ] A [ ] B [ ] C [ ] D [ ] E [ ] Other Backfill placed from \_\_\_ ft. to \_\_\_ ft. Material Gravel placed from \_\_\_ ft. to \_\_\_ ft. Size of gravel

(6) CASING/LINER: Table with columns: Diameter, From, To, Gauge, Steel, Plastic, Welded, Threaded. Includes a 'REMOVED' stamp.

Final location of shoe(s)

(7) PERFORATIONS/SCREENS: Table with columns: From, To, Slot size, Number, Diameter, Tele/pipe size, Casing, Liner. Includes entry for 156-196 slot size.

(8) WELL TESTS: Minimum testing time is 1 hour. [X] Pump [ ] Bailer [ ] Air [ ] Flowing Artesian. Yield gal/min 175, Drawdown 63, Time 1 hr.

Temperature of water 52°F Depth Artesian Flow Found Was a water analysis done? [ ] Yes By whom Did any strata contain water not suitable for intended use? [ ] Too little [ ] Salty [ ] Muddy [ ] Odor [ ] Colored [ ] Other Depth of strata:

(9) LOCATION OF WELL by legal description: County COLUMBIA Latitude Longitude Township 3N N or S Range 2W E or W. WM. Section 13 NW 1/4 NW 1/4 Tax Lot CITY SCAPPOOSE INDUSTRIAL AIRPARK Street Address of Well (or nearest address) 51940 SW CREEKVIEW PL. SCAPPOOSE, OR 97056

(10) STATIC WATER LEVEL: 41 ft. below land surface. Date 11/07/96 Artesian pressure lb. per square inch. Date

(11) WATER BEARING ZONES: Depth at which water was first found 150

Table with columns: From, To, Estimated Flow Rate, SWL. Includes entry for 170-196 depth with 175 GPM flow rate.

(12) WELL LOG: Ground Elevation

Table with columns: Material, From, To, SWL. Lists various soil types and their depths, including 'WELL ABANDONED, CASING REMOVED'.

Date started 10/22/96 Completed 11/07/96

(unbonded) Water Well Constructor Certification: I certify that the work performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.

Signed \_\_\_\_\_ WWC Number \_\_\_\_\_ Date \_\_\_\_\_

(bonded) Water Well Constructor Certification: I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

Signed \_\_\_\_\_ WWC Number 573 Date 11/18/96













NOTICE TO WATER WELL CONTRACTOR

The original and first copy of this report are to be filed with the

STATE ENGINEER, SALEM, OREGON 97310 within 30 days from the date of well completion.

3089

WATER WELL REPORT RECEIVED

STATE OF OREGON

(Please type or print) JUL 6 - 1976

(Do not write above this line)

State Well No. \_\_\_\_\_

State Permit No. 3N/2W-73

WATER RESOURCES DEPT.

SALEM, OREGON

(1) OWNER:

Name Joseph Ekau Address P.O. Box 445 Scappoose, Oregon 97056

(2) TYPE OF WORK (check):

New Well [X] Deepening [ ] Reconditioning [ ] Abandon [ ]

If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary [X] Cable [ ] Driven [ ] Jetted [ ] Bored [ ]

(4) PROPOSED USE (check):

Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [X] Test Well [ ] Other [ ]

(6) CASING INSTALLED:

8" Diam. from 0 ft. to 70 ft. Gage 250

PERFORATIONS:

Perforated? [ ] Yes [X] No

Type of perforator used

Size of perforations in. by in. perforations from ft. to ft.

(7) SCREENS:

Well screen installed? [ ] Yes [X] No

Manufacturer's Name type Model No. Diam. Slot size Set from ft. to ft.

(8) WELL TESTS:

Drawdown is amount water level is lowered below static level

Was a pump test made? [ ] Yes [X] No If yes, by whom? Field: gal./min. with ft. drawdown after hrs.

(9) CONSTRUCTION:

Well seal-Material used Cement and Bentonite Well sealed from land surface to 18 ft. Diameter of well bore to bottom of seal 12 in.

(10) LOCATION OF WELL:

County Columbia Driller's well number 1/4 Section 13 T. 3-N R. 2-W W.M. Bearing and distance from section or subdivision corner

(11) WATER LEVEL: Completed well.

Depth at which water was first found 28 ft. Static level 10 ft. below land surface. Date 6-20-76 Artesian pressure lbs. per square inch. Date

(12) WELL LOG:

Diameter of well below casing 8 Depth drilled 95 ft. Depth of completed well 70 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated.

Table with columns: MATERIAL, From, To, SWL. Rows include Top soil, Brown clay, Gravel, Blue clay, Gravel, Gravel sand and water, Brown sand.

Work started 6-18-76 19 Completed 6-20-76 19

Date well drilling machine moved off of well 6-20-76 19

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.

[Signed] David Donnelly Date 6-28-76 19 (Drilling Machine Operator)

Drilling Machine Operator's License No. 883

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Name Ralph Turner Drilling Co. (Person, firm or corporation) (Type or print)

Address Rte 1 Box 141 Hillsboro, Oregon

[Signed] Ralph Turner (Water Well Contractor)

Contractor's License No. 247 Date 6-28-76 19

NOTICE TO WATER WELL CONTRACTOR  
 The original and first copy  
 of this report are to be  
 filed with the  
 STATE ENGINEER, SALEM, OREGON 97310  
 within 30 days from the date  
 of well completion.

WATER WELL REPORT RECEIVED

3088

STATE OF OREGON  
 (Please type or print)  
 (Do not write above this line)

SEP 1 1976

State Well No. \_\_\_\_\_  
 State Permit No. 3W/2W73

(1) OWNER:  
 Name Joseph Intek  
 Address AT/Box 310 Scappoose Ore 97056

(2) TYPE OF WORK (check):  
 New Well  Deepening  Reconditioning  Abandon   
 If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL: (4) PROPOSED USE (check):  
 Rotary  Driven  Domestic  Industrial  Municipal   
 Cable  Jetted  Irrigation  Test Well  Other   
 Bored

(5) CASING INSTALLED:  
6" Diam. from 0 ft. to 89 ft. Gage 1250  
 " Diam. from " ft. to " ft. Gage "  
 " Diam. from " ft. to " ft. Gage "

(6) PERFORATIONS: Perforated?  Yes  No.  
 Type of perforator used \_\_\_\_\_  
 Size of perforations in. by in.  
 perforations from ft. to ft.  
 perforations from ft. to ft.  
 perforations from ft. to ft.

(7) SCREENS: Well screen installed?  Yes  No  
 Manufacturer's Name \_\_\_\_\_ Model No. \_\_\_\_\_  
 Type \_\_\_\_\_ Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(8) WELL TESTS: Drawdown is amount water level is lowered below static level  
 Was a pump test made?  Yes  No If yes, by whom?  
 Yield: gal./min. with ft. drawdown after hrs.  
 " " " " " "  
 " " " " " "  
 Bailer test 20 gal./min. with 8 ft. drawdown after 1 hrs.  
 Artesian flow g.p.m.  
 Temperature of water Depth artesian flow encountered ft.

(9) CONSTRUCTION:  
 Well seal—Material used Bentonite + Cement  
 Well sealed from land surface to 19' ft.  
 Diameter of well bore to bottom of seal 10 in.  
 Diameter of well bore below seal 6 in.  
 Number of sacks of cement used in well seal 1 sacks  
 Number of sacks of bentonite used in well seal 100 sacks  
 Brand name of bentonite International Cell  
 Number of pounds of bentonite per 100 gallons of water approx 4.5 gal. Per 100 lbs./100 gals.  
 Was a drive shoe used?  Yes  No Plugs \_\_\_\_\_ Size: location \_\_\_\_\_ ft.  
 Did any strata contain unusable water?  Yes  No  
 Type of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
 Method of sealing strata off \_\_\_\_\_  
 Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
 Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(10) LOCATION OF WELL:  
 County Col. Driller's well number \_\_\_\_\_  
 1/4 Section 13 T. 3N R. 2W W.M.

Bearing and distance from section or subdivision corner on Highway 30 approx 1 mile south of Scappoose

(11) WATER LEVEL: Completed well.  
 Depth at which water was first found 55 ft.  
 Static level 40 ft. below land surface. Date aug 23, 76  
 Artesian pressure lbs. per square inch. Date \_\_\_\_\_

(12) WELL LOG: Diameter of well below casing \_\_\_\_\_  
 Depth drilled 89 ft. Depth of completed well 89 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
<u>St. Be. soil</u>	<u>0</u>	<u>2</u>	
<u>1" Clay</u>	<u>2</u>	<u>17</u>	
<u>Grey sand &amp; med. gravel</u>	<u>17</u>	<u>50</u>	
<u>Grey sand med.</u>	<u>50</u>	<u>70</u>	<u>40</u>
<u>A. Pr. sand</u>	<u>70</u>	<u>82</u>	
<u>Course grey sand &amp; fine gravel</u>	<u>82</u>	<u>89</u>	<u>40</u>

Work started Aug 11 1976 Completed aug 23 1976  
 Date well drilling machine moved off of well aug 23 1976

Drilling Machine Operator's Certification:  
 This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.  
 [Signed] Svend A. Hald Date aug 23, 1976  
 (Drilling Machine Operator)  
 Drilling Machine Operator's License No. 144

Water Well Contractor's Certification:  
 This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
 Name Svend A. Hald  
 (Person, firm or corporation) (Type or print)  
 Address Box 1112 St. Helens Ore  
 [Signed] Svend A. Hald  
 (Water Well Contractor)  
 Contractor's License No. 261 Date aug 23 1976



NOTICE TO WATER WELL CONTRACTOR  
The original and first copy  
of this report are to be  
filed with the

**RECEIVED**  
STATE OF OREGON  
(Please type or print)  
JUL 25 1973  
STATE ENGINEER  
SALEM OREGON

STATE ENGINEER, SALEM, OREGON 97310  
within 30 days from the date  
of well completion.

State Well No. 3N/2W-1  
Permit No. W2R  
field check 1/23/73

**(1) OWNER:**

Name Robert Thomas  
Address Columbus Ave #1 Way  
Bay 14 RR 2

**(2) TYPE OF WORK (check):**

New Well  Deepening  Reconditioning  Abandon   
If abandonment, describe material and procedure in Item 12.

**(3) TYPE OF WELL:**

Rotary  Driven   
Cable  Jetted   
Dug  Bored

**(4) PROPOSED USE (check):**

Domestic  Industrial  Municipal   
Irrigation  Test Well  Other

**(5) CASING INSTALLED:**

Threated  Weided   
6" Diam. from 0 ft. to 65 ft. Gage 250  
" Diam. from ft. to ft. Gage  
" Diam. from ft. to ft. Gage

**(6) PERFORATIONS:**

Perforated?  Yes  No  
Type of perforator used  
Size of perforations in. by in.  
perforations from ft. to ft.  
perforations from ft. to ft.  
perforations from ft. to ft.

**(7) SCREENS:**

Well screen installed?  Yes  No  
Manufacturer's Name  
Type Model No.  
Diam. Slot size Set from ft. to ft.  
Diam. Slot size Set from ft. to ft.

**(8) WELL TESTS:**

Drawdown is amount water level is lowered below static level  
Was a pump test made?  Yes  No If yes, by whom?  
Yield: gal./min. with ft. drawdown after hrs.  
" " " " "  
" " " " "  
Bailer test 15 gal./min. with 70 ft. drawdown after 1 hrs.  
Artesian flow g.p.m.  
Temperature of water Depth artesian flow encountered ft.

**(9) CONSTRUCTION:**

Well seal—Material used Bentonite  
Well sealed from land surface to 20 ft.  
Diameter of well bore to bottom of seal 9 in.  
Diameter of well bore below seal 6 in.  
Number of sacks of cement used in well seal sacks  
Number of sacks of bentonite used in well seal 2 sacks  
Brand name of bentonite National  
Number of pounds of bentonite per 100 gallons of water 75 lbs./100 gals.  
Was a drive shoe used?  Yes  No Plugs Size: location ft.  
Did any strata contain unusable water?  Yes  No  
Type of water? depth of strata  
Method of sealing strata off  
Was well gravel packed?  Yes  No Size of gravel:  
Gravel placed from ft. to ft.

**(10) LOCATION OF WELL:**

County Columbia Driller's well number  
1/4 Section 13 T. 3N R. 2W W.M.  
Bearing and distance from section or subdivision corner

**(11) WATER LEVEL: Completed well.**

Depth at which water was first found 60 ft.  
Static level 40 ft. below land surface. Date 6-28-73  
Artesian pressure lbs. per square inch. Date

**(12) WELL LOG:**

Diameter of well below casing  
Depth drilled ft. Depth of completed well ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
top soil	0	3	
yellow clay	3	26	
gravel cemented	26	60	
large gravel	60	65	

Work started 28 June 1973 Completed 6-29 1973  
Date well drilling machine moved off of well 6-29 1973

**Drilling Machine Operator's Certification:**

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.  
[Signed] William McMillan Date 6-29, 1973  
(Drilling Machine Operator)  
Drilling Machine Operator's License No. 808

**Water Well Contractor's Certification:**

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
Name F.F. McTear  
(Person, firm or corporation) (Type or print)  
Address 840 West St. St. Helens, Or  
[Signed] F.F. McTear  
(Water Well Contractor)  
Contractor's License No. 420 Date 6-29, 1973

RECEIVED

N 1/2?

STATE OF OREGON  
WATER WELL REPORT  
(as required by ORS 637.766)

MAY 22 1987

COLU  
3083

3N / 2W - 13  
ABANDON

(1) OWNER:  
Name Northwest Earth Movers  
Address 8101 S.W. Nyberg Road  
City Tualatin State OR Zip

(9) LOCATION OF WELL by legal description:  
County Columbia Latitude Longitude  
Township 3N N or S, Range 2W E or W, WM.  
Section 13  
Tax Lot Lot Block Subdivision  
Street Address of Well (or nearest address) Inter section of Old Portland Rd. & Hwy. 30, Scappoose

(2) TYPE OF WORK:  
 New Well  Deepen  Recondition  Abandon

(10) STATIC WATER LEVEL:  
41'6" ft. below land surface. Date  
Artesian pressure lb. per square inch. Date

(3) DRILL METHOD  
 Rotary Air  Rotary Mud  Cable  
 Other

(11) WATER BEARING ZONES:  
Depth at which water was first found

(4) PROPOSED USE:  
 Domestic  Community  Industrial  Irrigation  
 Thermal  Injection  Other

(5) BORE HOLE CONSTRUCTION:  
Special Construction approval Yes No Depth of Completed Well ft.  
Explosives used Yes No Type Amount

From	To	Estimated Flow Rate	SWL
/			

HOLE		SEAL		Amount
Diameter	From To	Material	From To	sacks or pounds
/				

(12) WELL LOG: Ground elevation

How was seal placed: Method  A  B  C  D  E  
 Other  
Backfill placed from ft. to ft. Material  
Gravel placed from ft. to ft. Size of gravel

Material	From	To	SWL
Well was a 24" Hand dug well cased with red clay tile to a depth of 42 feet. Static level in well was 41'6"			
Six yards of concrete were placed in well by means of a 6" tremie pipe			
Work was performed by Northwest Earth Movers personnel under the supervision of the undersigned.			

(6) CASING/LINER:

Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Liner:				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Final location of shoe(s)

(7) PERFORATIONS/SCREENS:

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
/							

(8) WELL TESTS: Minimum testing time is 1 hour  
 Pump  Bailer  Air  Flowing Artesian  
Yield gal/min Drawdown Drill stem at Time  
1 hr.

Date started 1-5-87 Completed 5-1-87

temperature of water Depth Artesian Flow Found  
a water analysis done?  Yes By whom  
Did any strata contain water not suitable for intended use?  Too little  
 Salty  Murky  Odor  Colored  Other  
Depth of strata:

(unbonded) Water Well Constructor Certification:  
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.  
WWC Number  
Signed Date

(bonded) Water Well Constructor Certification:  
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.  
WWC Number 715  
Signed Don Fisher Date 5-21-87



RECEIVED

Address does not correlate to SW-SW Sec. 13. 3N/2W-13cc

STATE OF OREGON WATER WELL REPORT (as required by ORS 637.766)

COLU

JUN 06 1988

(1) OWNER: Peter McHugh, Well Number: WATER RESOURCES DEPARTMENT, Address: 52371 S.W. O'Keefe Pl., City: Scappoose, OR, Zip: 97056

(9) LOCATION OF WELL by legal description: Township 3N, Range 2W, Section 13 SW 1/4 SW 1/4, Date 5-27-88

(2) TYPE OF WORK: [X] New Well, [ ] Deepen, [ ] Recondition, [ ] Abandon

(3) DRILL METHOD: [X] Rotary Air, [ ] Rotary Mud, [ ] Cable, [ ] Other

(4) PROPOSED USE: [X] Domestic, [ ] Community, [ ] Industrial, [ ] Irrigation, [ ] Thermal, [ ] Injection, [ ] Other

(5) BORE HOLE CONSTRUCTION: Special Construction approval Yes No, Depth of Completed Well 120 ft., Explosives used [ ] Yes [X] No

Table with columns: HOLE Diameter, SEAL From, To, Material, Amount sacks or pounds. Row 1: 6, 0, 22, Bentonite, 10. Row 2: 6, 22, 130, ,

How was seal placed: Method [ ] A [ ] B [ ] C [ ] D [ ] E, [X] Other: POURED. Backfill placed from ft. to ft. Material. Gravel placed from ft. to ft. Size of gravel.

(6) CASING/LINER: Table with columns: Diameter, From, To, Gauge, Steel, Plastic, Welded, Threaded. Casing: 6, 71, 79, 250, [X] Steel, [ ] Plastic, [X] Welded, [ ] Threaded. Liner: none.

(7) PERFORATIONS/SCREENS: location of shoe(s) none. [ ] Perforations Method, [ ] Screens Type Material.

Table with columns: From, To, Slot size, Number, Diameter, Tele/pipe size, Casing, Liner. All cells empty.

(8) WELL TESTS: Minimum testing time is 1 hour. [ ] Pump, [ ] Bailer, [X] Air, [ ] Flowing, [ ] Artesian. Yield gal/min: 16, Drawdown: , Drill stem at: 100, Time: 1 hr.

(10) STATIC WATER LEVEL: 55 ft. below land surface. Date 5-27-88. Artesian pressure lb. per square inch. Date

(11) WATER BEARING ZONES: Depth at which water was first found 88. Table with columns: From, To, Estimated Flow Rate, SWL. Row 1: 88, 100, 16, 55.

(12) WELL LOG: Ground elevation. Table with columns: Material, From, To, SWL. Rows: BRN Silty Clay (0-17), Blue Clay (17-26), BRN SAND + GRAVEL (26-57), CEMENTED GRAVEL (57-78), WEATHERED ROCK (78-86), DRK Blue Sandstone (86-120).

Date started 5-27-88, Completed 5-27-88

(unbonded) Water Well Constructor Certification: I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. WWC Number, Signed, Date

(bonded) Water Well Constructor Certification: I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. WWC Number 215, Signed Don Fealin, Date 6-3-88



RECEIVED  
JUN 7 1988

RECEIVED

U 103

No 3060

WATER RESOURCES DEPT.  
SALEM, OREGON

"START CARD"

NOTICE OF BEGINNING OF WELL CONSTRUCTION  
(as required by ORS 537.762)

This form must be completed, signed by both the owner (or authorized agent) and constructor, and the original delivered to the Water Resources Department prior to commencement of construction, alteration or abandonment of each well.

\* Owner's Name and Mailing Address Peter McHugh  
52371 SW Keys Rd  
Scappoose, OR 97056

Proposed Commencement Date May 27 1988

Proposed Well Depth 150 Diameter 6 1/2  
and Use:  
 Domestic  Community  Industrial  Irrigation  
 Thermal  Injection  Other

\* Proposed Well Location: County Columbia  
\* Township 3 N (N or S) Range 2 W (E or W) Section 13 (NW)

At least 2 of these must be provided

1. SW 1/4 of SW 1/4 of above section
2. street address of well location \_\_\_\_\_
3. tax lot number of well location \_\_\_\_\_
4. attach approved map with location identified.  
(see reverse of this form for approved maps)

We hereby certify that we have read the back of this form, and that to the best of our knowledge the information provided herein is accurate and the well is being properly located from septic tanks and septic drain fields.

x Peter McHugh  
Owner's Signature

x Dan Feehan  
Bonded Water Well Constructor

\_\_\_\_\_  
Title  
\_\_\_\_\_  
Date

License No. 715  
Company TURNER DRILLING CO

Note: This is not a Water Right application. The owner is responsible for obtaining a Water Right through the Water Resources Department if required.

RECEIVED MAY 31 1988

NOTICE TO WATER WELL CONTRACTOR

The original and first copy of this report are to be filed with the

WATER WELL REPORT

STATE ENGINEER, SALEM, OREGON 97310 within 30 days from the date of well completion.

STATE OF OREGON Please type or print (Do not write above this line)

State Well No. 3N/2W-13

State Permit No. 5/2 of SW 1/4

(1) OWNER

Name Ross Carter
Address 3020 S. E. Franklin
Portland Ore.

(2) TYPE OF WORK (check):

New Well [X] Deepening [ ] Reconditioning [ ] Abandon [ ]
If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary [ ] Driven [ ]
Cable [X] Jetted [ ]
Dug [ ] Bored [ ]

(4) PROPOSED USE (check):

Domestic [X] Industrial [ ] Municipal [ ]
Irrigation [ ] Test Well [ ] Other [ ]

(5) CASING INSTALLED:

Threaded [ ] Welded [X]
6" Diam. from 0 ft. to 108 ft. Gage 250

(6) PERFORATIONS:

Perforated? [ ] Yes [X] No
Type of perforator used
Size of perforations in. by in.

(7) SCREENS:

Well screen installed? [ ] Yes [X] No
Manufacturer's Name
Type Model No.
Diam. Slot size Set from ft. to ft.

(8) WATER LEVEL: Completed well.

Static level 70 ft. below land surface Date 3/24/68
Artesian pressure lbs. per square inch Date

(9) WELL TESTS:

Drawdown is amount water level is lowered below static level
Was a pump test made? [ ] Yes [X] No If yes, by whom?
Well: gal./min. with ft. drawdown after hrs.
Baller test 10 gal./min. with 0 ft. drawdown after 1 hrs.
Artesian flow g.p.m. Date
Temperature of water 57 Was a chemical analysis made? [ ] Yes [X] No

(10) CONSTRUCTION:

Well seal-Material used BENTONITE - CLAY
Depth of seal 18' ft.
Diameter of well bore to bottom of seal 11 in.
Were any loose strata cemented off? [ ] Yes [X] No Depth
Was a drive shoe used? [X] Yes [ ] No
Did any strata contain unusable water? [ ] Yes [X] No
Type of water? depth of strata
Method of sealing strata off
Was well gravel packed? [ ] Yes [X] No Size of gravel:
Gravel placed from ft. to ft.

(11) LOCATION OF WELL:

County Col. Driller's well number 83
1/4 1/4 Section 13 T. 3N R. 2W W.M.
Bearing and distance from section or subdivision corner
ON Callahan Road

(12) WELL LOG:

Diameter of well below casing
Depth drilled 108 ft. Depth of completed well 108 ft.
Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level as drilling proceeds. Note drilling rates.

Table with columns: MATERIAL, From, To, SWL. Rows include Soil, Brown clay, Brown sandy clay, Gray clay + fine gravel, Brown sandy clay, Lt. Gray sandy siltstone, Med. coarse gravel + med. sand.

Work started 3/5/68 19 Completed 3/24 1968
Date well drilling machine moved off of well 3/30 1968

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.
(Signed) Fred Lane Date 3/26, 1968
(Drilling Machine Operator)

Drilling Machine Operator's License No. 499

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
NAME Svend A. Hald
Address Box 1267 St. Helens Ore.
(Signed) Svend A. Hald
(Water Well Contractor)
Contractor's License No. 261 Date 3-31 1968





TO WATER WELL CONTRACTOR  
 original and first copy of this report  
 are to be filed with the  
 WATER RESOURCES DEPARTMENT,  
 SALEM, OREGON 97310  
 within 30 days from the date  
 of well completion.

WATER WELL REPORT

RECEIVED

STATE OF OREGON

State Well No. 3N/2W-13C4

(Please type or print)

(Do not write above this line)

State Permit No. \_\_\_\_\_

OREGON

deepened

(1) OWNER:

Name GEORGE S. POOLEY  
 Address RT. 1 BOX 34 SCAPPOOSE, OR. 97056

(2) TYPE OF WORK (check):

New Well  Deepening  Reconditioning  Abandon

If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary  Driven   
 Cable  Jetted   
 Dug  Bored

(4) PROPOSED USE (check):

Domestic  Industrial  Municipal   
 Irrigation  Test Well  Other

(5) CASING INSTALLED:

Threaded  Welded

6" Diam. from 7.6" ft. to 111" ft. Gage 2.50  
 " Diam. from " ft. to " ft. Gage  
 " Diam. from " ft. to " ft. Gage

(6) PERFORATIONS:

Perforated?  Yes  No.

Type of perforator used \_\_\_\_\_

Size of perforations in. by in.  
 \_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 \_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 \_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(7) SCREENS:

Well screen installed?  Yes  No

Manufacturer's Name \_\_\_\_\_  
 Type \_\_\_\_\_ Model No. \_\_\_\_\_  
 Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(8) WELL TESTS:

Drawdown is amount water level is lowered below static level

Was a pump test made?  Yes  No If yes, by whom? DRILLER  
 Yield: 30 gal./min. with 67 ft. drawdown after 1 hrs.  
 " " " " " "  
 " " " " " "  
 Baller test gal./min. with ft. drawdown after hrs.  
 Artesian flow g.p.m.  
 Temperature of water 57 Depth artesian flow encountered \_\_\_\_\_ ft.

(9) CONSTRUCTION:

Well seal—Material used \_\_\_\_\_  
 Well sealed from land surface to \_\_\_\_\_ ft.  
 Diameter of well bore to bottom of seal \_\_\_\_\_ in.  
 Diameter of well bore below seal \_\_\_\_\_ in.  
 Number of sacks of cement used in well seal \_\_\_\_\_ sacks  
 How was cement grout placed? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 Was a drive shoe used?  Yes  No Plugs \_\_\_\_\_ Size: location \_\_\_\_\_ ft.  
 Did any strata contain unusable water?  Yes  No  
 Type of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
 Method of sealing strata off \_\_\_\_\_  
 Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
 Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(10) LOCATION OF WELL:

County COLUMBIA Driller's well number \_\_\_\_\_  
SE 1/4 SW 1/4 Section 13 T. 3N R. 2W W.M. \_\_\_\_\_  
 Bearing and distance from section or subdivision corner \_\_\_\_\_

(11) WATER LEVEL: Completed well.

Depth at which water was first found 93 ft.  
 Static level 35 ft. below land surface. Date 2-22-82  
 Artesian pressure \_\_\_\_\_ lbs. per square inch. Date \_\_\_\_\_

(12) WELL LOG:

Diameter of well below casing 6"

Depth drilled 122 ft. Depth of completed well 122 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
<u>OLD WELL 93 FT. DEEP</u>			
<u>SAND W/ GRAVEL BROWN</u>	<u>9.3</u>	<u>9.5</u>	<u>42</u>
<u>SAND FINE BROWN</u>	<u>9.5</u>	<u>10.4</u>	<u>42</u>
<u>SAND + GRAVEL GRAY</u>	<u>10.4</u>	<u>10.8</u>	<u>42</u>
<u>SAND W/ WOOD</u>	<u>10.8</u>	<u>11.0</u>	<u>42</u>
<u>WOOD LOG</u>	<u>11.0</u>	<u>11.3 1/2</u>	<u>42</u>
<u>GRAVEL W/ SAND WATER</u>	<u>11.3 1/2</u>	<u>12.2</u>	<u>35</u>

Work started 2-22-1982 Completed 2-22-1982  
 Date well drilling machine moved off of well 2-24-1982

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.

[Signed] Ron Edgell Date 2-24, 1982  
 (Drilling Machine Operator)

Drilling Machine Operator's License No. 589

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Name RON EDGELL PUMP & WELL DRILLING  
 (Person, firm or corporation) (Type or print)

Address P.O. BOX 695 CASTLE ROCK, WA. 98611

[Signed] Ron Edgell  
 (Water Well Contractor)

Contractor's License No. 515 Date 2, 24, 1982

NOTICE TO WATER WELL CONTRACTOR  
The original and first copy of this report are to be filed with the  
STATE ENGINEER, SALEM, OREGON 97310  
within 30 days from the date of well completion.

WATER WELL REPORT RECEIVED  
STATE OF OREGON NOV 2 1978  
(Please type or print)  
(Do not write above this line)  
WATER RESOURCES DEPT  
SALEM, OREGON

State Well No. 3W/2W-13  
State Permit No. 44

(1) OWNER:

Name JOHN C. BEAVERS  
Address 101 CALLAHAN RD. SCARBOROUGH, OR. 97136  
33391 Callahan Rd 97056

(2) TYPE OF WORK (check):

New Well  Deepening  Reconditioning  Abandon   
If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary  Driven   
Cable  Jetted   
Dug  Bored

(4) PROPOSED USE (check):

Domestic  Industrial  Municipal   
Irrigation  Test Well  Other

CASING INSTALLED:

Threaded  Welded   
6" Diam. from 4.6" ft. to 9.3" ft. Gage 2.52"  
" Diam. from " ft. to " ft. Gage "  
" Diam. from " ft. to " ft. Gage "

PERFORATIONS:

Perforated?  Yes  No.  
Type of perforator used \_\_\_\_\_  
Size of perforations in. by in.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(7) SCREENS:

Well screen installed?  Yes  No  
Manufacturer's Name \_\_\_\_\_  
Type \_\_\_\_\_ Model No. \_\_\_\_\_  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(8) WELL TESTS:

Drawdown is amount water level is lowered below static level  
Was a pump test made?  Yes  No If yes, by whom?  
ld: gal./min. with ft. drawdown after hrs.  
" " " " " "  
" " " " " "  
Bailer test 15 gal./min. with 19 ft. drawdown after 1 hrs.  
Artesian flow g.p.m. \_\_\_\_\_  
Temperature of water 57 ° Depth artesian flow encountered \_\_\_\_\_ ft.

(9) CONSTRUCTION:

Well seal—Material used BENTONITE \*  
Well sealed from land surface to 22 ft.  
Diameter of well bore to bottom of seal 10 in.  
Diameter of well bore below seal 6 in.  
Number of sacks of cement used in well seal \_\_\_\_\_ sacks  
Number of sacks of bentonite used in well seal 2 sacks  
Brand name of bentonite INTERNATIONAL  
Number of pounds of bentonite per 100 gallons of water 100 lbs./100 gals.  
Was a drive shoe used?  Yes  No Plugs \_\_\_\_\_ Size: location \_\_\_\_\_ ft.  
Did any strata contain unusable water?  Yes  No  
Type of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
Method of sealing strata off \_\_\_\_\_  
Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(10) LOCATION OF WELL:

County COLUMBIA Driller's well number \_\_\_\_\_  
SE 1/4 SE 1/4 Section 13 T. 3N R. 2W W.M.  
Bearing and distance from section or subdivision corner \_\_\_\_\_

(11) WATER LEVEL: Completed well.

Depth at which water was first found 70 ft.  
Static level 59 ft. below land surface. Date 10-24-76  
Artesian pressure lbs. per square inch. Date \_\_\_\_\_

(12) WELL LOG:

Diameter of well below casing 6"  
Depth drilled 93 1/2 ft. Depth of completed well 93 1/2 ft.  
Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To
TOP SOIL	0	1 1/2
CLAY BROWN	1 1/2	19
CLAY BROWN WITH GRAVEL	19	49
CLAY YELLOW W/ SAND & GRAVEL	49	64
CLAY BROWN W/ GRAVEL & SAND	64	75
CLAY GRAY W/ SOME GRAVEL	75	87
SAND GRAY	87	87
GRAVEL MIXED WITH SAND	87	93 1/2
WATER-BEARING		

Work started 10-22-1976 Completed 10-24-1976  
Date well drilling machine moved off of well 10-24-1976

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.

[Signed] Ed Edgerly Date 10-24-1976  
(Drilling Machine Operator)

Drilling Machine Operator's License No. 589

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Name IRON EDGELL PUMP & WELL DRILLING  
(Person, firm or corporation) (Type or print)

Address P.O. BOX 695 CASTLE ROCK, WA 98614

[Signed] Iron Edgell  
(Water Well Contractor)

Contractor's License No. 575 Date 10-24-1976

STATE ENGINEER  
Salem, Oregon

**COLU**

# Well Record

STATE WELL NO. 3N/2W-130  
COUNTY Columbia  
APPLICATION NO. GR-679

3110

GR- 1544

OWNER: Martin J. Irtek

MAILING ADDRESS:

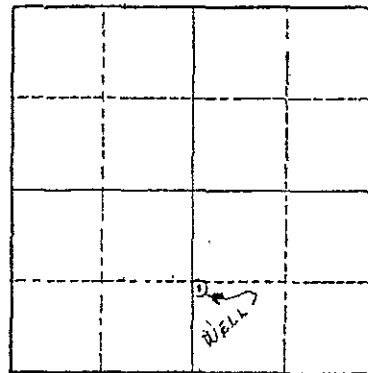
LOCATION OF WELL: Owner's No.

CITY AND STATE: Scappoose, Oregon

SW 1/4 SE 1/4 Sec. 13 T. 3 N. R. 2 E., W.M.

Bearing and distance from section or subdivision

corner 100' E. & 1200' N. from S 1/4 cor., Sec. 13



Section 13

Altitude at well

TYPE OF WELL: Drilled Date Constructed 1952

Depth drilled 170' Depth cased 170'

CASING RECORD:

6"

FINISH:

AQUIFERS:

WATER LEVEL:

47'

PUMPING EQUIPMENT: Type Pacific deep well turbine H.P. 3  
Capacity 45 G.P.M.

WELL TESTS:

Drawdown 53 ft. after 45 hours G.P.M.

Drawdown ft. after hours G.P.M.

USE OF WATER Irrigation Temp. °F. 19

SOURCE OF INFORMATION GR Record

DRILLER or DIGGER

ADDITIONAL DATA:

Log Water Level Measurements Chemical Analysis Aquifer Test

REMARKS:

Log: Soil 0 to 14 ft.  
Rock 14 to 20 ft.  
Quick sand 20 to 170 ft.

Irrigation of 3.5 acres

RECEIVED

LINE SE-NW  
(Columbia Rv. Hwy is in E 1/2, so cannot be in NW 1/4. Maybe NW 1/4 of SE 1/4)

MAR 20 1998

STATE OF OREGON  
WATER SUPPLY WELL REPORT  
(as required by ORS 537.765)

WATER RESOURCES DEPT. WELL I.D. # L 23620  
BALEM, OREGON START CARD # 110277

Instructions for completing this report are on the last page of this form.

(1) OWNER: Well Number \_\_\_\_\_  
Name TED WHITE  
Address 51583 COLUMBIA RIVER HWY.  
City SCAPEPOOSE State OR Zip 97056

(2) TYPE OF WORK  
 New Well  Deepening  Alteration (repair/recondition)  Abandonment

(3) DRILL METHOD:  
 Rotary Air  Rotary Mud  Cable  Auger  
 Other

(4) PROPOSED USE:  
 Domestic  Community  Industrial  Irrigation  
 Thermal  Injection  Livestock  Other

(5) BORE HOLE CONSTRUCTION:  
Special Construction approval  Yes  No Depth of Completed Well 187 ft.  
Explosives used  Yes  No Type \_\_\_\_\_ Amount \_\_\_\_\_

HOLE SEAL

Diameter	From	To	Material	From	To	Sacks or pounds
13	0	20	Bentonite	0	20	27 SKS
8	20	187				

How was seal placed: Method  A  B  C  D  E  
 Other Poured into dry annular  
Backfill placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Size of gravel \_\_\_\_\_

(6) CASING/LINER:

Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing: 8"	+2	176	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Liner: 6"	167	177	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6"	183	187	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Final location of shoe(s) Fig. K Packer @ 167' Shoe @ 176'

(7) PERFORATIONS/SCREENS:

Perforations Method Johnson Sand Screen  
 Screens Type Pipe Size Material Galv. Steel

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
177	183	.020		6"	pipe	<input type="checkbox"/>	<input checked="" type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour

Yield gal/min	Drawdown	Drill stem at	Flowing Time
80-90		165	1 hr.
40-45		100	2-3 hrs.

Temperature of water 52°F Depth Artesian Flow Found \_\_\_\_\_  
Was a water analysis done?  Yes By whom \_\_\_\_\_  
Did any strata contain water not suitable for intended use?  Too little  
 Salty  Muddy  Odor  Colored  Other iron  
Depth of strata: 97-158

(9) LOCATION OF WELL by legal description:  
County COLUMBIA Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
Township 3N N or S Range 2W E or W. WM.  
Section 13 SE 1/4 NW 1/4  
Tax Lot 12000 Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
Street Address of Well (or nearest address) 51577 COLUMBIA RIVER HWY., SCAPEPOOSE, OR

(10) STATIC WATER LEVEL:  
43 ft. below land surface. Date 03/16/98  
Artesian pressure \_\_\_\_\_ lb. per square inch. Date \_\_\_\_\_

(11) WATER BEARING ZONES:  
Depth at which water was first found 97

From	To	Estimated Flow Rate	SWL
177	183	80-90 GPM	43

(12) WELL LOG:  
Ground Elevation \_\_\_\_\_

Material	From	To	SWL
Brown silty clay occ. boulder	0	12	
Brown gravel & sand, tight boulders	12	97	
Brown sand w/some gravel	97	111	43
Brown sand & gravel	111	135	"
Gray-black sand & gravel	135	146	"
Brown sand w/gravel	146	158	"
Gray-black sand w/gravel	158	162	"
Gray-black gravel w/course sand	162	187	43

Date started 02/24/98 Completed 03/16/98

(unbonded) Water Well Constructor Certification:  
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.

Signed \_\_\_\_\_ Date \_\_\_\_\_ WWC Number \_\_\_\_\_

(bonded) Water Well Constructor Certification:  
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

Signed \_\_\_\_\_ Date 03/18/98 WWC Number 573







STATE OF OREGON  
**WATER WELL REPORT**  
(as required by ORS 537.765)

SEP 15 1993

WATER RESOURCES DEPT. Page 1 of 1  
 SALEM, OREGON

(START CARD) # 54487

*Cold*  
*MAG*  
*Maybe SE-SW-NE 30/2W/13ck*

**(1) OWNER:**

Well Number W-1  
 Name RUSS TYLANDER  
 Address OAK RIDGE DRIVE 6TH ST  
 City SCAPPOOSE State OR Zip 97056

**(2) TYPE OF WORK:**

New Well  Deepen  Recondition  Abandon

**(3) DRILL METHOD:**

Rotary Air  Rotary Mud  Cable  
 Other

**(4) PROPOSED USE:**

Domestic  Community  Industrial  Irrigation  
 Thermal  Injection  Other

**(5) BORE HOLE CONSTRUCTION:**

Special Construction approval  Yes  No Depth of Completed Well 60 ft.  
 Explosives used  Yes  No Type \_\_\_\_\_ Amount \_\_\_\_\_

HOLE			SEAL		Amount sacks or pounds	
Diameter	From	To	Material	From		To
10	0	20	CEMENT	0	20	10 SACKS
6	20	60				

How was seal placed: Method  A  B  C  D  E  
 Other

Backfill placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_  
 Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Size of gravel \_\_\_\_\_

**(6) CASING/LINER:**

Casing:	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
	6	+1	50	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Liner:					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Final location of shoe(s) 50 FT

**(7) PERFORATIONS/SCREENS:**

Perforations Method \_\_\_\_\_  
 Screens Type PVC 5CH-40 Material \_\_\_\_\_

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
60	55	8		4	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**(8) WELL TESTS: Minimum testing time is 1 hour**

Pump  Bailer  Air  Flowing Artesian  
 Yield gal/min \_\_\_\_\_ Drawdown \_\_\_\_\_ Drill stem at \_\_\_\_\_ Time \_\_\_\_\_  
20 50 1 hr.

Temperature of Water 52 Depth Artesian Flow Found \_\_\_\_\_  
 Was a water analysis done?  Yes By whom \_\_\_\_\_  
 Did any strata contain water not suitable for intended use?  Too little  
 Salty  Muddy  Odor  Colored  Other \_\_\_\_\_  
 Depth of strata: \_\_\_\_\_

**(9) LOCATION OF WELL by legal description:**

County COLUMBIA Latitude X' X" Longitude X' X"  
 Township 3 N N. or S. Range 2 W E. or W. WM.  
 Section 13 NW 1/4 SW 1/4  
 Tax Lot \_\_\_\_\_ Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
 Street Address of Well (or nearest address) 6TH STREET SCAPPOOSE, OR 97056

**(10) STATIC WATER LEVEL:**

10 ft. below land surface. Date 09/01/93  
 Artesian pressure \_\_\_\_\_ lb. per square inch. Date \_\_\_\_\_

**(11) WATER BEARING ZONES:**

Depth at which water was first found 10

From	To	Estimated Flow Rate	SWL
10	60	20 GPM	10

**(12) WELL LOG:**

Ground elevation \_\_\_\_\_

Material	From	To	SWL
SILT CLAY	0	10	
SILT	10	18	
SILT GRAVEL	18	40	
GRAVEL, SAND	40	55	
SAND	55	60	

Date started 09/01/93 Completed 09/03/93

**(unbonded) Water Well Constructor Certification:**

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.

WWC Number \_\_\_\_\_  
 Signed \_\_\_\_\_ Date \_\_\_\_\_

**(bonded) Water Well Constructor Certification:**

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

WWC Number 1480  
 Signed \_\_\_\_\_ Date 9/8/93



STATE ENGINEER  
Salem, Oregon

# Well Record

STATE WELL NO. 3N/2W-13F(1)  
COUNTY Columbia  
APPLICATION NO. GR-625

OWNER: Henry G. & Laura R. Roza

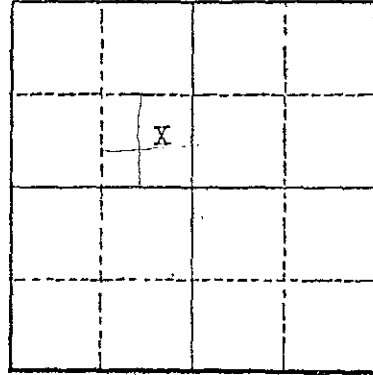
MAILING ADDRESS: Rt. 1, Box 11

LOCATION OF WELL: Owner's No. 1

CITY AND STATE: Scappoose, Oregon

SE  $\frac{1}{4}$  NW  $\frac{1}{4}$  Sec. 13 T. 3 N. X, R. 2 W., W.M.

Bearing and distance from section or subdivision corner 1870' S. & 2500' E. from NW Cor. Sec. 13.



Section 13

Altitude at well 62 ft. Interpolated

TYPE OF WELL: Drilled Date Constructed 8/16/46

Depth drilled 133 ft. Depth cased 133 ft.

CASING RECORD: 6 inch

FINISH:

AQUIFERS:

WATER LEVEL: 40 ft.

PUMPING EQUIPMENT: Type Berkeley jet H.P. 3  
Capacity 20 G.P.M.

WELL TESTS:

Drawdown ..... ft. after ..... hours ..... G.P.M.

Drawdown ..... ft. after ..... hours ..... G.P.M.

USE OF WATER dom. stk. & irrigation Temp. ..... °F., 19.....

SOURCE OF INFORMATION GR-625

DRILLER or DIGGER owner

ADDITIONAL DATA:

Log X Water Level Measurements ..... Chemical Analysis ..... Aquifer Test .....

REMARKS:

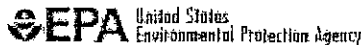












## ETHYLENE GLYCOL

107-21-1

### Hazard Summary

CAUTION: Unless otherwise noted, the quantitative information on these fact sheets are from "EPA Health Effects Notebook for Hazardous Air Pollutants-Draft", EPA-452/D-95-00, PB95-503579, December 1994." Please conduct a current literature search and check the appropriate current online database for the most recent quantitative information.

- Acute (short-term) exposure of humans to ethylene glycol by ingesting large quantities causes three stages of health effects. **Central nervous system (CNS) depression**, including such symptoms as vomiting, drowsiness, coma, respiratory failure, and convulsions, is followed by **cardiopulmonary effects**, and later **renal damage**.
- No effects were noted in one study of individuals exposed to low levels of ethylene glycol by inhalation for about a month. Rats and mice chronically (long-term) exposed to ethylene glycol in their diet exhibited signs of **kidney toxicity** and liver effects. Ocular irritation and lesions and pulmonary inflammation have been observed in rats, rabbits, and guinea pigs subchronically exposed by inhalation.
- The U.S. Environmental Protection Agency (EPA) has not established a Reference Concentration (RfC) for ethylene glycol.
- The Reference Dose (RfD) for ethylene glycol is 2.0 mg/kg/d.<sup>a</sup> EPA estimates that consumption of this dose or less, over a lifetime, would not likely result in the occurrence of chronic, noncancer effects.<sup>b</sup>
- No information is available on the reproductive or developmental effects of ethylene glycol in humans. Several studies of rodents exposed orally, by gavage (experimentally placing the chemical in the stomach), or by inhalation showed ethylene glycol to be **fetotoxic**.
- No information is available on the carcinogenic effects of ethylene glycol in humans. Oral exposure of rats and mice was not associated with an increased incidence of tumors. EPA has classified ethylene glycol as a Group D, **not classifiable as to human carcinogenicity**.

<sup>a</sup> Milligrams per kilogram per day is one way to measure the amount of the contaminant that is consumed in food.

<sup>b</sup> The RfD is not a direct estimator of risk but rather a reference point to gauge the potential effects. Exceedance of the RfD does not imply that an adverse health effect would necessarily occur. As the amount and frequency of exposures exceeding the RfD increase, the probability of adverse health effects also increases. Please Note: The main sources of information for this fact sheet are EPA's

Integrated Risk Information System (IRIS), which contains information on oral chronic toxicity and the RfD, and the carcinogenic effects of ethylene glycol, and EPA's *Health Effects Assessment for Ethylene Glycol*. Other secondary sources include the Hazardous Substances Data Bank (HSDB), a database of summaries of peer-reviewed literature, and the Registry of Toxic Effects of Chemical Substances (RTECS), a database of toxic effects that are not peer reviewed.

### Environmental/Occupational Exposure

- Dermal or inhalation exposure to workers may occur during the manufacture or use of the chemical. (1)
- Ethylene glycol may be discharged into wastewater from its production and use. It may also enter the environment from its uses in deicing airplane runways and from spills and improper disposal of used antifreeze, coolant, and solvents containing ethylene glycol. (1,2)

### Assessing Personal Exposure

- Urinalysis for oxalic acid; an ethylene glycol metabolite, may be useful in diagnosis of poisoning by oral exposure. (3)

### Health Hazard Information

#### *Acute Effects:*

- Acute (short-term) exposure of humans to ethylene glycol by ingesting large quantities causes three stages of health effects. CNS depression, including such symptoms as vomiting, drowsiness, coma, respiratory failure, and convulsions, is followed by cardiopulmonary effects and later renal damage. (4,5)
- Acute animal tests, such as the LC<sub>50</sub> and LD<sub>50</sub> tests in rats, mice, rabbits, and guinea pigs, have demonstrated ethylene glycol to have moderate acute toxicity by inhalation or dermal exposure and low to moderate acute toxicity by ingestion. (6)

#### *Chronic Effects (Noncancer):*

- No effects were noted in one study of individuals exposed to low levels of ethylene glycol by inhalation for about a month. (5)
- Rats and mice chronically (long-term) exposed to ethylene glycol in their diet exhibited signs of kidney toxicity and liver effects. (5,7)
- Ocular irritation and lesions and pulmonary inflammation have been observed in rats, rabbits, and guinea pigs subchronically exposed by inhalation. (5)
- EPA has not established an RfC for ethylene glycol. (7)
- The RfD for ethylene glycol is 2.0 mg/kg/d based on kidney toxicity in rats. (7)
- EPA has high confidence in the study on which the RfD was based because it was a well-conducted lifetime study by a relevant route and defined a no-observed-adverse-effect level (NOAEL) and lowest-observed-adverse-effect level (LOAEL); high confidence in the database because it contains another chronic rat study and a monkey study that support the NOAEL and LOAEL and it also contains data that indicate that the RfD is protective of teratogenic and

reproductive effects; and, consequently, high confidence in the RfD. (7)

- EPA's Office of Air Quality Planning and Standards, for a hazard ranking under Section 112(g) of the Clean Air Act Amendments, has evaluated ethylene glycol for chronic toxicity and has given it a composite score of 10 (scores range from 1 to 100, with 100 being the most toxic). These scores are nonlinear and are the product of two ratings: a rating based on the minimal-effect-dose and a rating based on the type of effect. (8)

#### *Reproductive/Developmental Effects:*

- No information is available on the reproductive or developmental effects of ethylene glycol in humans.
- Several studies of rodents exposed orally, by gavage (experimentally placing the chemical in the stomach), or by inhalation showed ethylene glycol to affect animal fetuses. Fetotoxicity manifested as increased preimplantation loss, delayed ossification, and an increased incidence of fetal malformations were reported. The inhalation study, however, noted continuous grooming of the fur, resulting in a high rate of exposure by ingestion as well. (5,7)

#### *Cancer Risk:*

- No information is available on the carcinogenic effects of ethylene glycol in humans. (5)
- Oral exposure of rats and mice was not associated with an increased incidence of tumors. (5)
- EPA has classified ethylene glycol as a Group D, not classifiable as to human carcinogenicity. (5)

#### **Physical Properties**

- The chemical formula for ethylene glycol is  $C_2H_6O_2$ , and its molecular weight is 62.07 g/mol. (4)
- Ethylene glycol occurs as a clear, slightly viscous liquid that is completely miscible with water. (1,4,5)
- Ethylene glycol is odorless. (3)
- The vapor pressure for ethylene glycol is 0.06 mm Hg at 20 C, and its log octanol/water partition coefficient ( $\log K_{ow}$ ) is -1.36. (5)

#### **Uses**

- Ethylene glycol is used as antifreeze in cooling and heating systems, in hydraulic brake fluids, as an industrial humectant, as an ingredient of electrolytic condensers, as a solvent in the paint and plastics industries, in the formulations of printers' inks, stamp pad inks, and inks for ballpoint pens, as a softening agent for cellophane, and in the synthesis of safety explosives, plasticizers, synthetic fibers (Terylene, Dacron), and synthetic waxes. (4)

---

#### **Conversion Factors:**

To convert from ppm to  $mg/m^3$ :  $mg/m^3 = (ppm) \times (\text{molecular weight of the compound}) / (24.45)$ . For ethylene glycol:  $1 \text{ ppm} = 2.54 \text{ mg/m}^3$ .

## Health Data from Inhalation Exposure

Concentration (mg/m <sup>3</sup> )	Health numbers <sup>a</sup>	Regulatory, advisory numbers <sup>b</sup>	Reference
1,000,000.0			
---			
---			
---			
100,000.0			
---			
---			
---			
10,000.0	<ul style="list-style-type: none"> <li>• LC<sub>50</sub> (rats) (10,876 mg/m<sup>3</sup>)</li> </ul>		6
---			
---			
---			
1,000.0			
---			
---			
---			
100.0		<ul style="list-style-type: none"> <li>• ACGIH TLV and OSHA PEL (125 mg/m<sup>3</sup>)</li> </ul>	6
---			
---			
---			
10.0		<ul style="list-style-type: none"> <li>• MSHA standard (10 mg/m<sup>3</sup>)</li> </ul>	6

ACGIH TLV--American Conference of Governmental and Industrial Hygienists' threshold limit value expressed as a time-weighted average; the concentration of a substance to which most workers can be exposed without adverse effects.

LC<sub>50</sub> (Lethal Concentration<sub>50</sub>)--A calculated concentration of a chemical in air to which exposure for a specific length of time is expected to cause death in 50% of a defined experimental animal population.

MSHA--Mine Safety and Health Administration.

OSHA PEL--Occupational Safety and Health Administration's permissible exposure limit expressed as a time-weighted average; the concentration of a substance to which most workers can be exposed without adverse effect averaged over a normal 8-h workday or a 40-h workweek.

<sup>a</sup> Health numbers are toxicological numbers from animal testing or risk assessment values developed by EPA.

<sup>b</sup> Regulatory numbers are values that have been incorporated in Government regulations, while

advisory numbers are nonregulatory values provided by the Government or other groups as advice.

## References

1. U.S. Department of Health and Human Services. Hazardous Substances Data Bank (HSDB, online database). National Library of Medicine, National Toxicology Information Program, Bethesda, MD. 1993.
2. U.S. Environmental Protection Agency. *Ethylene Glycol Health Advisory*. Office of Drinking Water, Washington, DC. 1987.
3. M. Sittig. *Handbook of Toxic and Hazardous Chemicals and Carcinogens*. 2nd ed. Noyes Publications, Park Ridge, NJ. 1985.
4. *The Merck Index. An Encyclopedia of Chemicals, Drugs, and Biologicals*. 11th ed. Ed. S. Budavari. Merck and Co. Inc., Rahway, NJ. 1989.
5. U.S. Environmental Protection Agency. *Health Effects Assessment for Ethylene Glycol*. EPA/600/8-88/038. Environmental Criteria and Assessment Office, Office of Health and Environmental Assessment, Office of Research and Development, Cincinnati, OH. 1988.
6. U.S. Department of Health and Human Services. Registry of Toxic Effects of Chemical Substances (RTECS, online database). National Toxicology Information Program, National Library of Medicine, Bethesda, MD. 1993.
7. U.S. Environmental Protection Agency. *Integrated Risk Information System (IRIS) on Ethylene Glycol*. Environmental Criteria and Assessment Office, Office of Health and Environmental Assessment, Office of Research and Development, Cincinnati, OH. 1993.
8. U.S. Environmental Protection Agency. *Technical Background Document to Support Rulemaking Pursuant to the Clean Air Act--Section 112(g). Ranking of Pollutants with Respect to Hazard to Human Health*. EPA450/3-92-010. Emissions Standards Division, Office of Air Quality Planning and Standards, Research Triangle Park, NC. 1994.



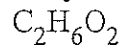
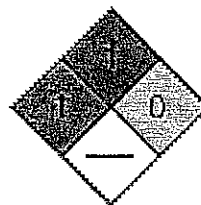
ToxFAQs

## Ethylene Glycol and Propylene Glycol

CAS# 107-21-1, 57-55-6

September 1997

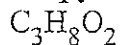
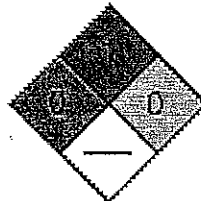
### Ethylene Glycol

[Stereo Image](#)[XYZ File](#)

NFPA Label Key

[Material Safety Data Sheet](#)  
(University of Utah)

### Propylene Glycol

[Stereo Image](#)[XYZ File](#)

NFPA Label Key

[Material Safety Data Sheet](#)  
(University of Utah)

### Agency for Toxic Substances and Disease Registry

*This fact sheet answers the most frequently asked health questions (FAQs) about ethylene glycol and propylene glycol. For more information, call the ATSDR Information Center at 1-800-447-1544. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It's important you understand this information because these substances may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.*

**HIGHLIGHTS:** Ethylene glycol and propylene glycol are clear liquids that are used in antifreeze and deicing solutions. Exposure to large amounts of ethylene glycol can damage the kidneys, heart, and nervous system. Both compounds can change your body chemistry by increasing the amount of acid. Ethylene glycol has been found in at least 34, and propylene glycol in at least 5, of the 1,416 National Priorities List sites identified by the Environmental Protection Agency (EPA).

### What are ethylene glycol and propylene glycol?

Both ethylene glycol and propylene glycol are clear, colorless, slightly syrupy liquids at room temperature. Either compound may exist in air in the vapor form, although propylene glycol must be heated or briskly shaken to produce a vapor. Ethylene glycol is odorless but has a sweet taste. Propylene glycol is practically odorless and tasteless.

Both compounds are used to make antifreeze and de-icing solutions for cars, airplanes, and boats; to make polyester compounds; and as solvents in the paint and plastics industries. Ethylene glycol is also an ingredient in photographic developing solutions, hydraulic brake fluids and in inks used in stamp pads, ballpoint pens, and print shops.

The **Food and Drug Administration (FDA)** has classified propylene glycol as an additive that is "generally recognized as safe" for use in food. It is used to absorb extra water and maintain moisture in certain medicines, cosmetics, or food products. It is a solvent for food colors and flavors.

Propylene glycol is also used to create artificial smoke or fog used in fire-fighting training and in theatrical productions.

### What happens to ethylene glycol and propylene glycol when they enter the environment?

- Neither compound is likely to exist in large amounts in air.
- About half of the compounds that enter the air will break down in 24-50 hours.
- Both compounds break down within several days to a week in water and soil.

### How might I be exposed to ethylene glycol and propylene glycol?

- You can be exposed to ethylene glycol when you use antifreeze, photographic developing solutions, coolants, and brake fluid.
- You can be exposed to propylene glycol by eating food products, using cosmetics, or taking medicine that contains it.
- If you work in an industry that uses ethylene glycol or propylene glycol, you could be exposed by breathing or touching these substances.

### How can ethylene glycol and propylene glycol affect my health?

Animal testing is sometimes necessary to find out how toxic substances might harm people or to treat those who have been exposed. Laws today protect the welfare of research animals and scientists must follow strict guidelines.



Eating or drinking very large amounts of ethylene glycol can result in death, while large amounts can result in nausea, convulsions, slurred speech, disorientation, and heart and kidney problems. In addition, ethylene glycol affects the body's chemistry by increasing the amount of acid, resulting in metabolic problems.

Female animals that ate large amounts of ethylene glycol had babies with birth defects, while male animals had reduced sperm counts. However, these effects were seen at very high levels and would not be expected in people exposed to lower levels at hazardous waste sites.

Similar to ethylene glycol, propylene glycol increases the amount of acid in the body. However, larger amounts of propylene glycol are needed to cause this effect.

### **How likely are ethylene and propylene glycol to cause cancer?**

The **Department of Health and Human Services (DHHS)**, the **International Agency for Research on Cancer (IARC)**, and the **EPA** have not classified ethylene glycol and propylene glycol for carcinogenicity. Studies with people who used ethylene glycol did not show carcinogenic effects. Animal studies also have not shown these chemicals to be carcinogens.

### **Is there a medical test to show whether I've been exposed to ethylene or propylene glycol?**

Tests are available to determine if you have been exposed to ethylene glycol. These tests are only used on people who are showing symptoms of ethylene glycol poisoning (but they could be used in other situations). The tests are most often used on people who have intentionally consumed, or who suspect they have consumed, large amounts of ethylene glycol.

Propylene glycol is generally considered to be a safe chemical, and is not routinely tested for, unless specific exposure, such as to a medicine or cosmetic, can be linked with symptoms. Since both chemicals break down very quickly in the body, they are very difficult to detect, even though symptoms may be present.

### **Has the federal government made recommendations to protect human health?**

The **EPA** has set a drinking water guideline for ethylene glycol of 7,000 micrograms (7,000 µg/L) in a liter of water for an adult.

The **Food and Drug Administration (FDA)** has classified propylene glycol as "generally recognized as safe," which means that it is acceptable for use in flavorings, drugs, and cosmetics, and as a direct food additive.

The **American Conference of Governmental Industrial Hygienists (ACGIH)** recommends a maximum level of 127 milligrams of ethylene glycol per cubic meter of air (127 mg/m<sup>3</sup>) for a 15-minute exposure.

## **Glossary**

### **Acid:**

A sour substance

**Carcinogenicity:**

Ability to cause cancer

**CAS:**

Chemical Abstracts Service

**Metabolic:**

Chemical changes in cells that provide energy to the body

**Synthetic:**

Made by humans

**Reference**

Agency for Toxic Substances and Disease Registry (ATSDR). 1996. Toxicological profile for ethylene glycol and propylene glycol (update). Atlanta, GA.: U.S. Department of Health and Human Services, Public Health Service.

**Where can I get more information?**

ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances.

You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

**For more information, contact:**

Agency for Toxic Substances and Disease Registry  
Division of Toxicology  
1600 Clifton Road NE, Mailstop E-29  
Atlanta, GA 30333  
Phone: 1-800-447-1544  
Fax: 404-639-6359



U.S. Department of Health and Human Services  
Public Health Service  
Agency for Toxic Substances and Disease Registry

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[Link to ToxFAQs Home Page](#)

[Link to ATSDR Science Corner](#)

[Link to ATSDR Home Page](#)

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ATSDR Information Center / [ATSDRIC@cdc.gov](mailto:ATSDRIC@cdc.gov) / 1-800-447-1544

EXHIBIT 11

FRAWLEY

CONDENSED CHEMICAL  
DICTIONARY TENTH  
EDITION

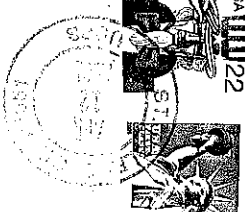
VAN NOSTRAND  
REINHOLD



THE  
CONDENSED  
CHEMICAL  
DICTIONARY

GESS

**Auto-Tax**  
51377 SW Old Portland Road  
Scappoose, OR 97056



**First Class Mail**  
**First Class Mail**

Hon. Judge Kevin Arnold  
Oregon Employment Dept.  
875 Union Street S.W.  
Salem, OR 97311

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APR 18 2001

EMPLOYMENT DEPT.

FIRST CLASS

FIRST CLASS

FIRST CLASS

FIRST CLASS

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FIRST CLASS

FIRST CLASS



iminodiacetic acid, ethylenedinitrilotetraacetic acid)  $(\text{HOOCCH}_2)_2\text{NCH}_2\text{CH}_2\text{N}(\text{CH}_2\text{COOH})_2$ . An amine chelating agent.

Properties: Colorless crystals, decomposing at  $240^\circ\text{C}$ . Slightly soluble in water; insoluble in common organic solvents; neutralized by alkali metal hydroxides to form a series of water-soluble salts containing from one to four alkali metal cations. Low toxicity.

Derivation: (a) Addition of sodium cyanide and formaldehyde to a basic solution of ethylenediamine (forms the tetrasodium salt); (b) heating tetrahydroxyethylethylenediamine with sodium or potassium hydroxide with cadmium oxide catalyst.

Uses: Detergents, liquid soaps, shampoos, agricultural chemical sprays; metal cleaning and plating; metal chelating agent; treatment of chlorosis; decontamination of radioactive surfaces; metal deactivator in vegetable oils, oil emulsions, pharmaceutical products, etc; anticoagulant of blood; chelating agent in ion exchange; to remove insoluble deposits of calcium and magnesium soaps; in textiles to improve dyeing, scouring, and detergent operations; antioxidant; clarification of liquids; analytical chemistry; spectrophotometric titration; aid in reducing blood cholesterol; in medicine to treat lead poisoning and calcinosis; food additive (preservative).

Note: A number of salts of EDTA are available with uses identical or similar to the acid. The U.S.P. salts are called edetates (calcium disodium, disodium edetates); others are usually abbreviated to EDTA (tetrasodium, trisodium EDTA). Other salts, known chiefly under trademarked names, are the sodium ferric, dihydrogen ferrous, and a range of disodium salts with magnesium, divalent cobalt, manganese, copper, zinc and nickel.

**ethylenediaminetetraacetoneitrile (EDTAN)**  
[ $-\text{CH}_2\text{NCH}_2\text{CN}_2$ ]<sub>2</sub>.

Properties: White crystalline solid; melting range  $126-132^\circ\text{C}$ ; bulk density 48.4 lb/cu ft. Slightly soluble in water; soluble in acetone.

Hazard: Toxic by ingestion and inhalation.

Uses: Chelating agent and intermediate.

**ethylene dibromide (EDB; 1,2-dibromoethane; ethylene bromide)**  $\text{BrCH}_2\text{CH}_2\text{Br}$ .

Properties: Colorless, nonflammable liquid. Sweetish odor. Emulsifiable. Miscible with most solvents and thinners; slightly soluble in water. Sp. gr. 2.17-2.18 ( $20^\circ\text{C}$ ); wt/gal 18.1 lb; b.p.  $131^\circ\text{C}$ ; vapor pressure 17.4 mm ( $30^\circ\text{C}$ ); f.p.  $9^\circ\text{C}$ ; refractive index 1.5337 ( $25^\circ\text{C}$ ); flash point, none.

Derivation: Action of bromine on ethylene.

Hazard: Toxic by inhalation, ingestion, and skin absorption. Carcinogen in test animals. Strong irritant to eyes and skin.

Uses: Scavenger for lead in gasoline; grain fumigant; general solvent; waterproofing preparations; organic synthesis; fumigant for tree crops.

Note: May poison platinum catalysts.

**ethylene dichloride (sym-dichloroethane; 1,2-dichloroethane; ethylene chloride, ch oil)**. 17th highest-volume chemical produced in U.S. (1979).  $\text{ClCH}_2\text{CH}_2\text{Cl}$ .

Properties: Colorless, oily liquid; chloroform-like odor; sweet taste. Stable to water, alkalies, acids, or active chemicals. Resistant to oxidation. Will not corrode metals. Miscible with most common solvents; slightly soluble in water. B.p.  $83.5^\circ\text{C}$ ; f.p.  $-35.5^\circ\text{C}$ ; sp. gr. 1.2554 ( $20/4^\circ\text{C}$ ); wt/gal 10.4 lb; refractive index 1.444; flash point  $56^\circ\text{F}$  ( $13.3^\circ\text{C}$ ).

Derivation: Action of chlorine on ethylene with subsequent distillation, with metallic catalyst; also by reaction of acetylene and HCl.

Grades: Technical; spectrophotometric.

Containers: Drums; tank cars.

Hazard: Toxic by ingestion, inhalation, skin absorption. Strong irritant to eyes and skin. Tolerance, 10 ppm in air. Flammable, dangerous fire risk; explosive limits in air 6 to 16%. May be carcinogenic.

Uses: Vinyl chloride solvent; lead scavenger in anti-knock gasoline; paint, varnish and finish removers; metal degreasing; soaps and scouring compounds; wetting and penetrating agents; organic synthesis; ore flotation.

Shipping regulations: (Rail, Air) Flammable Liquid label.

**ethylene dicyanide**. See ethylene cyanide.

**ethylenedinitrilotetraacetic acid**. See ethylenediaminetetraacetic acid.

**ethylenedinitrilotetra-2-propanol**. See N,N,N',N'-tetrakis(2-hydroxypropyl) ethylenediamine.

**ethylene diphenyldiamine**. See N,N-diphenylethylenediamine.

**1,1'-ethylene-2,2'-dipyridinium dibromide**. See diquat.

**ethylene glycol (ethylene alcohol; glycol; 1,2-ethanediol)**.  $\text{CH}_2\text{OHCH}_2\text{OH}$ . The simplest glycol. 28th highest-volume chemical produced in U.S. (1979). Properties: Clear, colorless, syrupy liquid; sweet taste; hygroscopic; lowers freezing point of water. Relatively non-volatile. Odorless. Soluble in water, alcohol, and acetone. Sp. gr. 1.1155 ( $20^\circ\text{C}$ ); b.p.  $197.2^\circ\text{C}$ ; f.p.  $-13.5^\circ\text{C}$ ; wt/gal 9.31 lb ( $15/15^\circ\text{C}$ ); refractive index 1.430 ( $25^\circ\text{C}$ ); flash point  $240.8^\circ\text{F}$  ( $116^\circ\text{C}$ ); combustible; autoignition temp.  $775^\circ\text{F}$  ( $412^\circ\text{C}$ ).

Derivation: (1) Air oxidation of ethylene followed by hydration of the ethylene oxide formed; (2) acetoxylation (q.v.); (3) from carbon monoxide and hydrogen (synthesis gas) from coal gasification; (4) Oxirane process (q.v.).

Grade: Technical.

Containers: Drums; tank cars.

Hazard: Toxic by ingestion and inhalation; lethal

dose reported to be 100 cc. Tolerance (vapor), 50 ppm in air; (particulate), 10 mg per cubic meter of air.

Uses: Coolant and antifreeze; asphalt-emulsion paints; heat-transfer agent; low-pressure laminates; brake fluids; glycol diacetate; polyester fibers and films; low-freezing dynamite; solvent; extractant for various purposes; solvent mixtures for cellulose esters and ethers, especially cellophane; cosmetics (up to 5%); lacquers; alkyd resins; printing inks; wood stains; adhesives; leather dyeing; textile processing; tobacco; ingredient of deicing fluid for airport runways; humectant; ball-point pen inks; foam stabilizer.

**ethylene glycol-bis(beta-aminoethyl ether)-N,N-tetraacetic acid** (ethylene bis(oxyethylenenitrilo)tetraacetic acid)  
 $[-CH_2OC_2H_4N(CH_2COOH)_2]_2$ . Crystals; m.p. 241° (dec.). Soluble in water.  
 Use: Chelating agent.

**ethylene glycol bis(mercaptopropionate)**. See glycol dimercaptopropionate.

**ethylene glycol bisthioglycolate**. See glycol dimercaptacetate.

**ethylene glycol diacetate** (glycol diacetate)  
 $CH_3COOCH_2CH_2OOCCH_3$ .  
 Properties: Colorless liquid; faint odor. Soluble in alcohol, ether, benzene; slightly soluble in water (10%). Sp. gr. 1.1063 (20/20° C); b.p. 190.5° C; vapor pressure 0.3 mm (20° C); flash point 205° F (96° C) (o.c.); wt/gal 9.2 lb (20° C); f.p. -31° C; refractive index (n<sub>D</sub> 20) 1.415. Combustible. Low toxicity.

Derivation: (a) Ethylene glycol and acetic acid; (b) ethylene dichloride and sodium acetate.  
 Uses: Solvent for cellulose esters and ethers; resins; lacquers; printing inks; perfume fixative; non-discoloring plasticizer for ethyl and benzyl cellulose.

**ethylene glycol dibutyl ether**  $C_4H_9OC_2H_4OC_4H_9$ .  
 Properties: Practically colorless liquid; slight odor. Slightly soluble in water; sp. gr. 0.8374 (20/20° C); 7.0 lb/gal (20° C); b.p. 203.1° C; vapor pressure 0.09 mm (20° C); freezing point -69.1° C; flash point 185° F (85° C). Combustible.  
 Containers: 1-gal cans; 5-, 55-gal drums.  
 Uses: High-boiling inert solvent; specialized solvent and extraction applications.

**ethylene glycol dibutyrate** (glycol bidutyrate)  
 $(-CH_2OCOC_4H_9)_2$ .  
 Properties: Colorless liquid; sp. gr. (0° C) 1.024; refractive index (25° C), 1.424; b.p. 240° C; f.p. less than -80° C; solubility in water, 0.050% by weight.

9.4 mm (20° C); flash point 95° F (35° C); wt/gal 7 lb (20° C); f.p. -74° C. Immiscible with water.

Grade: Technical.

Containers: 1-gal cans; 5-, 55-gal drums.

Hazard: Flammable, moderate fire risk.

Uses: Organic synthesis (reaction medium); solvent and diluent for detergents.

**ethylene glycol diformate** (glycol diformate)  
 $HCOOCH_2CH_2OOCCH_3$ .  
 Properties: Water-white liquid, soluble in water, alcohol and ether. Sp. gr. 1.2277 (20/20° C); 10.2 lb/gal (20° C); b.p. 177.1° C; flash point 200° F (93° C); combustible. Vapor pressure 0.5 mm (20° C); f.p. -10° C. Hydrolyzes slowly, liberating formic acid.

Hazard: Toxic by ingestion.

Use: Embalming fluids.

**ethylene glycol dimethyl ether** (GDME; glycol dimethyl ether; 1,2-dimethoxyethane; glyme.)  
 $CH_3OCH_2CH_2OCH_3$ .

Properties: Water-white liquid with a mild odor. Sp. gr. 0.8683 (20° C); b.p. 85.2° C; f.p. -69° C; refractive index 1.3792 (20/D); flash point 104° F (40° C); soluble in water and hydrocarbons; pH 8.2.

Hazard: Moderate fire risk.

Use: Solvent.

**ethylene glycol dinitrate**. A freezing point-depressant for nitroglycerine, used in low-freezing dynamites.

Hazard: Toxic; can penetrate the skin. Tolerance, 0.02 ppm in air.

**ethylene glycol dipropionate** (glycol propionate; glycol dipropionate)  $(-CH_2OCOC_2H_5)_2$ . Liquid; sp. gr. (15° C) 1.054; refractive index (25° C) 1.419; b.p. 211° C; f.p. less than -80° C; solubility in water, 0.16% by weight. Combustible.

Use: Plasticizer.

**ethylene glycol monoacetate** (glycol monoacetate)  
 $HOCH_2CH_2OOCCH_3$ .  
 Properties: Colorless liquid; almost odorless; soluble in water, alcohol, ether, benzene, and toluene; b.p. 181-182° C; sp. gr. 1.108. Flash point 215° F (101° C). Combustible. Low toxicity.

Derivation: (a) Heating ethylene glycol with acetic acid (glacial) or acetic anhydride; (b) passing ethylene oxide into hot acetic acid containing sodium acetate or sulfuric acid.

Use: Solvent for nitrocellulose, cellulose acetate, camphor.

**ethylene glycol monobenzyl ether** (benzyl "Cellosolve").  $C_6H_5CH_2OC_2H_4OH$ .  
 Properties: Water-white liquid; faint rose-like odor. Sp. gr. 1.070 (20/20° C); b.p. 170° C; vapor pres-

Uses: Solvent for cellulose acetate, dyes, inks, resins, perfume fixative; organic synthesis (selective hydroxyethylating agent); coating compositions for leather, paper, and cloth; lacquers.

**ethylene glycol monobutyl ether** (2-butoxyethanol, butyl "Cellosolve").  $HOCH_2CH_2OC_4H_9$ .

Properties: Colorless liquid; mild odor; high dilution ratio with petroleum hydrocarbons; soluble in alcohol and water. B.p. 171.2° C; sp. gr. 0.9019 (20/20° C); wt/gal 7.51 lb (20° C); refractive index 1.4190 (25° C); vapor pressure 0.76 mm (20° C); flash point 142° F (61° C). Autoignition temp. 472° F (244° C). Combustible.

Grade: Technical.

Containers: 1-gal cans; 5- and 55-gal drums; tank cars and trucks.

Hazard: Toxic. Tolerance, 25 ppm in air.

Uses: Solvent for nitrocellulose resins; spray lacquers; quick-drying lacquers; varnishes; enamels; drycleaning compounds; varnish removers; textile (preventing spotting in printing or dyeing); mutual solvent for "soluble" mineral oils to hold soap in solution and to improve the emulsifying properties.

**ethylene glycol monobutyl ether acetate** (butyl "Cellosolve" acetate).  $C_4H_9OCH_2CH_2OOCCH_3$ .

Properties: Colorless liquid; fruity odor. Soluble in hydrocarbons and organic solvents; insoluble in water. B.p. 192.3° C; sp. gr. 0.9424 (20/20° C); f.p. -63.5° C; flash point 190° F (87.7° C). Combustible. Low toxicity.

Grade: Technical.

Containers: 1-, 5-, 55-gal drums; tank cars; tank trucks.

Uses: High-boiling solvent for nitrocellulose lacquers, epoxy resins, multicolor lacquers; film coalescing aid for polyvinyl acetate latex.

**ethylene glycol monobutyl ether laurate** (butoxyethyl laurate)  $C_{11}H_{23}COO(CH_2)_2OC_4H_9$ .

Properties: Liquid; sp. gr. (25° C) 0.985; f.p. -10 to -15° C; insoluble in water. Combustible. Probably low toxicity.

Use: Plasticizer.

**ethylene glycol monobutyl ether oleate** (butoxyethyl oleate)  $C_{17}COOCH_2CH_2OC_4H_9$ .

Properties: Liquid; sp. gr. (25° C) 0.892; f.p. less than -45° C; insoluble in water. Combustible. Probably low toxicity.

Use: Plasticizer.

**ethylene glycol monobutyl ether stearate** (butoxyethyl stearate)  $C_{17}H_{35}COOC_2H_4OC_4H_9$ .

Properties: Colorless liquid. Sp. gr. 0.882 (20° C); (25° C) 1.446; vapor pressure <0.01 mm (20° C); b.p. 210-233° C (4 mm); m.p. 16.5° C; insoluble in water. Combustible.

135.6° C; sp. gr. (20° C); refract. 120° F (48.9° C); ignition temp. carbons and w. Grade: Technic. Containers: 1-gal cans. Hazard: Moder. Uses: Solvent; thetic resins; soluble oils; la and printing solutions; leat fuels.

**ethylene glycol "solve" acetate**;  $CH_3COOCH_2CH_2OOCCH_3$ .

Properties: Colorless liquid; faint odor. Soluble in alcohol, ether, benzene; slightly soluble in water (10%). Sp. gr. 1.1063 (20/20° C); b.p. 190.5° C; vapor pressure 0.3 mm (20° C); flash point 205° F (96° C) (o.c.); wt/gal 9.2 lb (20° C); f.p. -31° C; refractive index (n<sub>D</sub> 20) 1.415. Combustible. Low toxicity.

Derivation: (a) Ethylene glycol and acetic acid; (b) ethylene dichloride and sodium acetate.

Uses: Solvent for cellulose esters and ethers; resins; lacquers; printing inks; perfume fixative; non-discoloring plasticizer for ethyl and benzyl cellulose.

Hazard: Moderate fire risk. Tolerance, 0.02 ppm in air.

Use: Solvent.

**ethylene glycol m**  $C_{11}H_{23}COO(CH_2)_2OC_4H_9$ .

Properties: Liquid; sp. gr. (25° C) 0.985; f.p. -10 to -15° C; insoluble in water. Combustible. Probably low toxicity.

Use: Plasticizer.

**ethylene glycol m**  $C_{17}H_{35}COOC_2H_4OC_4H_9$ .

Properties: Liquid; sp. gr. (25° C) 0.892; f.p. less than -45° C; insoluble in water. Combustible. Probably low toxicity.

Use: Plasticizer.

**ethylene glycol r**  $C_6H_5CH_2OC_2H_4OH$ .

Properties: Colorless liquid; faint rose-like odor. Sp. gr. 1.070 (20/20° C); b.p. 170° C; vapor pres-

*put into  
plastic sleeves*

### CONVERSION FACTORS

or, "How to maneuver in the land of little bitty bits!"

One Part per Million (ppm) = 1 milligram per kilogram (mg/kg)  
10<sup>-6</sup> 1 milligram per liter (mg/l)  
1 microgram per gram (µg/gm)  
1 microgram per milliliter (µg/ml)  
1 second in 11.57 days  
1 inch in 15.78 miles  
1 inch-square postage stamp in a  
6,944 square foot lot

One Part per Billion (ppb) = 1 microgram per kilogram (µg/kg)  
10<sup>-9</sup> 1 nanogram per gram (ng/gm)  
1 second in 32 years  
1 inch in 15,782 miles  
1 inch-square postage stamp in a 159  
acre farm  
15 inches on the way to the moon

One Part per Trillion (???) = 1 nanogram per kilogram (ng/kg)  
10<sup>-12</sup> 1 picogram per gram (pg/gm)  
1 second in 32,000 years  
1 inch in 15,782,828 miles (≈ 2/3 of  
the way to Venus)  
1 inch-square postage stamp in a  
city of 249 square miles (≈ 4  
times larger than Washington  
D.C. [like somebody cares!])

One Part/Quadrillion (ppq) = 1 picogram per liter (pg/l)  
10<sup>-15</sup> 1 second in 32,000,000 years  
1 inch in 15,782,828,280 miles (≈ 85  
roundtrips to the Sun)  
1 inch-square postage stamp in  
249,000 square miles (all of  
New England, New York, New  
Jersey, Maryland, Virginia,  
North Carolina, and part of  
South Carolina)

Just for laughs...

1 milligram = 0.001 gram  
1,000 micrograms  
1,000,000 nanograms  
1,000,000,000 picograms

*Crow Water Systems, Inc.*

P.O. BOX 665  
51320 OLD PORTLAND ROAD  
SCAPPOOSE, OREGON 97056  
(503) 543-6326

**To Whom It May Concern:**

The static water levels in the wells I have worked on in the area of Old Portland Road and Dutch Canyon all have been over 40 feet. I am sending three well logs of wells in the area. The logs show static water levels and the material the well driller went through when constructing the well. This area is well drained and the static water level does not change in the different seasons. There is a clay layer in most of this area that helps to seal off surface water from the ground water. If you have any other questions please contact me.

David Graham

A handwritten signature in black ink that appears to read "David Graham".

Crow Water Systems

EXHIBIT #

13



WATER RESOURCES DEPARTMENT  
SALEM, OREGON 97310  
within 30 days from the date  
of well completion.

STATE OF OREGON

(Please type or print)

(Do not write above this line)

State Well No. \_\_\_\_\_

State Permit No. \_\_\_\_\_

*Colu  
100*

**RECEIVED**

1) OWNER:

City of Scapoose  
Scapoose, Oregon 97056

2) TYPE OF WORK (check):

New Well  Deepening  Reconditioning  Abandon   
abandonment, describe material and procedure in Item 12.

3) TYPE OF WELL:

Artesian  Driven  Domestic  Industrial  Municipal   
Cable  Jetted  Irrigation  Test Well  Other   
Aug  Bored

(4) PROPOSED USE (check):

5) CASING INSTALLED: Threaded  Welded   
12" Diam. from 0 ft. to 186 ft. Casing 375  
10" Diam. from 185 ft. to 1869 ft. Casing 250

6) PERFORATIONS:

Perforated?  Yes  No.  
Type of perforator used \_\_\_\_\_  
Size of perforations in. by in.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

7) SCREENS:

Well screen installed?  Yes  No  
Manufacturer's Name Johnson Co.  
Stainless Steel Model No. \_\_\_\_\_  
12" slot size 50 Set from 186'9" ft. to 206'9" ft.  
12" slot size 60 Set from 206'9" ft. to 216'9" ft.  
12" slot size 80 Set from 216'9" ft. to 226'9" ft.

8) WELL TESTS:

Drawdown is amount water level is lowered below static level.  
As a pump test made?  Yes  No If yes, by whom? Driller  
Pump size: 500 gal./min. with 72 ft. drawdown after 48 hrs.  
Pump test: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
Testian flow: \_\_\_\_\_ g.p.m.  
Temperature of water: \_\_\_\_\_ Depth artesian flow encountered: \_\_\_\_\_ ft.

9) CONSTRUCTION:

Material used: cement  
Sealed from land surface to 45 ft.  
Diameter of well bore to bottom of seal: 16 in.  
Diameter of well bore below seal: 12 in.  
Number of sacks of cement used in well seal: 36 sacks  
How was cement grout placed? pressure pumped

(10) LOCATION OF WELL:

County Columbia Driller's well no. JUN 21 1978  
1/4 Section 13 T. 3N R. 2W W.M.  
Bearing and distance from section or subdivision \_\_\_\_\_  
Dutch Canyon Rd. #2

(11) WATER LEVEL: Completed well

Depth at which water was first found \_\_\_\_\_ ft.  
Static level 61 ft. below land surface  
Artesian pressure 228 lbs. per square foot

(12) WELL LOG:

Diameter of well below casing \_\_\_\_\_  
Depth drilled 228 ft. Depth of completion 227 ft.  
Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of static water level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Top soil	0	3	
Clay Brwn. sandy	3	11	
Clay brwn.	11	22	
Clay Br. w/gravel	22	60	
Gravel & Sand cemented	60	123	
Sand w/ trace gravel	123	158	
Gravel med sand fine water	158	180	
Gravel w/med sand water	180	227	
Clay Blue	227	228	

Work started Sept. 7 1978 Completed Oct. 10 1978  
Date well drilling machine moved off of well 9/25/ 1978

Drilling Machine Operator's Certification:  
This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.  
(Signed) David Driscoll Date 11/2 1978  
Drilling Machine Operator's License No. 888

Water Well Contractor's Certification:  
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
Name S & M Drilling & Supply Inc.  
Address 399 se Walnut St. Canby, Oregon 970  
(Signed) Walter Mace  
(Water Well Contractor)

RECEIVED

MAR 20 1998

STATE OF OREGON  
WATER SUPPLY WELL REPORT  
(as required by ORS 537.765)

WATER RESOURCES DEPT. WELL I.D. # L 23620  
SALEM, OREGON START CARD # 110277

Instructions for completing this report are on the last page of this form.

*Colu 50690*

(1) OWNER: Well Number \_\_\_\_\_  
Name TED WHITE  
Address 51583 COLUMBIA RIVER HWY.  
City SCAPOOSE State OR Zip 97056

(2) TYPE OF WORK  
 New Well  Deepening  Alteration (repair/recondition)  Abandonment

(3) DRILL METHOD:  
 Rotary Air  Rotary Mud  Cable  Auger  
 Other

(4) PROPOSED USE:  
 Domestic  Community  Industrial  Irrigation  
 Thermal  Injection  Livestock  Other

(5) BORE HOLE CONSTRUCTION:  
Special Construction approval  Yes  No Depth of Completed Well 187 ft.  
Explosives used  Yes  No Type \_\_\_\_\_ Amount \_\_\_\_\_

HOLE			SEAL			Sacks or pounds
Diameter	From	To	Material	From	To	
13	0	20	Bentonite	0	20	27 SKS
8	20	187				

How was seal placed: Method  A  B  C  D  E  
 Other Poured into dry annular  
Backfill placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Size of gravel \_\_\_\_\_

(6) CASING/LINER:

Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing: 8"	+2	176	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Liner: 6"	167	177	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6"	183	187	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Final location of shoe(s) Fig K Packer @ 167' Shoe @ 176'

(7) PERFORATIONS/SCREENS:

Perforations Method Johnson Sand Screen  
 Screens Type Pipe Size 6" Material Galv. Steel

From	To	Slot size	Number	Diameter	Tube/pipe size	Casing	Liner
177	183	.020		6"	pipe	<input type="checkbox"/>	<input checked="" type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour  
 Pump  Bailor  Air  Artesian  
Yield gal/min \_\_\_\_\_ Drawdown \_\_\_\_\_ Drill stem at \_\_\_\_\_ Time \_\_\_\_\_  
80-90 \_\_\_\_\_ 165 \_\_\_\_\_ 1 hr.  
40-45 \_\_\_\_\_ 100 \_\_\_\_\_ 2-3 hrs.

Temperature of water 52.8 Depth Artesian Flow Found \_\_\_\_\_  
Was a water analysis done?  Yes By whom \_\_\_\_\_  
Did any strata contain water not suitable for intended use?  Too little  
 Salty  Muddy  Odor  Colored  Other Iron

(9) LOCATION OF WELL by legal description:  
County COLUMBIA Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
Township 3N N or S Range 2W E or W. WM. \_\_\_\_\_  
Section 13 SE 1/4 NW 1/4  
Tax Lot 12000 Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
Street Address of Well (or nearest address) 51577 COLUMBIA RIVER HWY. SCAPOOSE, OR

(10) STATIC WATER LEVEL:  
43 ft. below land surface. Date 03/16/98  
Artesian pressure \_\_\_\_\_ lb. per square inch. Date \_\_\_\_\_

(11) WATER BEARING ZONES:  
Depth at which water was first found 97

From	To	Estimated Flow Rate	SWL
177	183	80-90 GPM	43

(12) WELL LOG:  
Ground Elevation \_\_\_\_\_

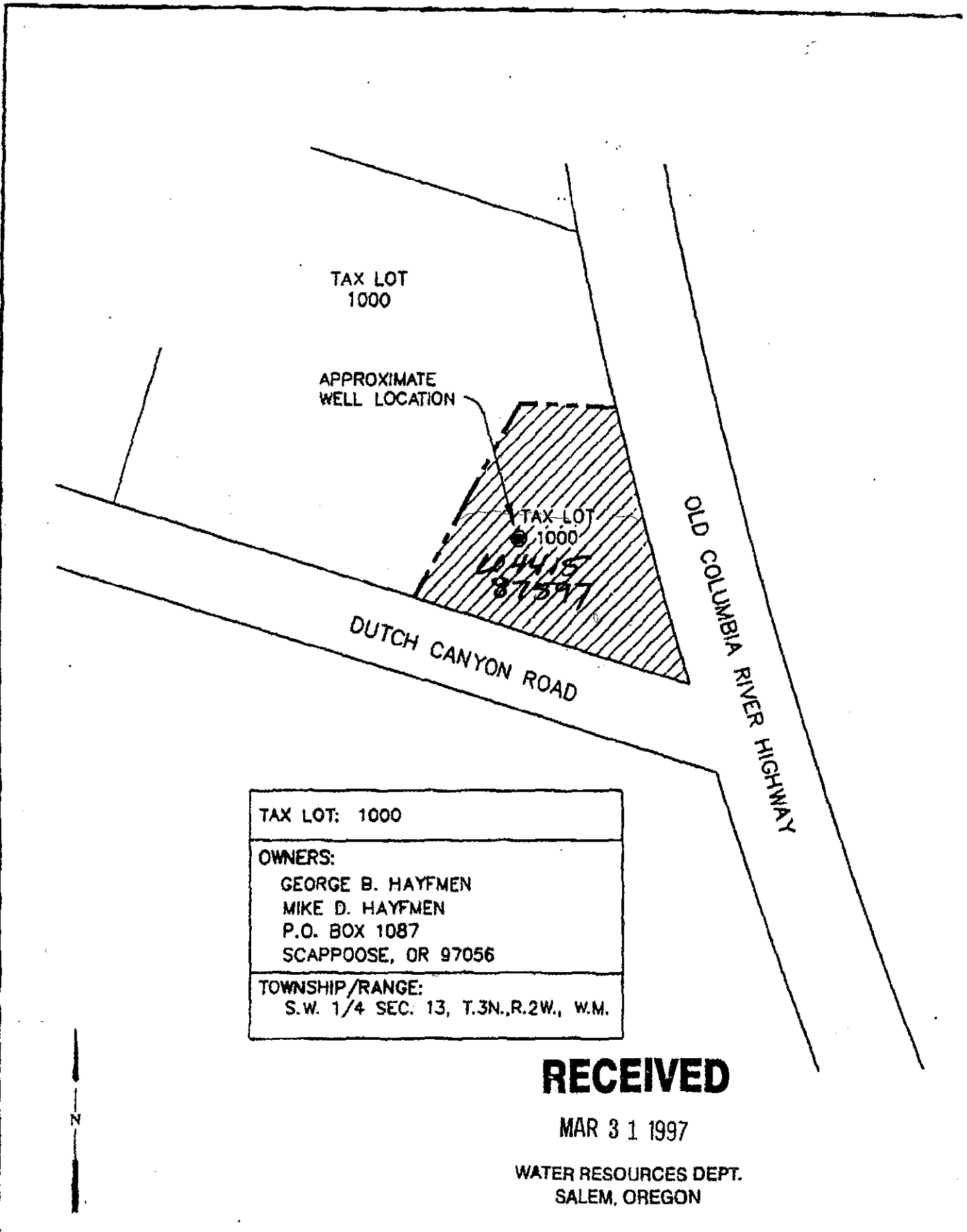
Material	From	To	SWL
Brown silty clay occ. boulder	0	12	
Brown gravel & sand, tight boulders	12	97	
Brown sand w/some gravel	97	111	43
Brown sand & gravel	111	135	"
Gray-black sand & gravel	135	146	"
Brown sand w/gravel	146	158	"
Gray-black sand w/gravel	158	162	"
Gray-black gravel w/course sand	162	187	43

Date started 02/24/98 Completed 03/16/98

(unbonded) Water Well Constructor Certification:  
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.  
WWC Number \_\_\_\_\_  
Signed \_\_\_\_\_ Date \_\_\_\_\_

(bonded) Water Well Constructor Certification:  
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.  
Date \_\_\_\_\_





**MURPHY Daniel E**

---

**From:** COX Anne  
**Sent:** Monday, August 14, 2000 08:04 AM  
**To:** MURPHY Daniel E  
**Subject:** Reggie Huff and antifreeze down a stormwater drain

Reggie Huff has requested copies of phone logs, complaints, etc., concerning this enforcement action. could you please print up any complaints on this from the data base? Thanks.

**Anne Cox**  
**(503) 229-6653**

—Original Message—

**From:** COX Anne  
**Sent:** Friday, February 25, 2000 04:39 PM  
**To:** BIDDLEMAN Lucinda; DULAY Renato C  
**Cc:** HICKMAN Jane; CLINTON Chuck; BAUMGARTNER Robert P; MURPHY Daniel E; SCHAEDEL Andrew L  
**Subject:** antifreeze down a stormwater drain

Dan murphy has taken complaint on this one from the land lord. Jane and I conference called today with the landlord Robert Jackson. 366-3710. The tenant has now testified in a court of law (Dec 1999) and at a deposition (for his FED) that he did indeed dump 400 gallons of used antifreeze down a storm drain on the property he's renting, a business property south of Scappoose. I think the renter has some sort of automotive or engine business at the site. Jane says the sworn admissions are good evidence.

the landlord says that he checked with city of Scappoose, the storm drain does not connect to sanitary sewer, there are no city storm sewers in the area. It is either a gravelled drywell—or there could be piping of some sort from the sump to a waterway—he doesn't know.

We'd need to investigate the storm drain to see if it is dead end or if it does in fact get piped off to somewhere.

It would seem to be haz waste violations as well as WQ violations. Also, the fed might be interested in this particularly egregious act, might want to piggy back on anything we did. UIC violations come to mind. Anyway, the landlord is mailing the transcripts to me.

I'll keep you posted. Any other ideas on specific violations...

**Anne Cox**  
**(503) 229-6653**

EXHIBIT # 14



TO Reggie Huff  
51377 SW Old Portland Rd.  
Scappoose OR 97056

File copy  
made.  
Please mail  
← to Mr Huff

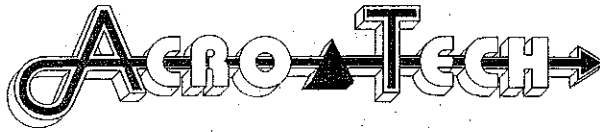
10 Apr 00 @ 12:00 p.m.  
unable to determine if this is a UIC  
or storm drain, need to find storm  
drain outfall & do dye testing.  
No person present

Drain was full of water.

Dear Mr Huff,

Here are Dan Murphy's  
notes, as you requested,  
regarding his site visit.

Oliver Cox  
Feb 5, 2001



RECEIVED  
FEB 15 2001  
EMPLOYMENT HEARINGS

Hon. Judge Kevin Anselm  
Oregon Employment Department  
875 Union Street NE  
Salem, OR 97311

February 14, 2001

Dear Hon. Judge Anselm:

Enclosed please find a copy of my affidavit submitted for your review, which I intend to submit at the hearing.

Thank you.

Sincerely,

Reggie D. Huff  
President

RDH/lgh

CC: Susan Greco

EXHIBIT # 17

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# AFFIDAVIT OF REGGIE D. HUFF

State of Oregon

County of Columbia


I, Reggie D. Huff, being first duly sworn, do depose and say that:

1. I am the president of ACRO-TECH, Inc.
2. In my capacity as president of said ACRO-TECH, Inc. I purchased 55 gallons of ethylene glycol for use in our dynamometer cooling system on November 15, 1996.
3. Within one week of the purchase date of said ethylene glycol I added it to our cooling tank, which contained 450 to 500 gallons of Scappoose, Oregon city water.
4. Our cooling system is an open system, exposed to the atmosphere at both ends, both at the large storage tank area, where the bulk of the cooling fluid is stored, and at the staging tank, near the dynamometer. The system remained open at all times.
5. On or about February of 1999 I checked the specific gravity of the said mixture and determined that it had returned to the specific gravity of basic water.
6. On or about March of 1999 I contacted the Oregon Department of Environmental Quality and asked to talk to someone knowledgeable of the requirements regarding the disposal of an old ethylene glycol solution. I was turned over to a man who purported that he was knowledgeable of the requirements to dispose the cooling solution. I stated to him the above facts. He relayed to me that this substance sounded to him to be of minor consequence, and could be discharged on dry ground. I was not sanguine with this answer and inquired further. The said DEQ personnel then recommended I contact the City of Scappoose to ask if they would have any concerns about a discharge into their sewer system.
7. On February 4<sup>th</sup>, 2001 I thoroughly boiled a glass container and its lid and seal, as well as a plastic syringe and all of its parts. Immediately upon their being removed from the boiling water and air dried I placed the syringe and all of its parts in a plastic bag and sealed it, and I reattached the lid and seal to the glass container, and sealed it as well.
8. On February 4<sup>th</sup>, 2001, at approximately 8 PM I collected a sample, using the said container and syringe, of the said cooling fluid from a cement encased under-floor pipe which had contained the fluid since the inception of the system and had been undisturbed since the system had been shut down in the winter of 1998. Nothing had been added or taken away from the fluid contained in the said pipe.
9. On February 5<sup>th</sup>, at 1:30 PM I turned the sample over to North Creek Analytical, Inc. for analysis.

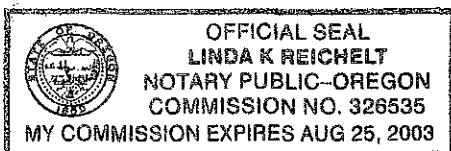
The above is true as I verily believe.

  
Reggie D. Huff

Subscribed and sworn to before me this 14<sup>th</sup> day of February 2001.

  
NOTARY PUBLIC FOR OREGON

My commission expires: Aug. 25, 2003



EMPLOYMENT VERIFICATION

FEB 15 2001

RECEIVED



51377 SW Old Portland Road  
Scappoose, OR 97056

Kevin Anslern  
Oregon Employment Department  
875 Union Street NE  
Salem, OR 97311

Lisa Louise Nelson, 35, Scappoose, and Dale Allen Nelson, 33, Portland.

Connie Marie St. Clair, 45, and David Brian St. Clair, 41, both of Deer Island.

Charles D. Martin, 32, Banks, and Pamela C. Martin, 45, St. Helens.

Kaleen K. Bateman-Seibert, 30, Portland, and Lemel B. Seibert, 30, Vernonia.

Ryan Fisher, 35, and Tiffany Wilson Fisher, 32, both of St. Helens.

Lora Lynn Watson, 30, St. Helens, and Ronald Scott Watson, 39, Portland.

*Handwritten notes:*  
Mrs. Crommett  
9 10/21/00  
9 + 400-455  
Salem water  
Fine in water  
December  
Diesel fuel  
go to summer  
water

Care of mortuary, six grandchildren, eight great-grandchildren; and 11 great-great-grandchildren.

Disposition was by cremation.

Remembrances: Diabetes Association.

Arrangements: Columbia Funeral Home.

**Terri Lynn Crommett**

Memorial services for Terri Lynn Crommett, a former resident of St. Helens, were held Oct. 26 in Vancouver, Wash.

Mrs. Crommett died Oct. 21, 2000,

*The Chronicle*  
Oct 28, 2000

a "worry-free" party for youngsters. Meadow Park Care Center is located at 75 Shore Drive.

**Illegal disposal draws fine**

The Oregon Department of Environmental Quality has levied a civil penalty of \$4,200 against Reggie D. Huff of Scappoose for illegal disposal of 500 gallons of antifreeze into a dry well leading into groundwater.

The civil penalty, one of nearly 30 civil actions taken by the DEQ in August and September, was announced Oct. 23 by the state agency.

**HARVEST PARTY**

**AT COLUMBIA CITY GRADE SCHOOL**

**EVERYONE IS WELCOME!**

**October 31st**

**6:00 to 8:30**

The biggest party in Columbia County with free admission, tons of candy, an old fashioned hay ride, games for all ages, door prizes, face painting and lots more!

A COMMUNITY SERVICE OF COLUMBIA CITY FOURSQUARE CHURCH (503-397-0069) PLEASE, NO SCARY COSTUMES



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8223  
425.420.9200 fax 425.420.9210  
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
509.924.9200 fax 509.924.9290  
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
503.906.9200 fax 503.906.9210  
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
541.383.9310 fax 541.382.7588

February 19, 2001

Reggie D. Huff  
Acro Tech Inc.  
51377 SW Old Portland Rd  
Scappoose, OR 97056

Re: Cooling Water Analysis

North Creek Analytical performed EPA method 8260B for volatile organic compounds on a sample provided by you (NCA sample # P1B0103-01). Analysis results showed a 2-butanone (methyl ethyl ketone) concentration of 2.14 mg/L.

Please note that the EPA regulatory level for 2-butanone is 200 mg/L, approximately 100 times higher than the concentration found in the cooling water sample. No other compounds detected have a regulatory limit as defined by the EPA.

If you have any questions, please call me at 503 906-9239.

Sincerely,

*Brian L. Cone*

Brian L. Cone, CHMM  
Industrial Services Manager

RECEIVED

EMPLOYMENT HEARINGS

RECEIVED

FEB 21 2001

EMPLOYMENT HEARINGS

EXHIBIT # 19

North Creek Analytical, Inc.  
Environmental Laboratory Network



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 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

Acro Tech Inc. 51377 SW Old Portland Rd Scappoose, OR 97056	Project: Cooling System Project Number: na Project Manager: Reggie D. Huff	Reported: 02/07/01 16:23
---	--	-----------------------------

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Under Floor Cooling Pipe Sample	P1B0103-01	Water	02/04/01 20:00	02/05/01 13:30

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

  
 Brian Cone, Industrial Services Manager



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 Spokane: East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland: 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend: 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

Acro Tech Inc. 51377 SW Old Portland Rd Scappoose, OR 97056	Project: Cooling System Project Number: na Project Manager: Reggie D. Huff	Reported: 02/07/01 16:23
---	--	-----------------------------

**Volatile Organic Compounds per EPA Method 8260B  
 North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
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Under Floor Cooling Pipe Sample (P1B0103-01) Water

Sampled: 02/04/01 Received: 02/05/01

Acetone	217	100	ug/l	10	EPA 8260B	02/06/01	02/07/01	1020165	
Benzene	ND	10.0	"	"	"	"	"	"	
Bromobenzene	ND	10.0	"	"	"	"	"	"	
Bromochloromethane	ND	10.0	"	"	"	"	"	"	
Bromodichloromethane	ND	10.0	"	"	"	"	"	"	
Bromoform	ND	10.0	"	"	"	"	"	"	
Bromomethane	ND	50.0	"	"	"	"	"	"	
<b>2-Butanone</b>	<b>2410</b>	100	"	"	"	"	"	"	
n-Butylbenzene	ND	50.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	10.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	10.0	"	"	"	"	"	"	
Carbon disulfide	ND	100	"	"	"	"	"	"	
Carbon tetrachloride	ND	10.0	"	"	"	"	"	"	
Chlorobenzene	ND	10.0	"	"	"	"	"	"	
Chloroethane	ND	10.0	"	"	"	"	"	"	
Chloroform	ND	10.0	"	"	"	"	"	"	
Chloromethane	ND	50.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	10.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	10.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	50.0	"	"	"	"	"	"	
Dibromochloromethane	ND	10.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	10.0	"	"	"	"	"	"	
Dibromomethane	ND	10.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	50.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	10.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	10.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	10.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	10.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	10.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	10.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	10.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	10.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	10.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	10.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	10.0	"	"	"	"	"	"	

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Brian Cone, Industrial Services Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



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 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

Acro Tech Inc.  
 51377 SW Old Portland Rd  
 Scappoose, OR 97056

Project: Cooling System  
 Project Number: na  
 Project Manager: Reggie D. Huff

Reported:  
 02/07/01 16:23

**Volatile Organic Compounds per EPA Method 8260B**  
**North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
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Under Floor Cooling Pipe Sample (P1B0103-01) Water

Sampled: 02/04/01 Received: 02/05/01

Ethylbenzene	ND	10.0	ug/l	10	EPA 8260B	02/06/01	02/07/01	1020165	
Hexachlorobutadiene	ND	20.0	"	"	"	"	"	"	
2-Hexanone	ND	100	"	"	"	"	"	"	
Isopropylbenzene	ND	20.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	20.0	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	50.0	"	"	"	"	"	"	
<b>Methyl tert-butyl ether</b>	<b>10.4</b>	10.0	"	"	"	"	"	"	
Methylene chloride	ND	50.0	"	"	"	"	"	"	
Naphthalene	ND	20.0	"	"	"	"	"	"	
n-Propylbenzene	ND	10.0	"	"	"	"	"	"	
Styrene	ND	10.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	10.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	10.0	"	"	"	"	"	"	
Trichloroethene	ND	10.0	"	"	"	"	"	"	
Benzene	ND	10.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	10.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	10.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	10.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	10.0	"	"	"	"	"	"	
Trichloroethene	ND	10.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	10.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	10.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	10.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	10.0	"	"	"	"	"	"	
Vinyl chloride	ND	10.0	"	"	"	"	"	"	
o-Xylene	ND	10.0	"	"	"	"	"	"	
m,p-Xylene	ND	20.0	"	"	"	"	"	"	

Surr: 4-BFB	99.0 %	75-125
Surr: 1,2-DCA-d4	112 %	75-125
Surr: Dibromofluoromethane	109 %	75-125
Surr: Toluene-d8	103 %	75-125

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Brian Cone, Industrial Services Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



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 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

Acro Tech Inc. 51377 SW Old Portland Rd Scappoose, OR 97056	Project: Cooling System Project Number: na Project Manager: Reggie D. Huff	Reported: 02/07/01 16:23
---	--	-----------------------------

**Notes and Definitions**

- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis. MRLs are adjusted if %Solids are less than 50%.
- wet Sample results reported on a wet weight basis
- RPD Relative Percent Difference

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

  
 Brian Cone, Industrial Services Manager





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 9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132  
 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

(425) 420-9200 FAX 420-9210  
 (509) 924-9200 FAX 924-9290  
 (503) 906-9200 FAX 906-9210  
 (541) 383-9310 FAX 382-7588

### CHAIN OF CUSTODY REPORT

Work Order #: **P1B0103**

CLIENT: <i>Reggie V Huff - Aero-Tech Dnc</i>	INVOICE TO:	<b>TURNAROUND REQUEST in Business Days*</b> Organic & Inorganic Analyses <input type="checkbox"/> 10 <input type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 STD. Petroleum Hydrocarbon Analyses <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 STD. <input type="checkbox"/> OTHER Please Specify _____ <small>*Turnaround Requests less than standard may incur Rush Charges.</small>
REPORT TO: <i>Reggie V Huff</i>	P.O. NUMBER:	
ADDRESS: <i>34085 S.W. Dalehaven Flats Rd ST Helens OR 97051</i>		
PHONE: <i>503-340-0223</i> FAX: <i>Same</i>		

PROJECT NAME:	REQUESTED ANALYSES										MATRIX (W, S, O)	# OF CONT.	COMMENTS	NC	ID	
PROJECT NUMBER:																
SAMPLED BY: <i>R. H.</i>	<i>B260 VOC's</i>															
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME															
<i>Under Floor Cooling 1. Pipe Sample</i>	<i>2/4/01 - 8:00 PM</i>	<i>X</i>									<i>W</i>					
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3.																
4.																
5.																
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14.																
15.																

RELINQUISHED BY: <i>Reggie V Huff</i>	DATE: <i>2/5/01</i>	RECEIVED BY: <i>Sarah Passarje</i>	DATE: <i>2/5/01</i>
PRINT NAME: <i>Reggie V Huff</i>	FIRM: <i>Aero-Tech, Inc</i>	PRINT NAME: <i>Sarah Passarje</i>	TIME: <i>1:30 PM</i>
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
PRINT NAME:	FIRM:	PRINT NAME:	TIME:

ADDITIONAL REM: \_\_\_\_\_



Seattle	425.420.9200	FAX 420.9210
Spokane	509.924.9200	FAX 924.9290
Portland	503.906.9200	FAX 906.9210
Bend	541.383.9310	FAX 382.7588

# FAX

Date: 2/22/01

Total Pages: 2

*BLC*

To: Susan Greco

From: Brian Cone 503-906-9239

Company: Oregon DEQ

Company: NCA - Portland

Fax: 503 229-6945

bcone@ncalabs.com

Urgent

Please Confirm Receipt

Please Reply ASAP

Hello Susan!

Attached is the letter clarifying glycol methodology. Call me if you have any questions.

Thanks!

**Confidentiality Notice:**

This message is intended only for the use of the individual or entity to which it is addressed and may contain information that is privileged, confidential, and exempt from disclosure under applicable law. If the reader of this message is not the intended recipient, or the employee or agent responsible for delivering this message to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this message in error, please notify us immediately by telephone.

North Creek Analytical, Inc.  
Environmental Laboratory Network

EXHIBIT # 20



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 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
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 503.906.9200 | fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 | fax 541.382.7488

February 22, 2001

Susan Greco  
 Oregon Department of Environmental Quality  
 2020 SW 4<sup>th</sup> Ave  
 Portland, OR 97201

Re: Cooling Water Analysis

Dear Susan:

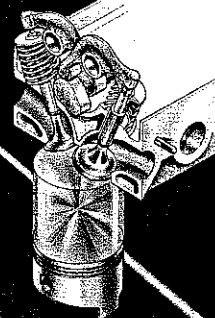
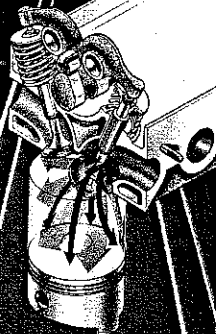
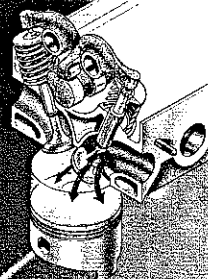
North Creek Analytical performed EPA method 8260B for volatile organic compounds on a sample provided by Acro Tech (P1B0103). Glycols, such as ethylene glycol, are not analyzed by method 8260B. Method 8015M (modified) is a GC/FID procedure that is used to analyze water samples for glycols. This test was not performed on the Acro Tech sample.

If you have any questions, please call me at 503 906-9239.

Sincerely,

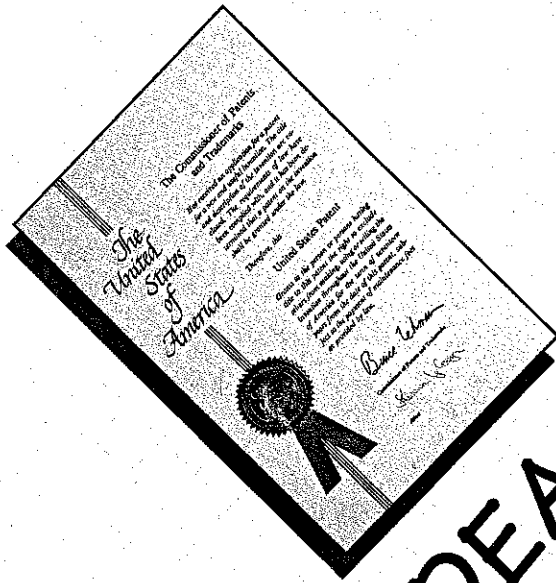
Brian L. Cone, CHMM  
 Industrial Services Manager

# Acro-Tech



**PIONEERING ADVANCED CONCEPTS  
FOR  
TODAY'S ENGINES**

EXHIBIT #21



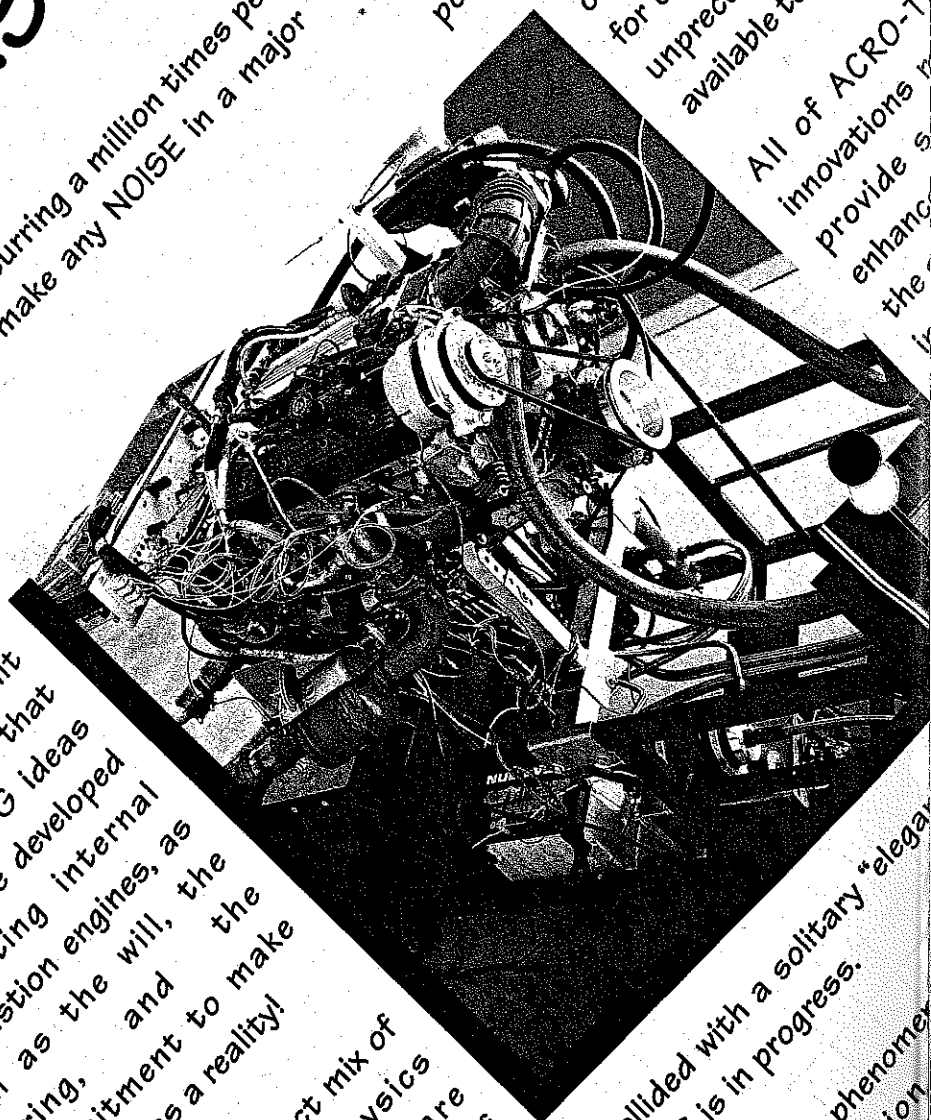
# IDEAS

are the spark that lead to innovation, occurring a million times per second, yet only one in a billion ever make any NOISE in a major industry!

ACRO-TECH, Inc. is a research and development firm built on the solid belief that many BIG BANG ideas are yet to be developed for existing internal combustion engines, as well as the will, the daring, and the commitment to make such ideas a reality!

When the perfect mix of fundamental physics and simplicity are applied to a series of complex engineering challenges and super solution, the BIG BANG is in progress.

A classic example of this phenomenon (dual stage) induction combustion engines. Convert the



and reduced mechanical stress, in the context of a single self-contained replacement part, is not possible. Yet, ACRO-TECH's patented valve within a valve design provides otherwise. That's a whole lot of unprecedented innovation available to the public!

All of ACRO-TECH's innovations provide enhanced performance to the

...g  
 BANG  
 ... of this  
 ... is expected to be  
 ... limited quantities in 1997.  
 ... CH's current and future product  
 ... must meet a very rigid criteria. They must  
 ... sophisticated multi-dimensional performance  
 ... to popular engine designs without bastardizing  
 ... of their universal appeal and utility. This will result  
 ... an exciting and rarefied line of products which:

- Do not compromise one dimension of performance over another;
- Are environmentally friendly;
- Are easily adapted and retrofitted into most existing applications.

These products are expressly designed to exceed the demands of today's aftermarket and OEM client.

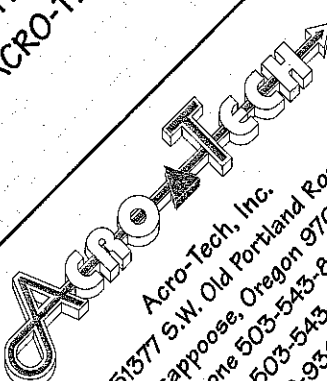
ACRO-TECH, Inc. will entertain special engineering project

...ion is vented  
 ... for internal

...onal wisdom would state  
 ... affecting four  
 ... dimensional variable valve  
 ... timing concomitant with  
 ... increased flow  
 ... dimension,  
 ... improved  
 ... combustion and  
 ... combustion  
 ... timing.

Acro-Tech's engine development facility, Scappoose, Oregon  
 - Photos by Del Monroe

proposals involving vented valve development.  
 Individuals can receive priority notification of future product  
 availability by advising ACRO-TECH, Inc. of their interest.



Acro-Tech, Inc.  
 51377 S.W. Old Portland Road  
 Scappoose, Oregon 97056  
 Phone 503-543-8220  
 Fax 503-543-8221  
 1-800-956-9394



# TECHNOLOGUE

BY RON GRABLE

## ACRO-TECH'S VENTED VALVE

An internal-combustion engine is essentially an air pump, and its power output is a function of how much air can be processed through it. Innovations like multiple valves, tuned intake and exhaust systems, and variable valve timing are all mechanical means of increasing the amount of air an engine can breathe during its intake cycle. Turbochargers and superchargers also are pumps, external to the engine, which increase airflow by force-feeding intake air at higher (than atmospheric) pressure.

Despite all the mechanisms to increase airflow, the single most significant intake restriction remains the intake valve itself, especially at low valve lifts. The intake charge flowing down the induction port has its highest kinetic energy at its center, yet as it reaches the head of the intake valve, all the incoming airflow must squeeze out around the periphery of the valve to enter the combustion chamber. This causes the highest energy portion of the intake flow to stack up on the back of the valve head, creating a pressure that opposes intake flow.

Acro-Tech Inc., a small research company in Oregon (503/531-9394), has come up with an elegant solution to this problem, which, according to its preliminary test-

### A VALVE-IN-VALVE DESIGN TO INCREASE VOLUMETRIC EFFICIENCY

ing, promises some significant gains for the internal-combustion engine. Acro-Tech replaces the standard intake valve with a vented, two-stage valve, which is actually a valve-in-valve design. Entirely contained within the head and stem of a conventional intake valve, it features a small titanium inner valve, controlled by self-contained coil springs. The small springs are sized so that the opening point, lift, and closing point of the inner valve is determined by the difference in pressure between the intake tract and the combustion chamber. At low-throttle openings and low rpm, the pressure difference is small, causing the inner valve "timing" to be conservative. Full throttle and high rpm cause it to open sooner, with more lift, and close later. Since opening and closing of the inner valve is a function of engine demand, it can be thought of as the quintessential variable valve timing system.

When the inner valve is open, incoming air can flow through vents in the outer valve head directly into the combustion chamber, as well as around the periphery of the conventional valve head. This increased intake flow through the inner valve not only increases volumetric efficiency, but enhances turbulence and helps atomize fuel droplets for improved flame propagation. Acro-Tech claims the more homogeneous mixture burns much faster, allowing spark advance to be reduced

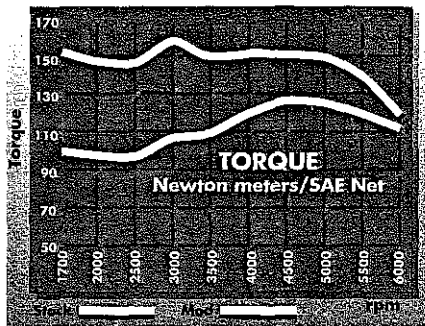
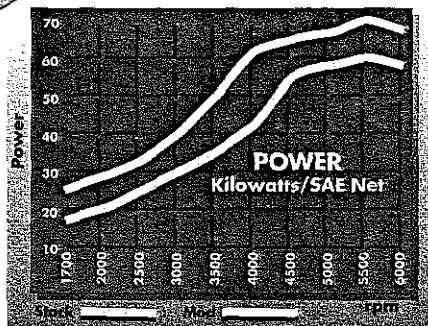
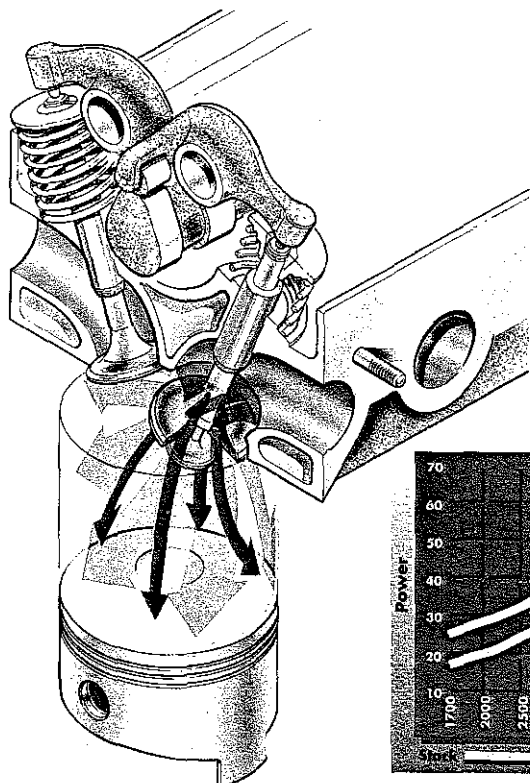
from the typical 35 degrees BTDC (before top dead center), to 15 degrees BTDC, this decreases negative work on the crankshaft prior to TDC on the power stroke. This faster burning also means there's less residual gas released into the exhaust at the end of the power stroke, which reduces emissions.

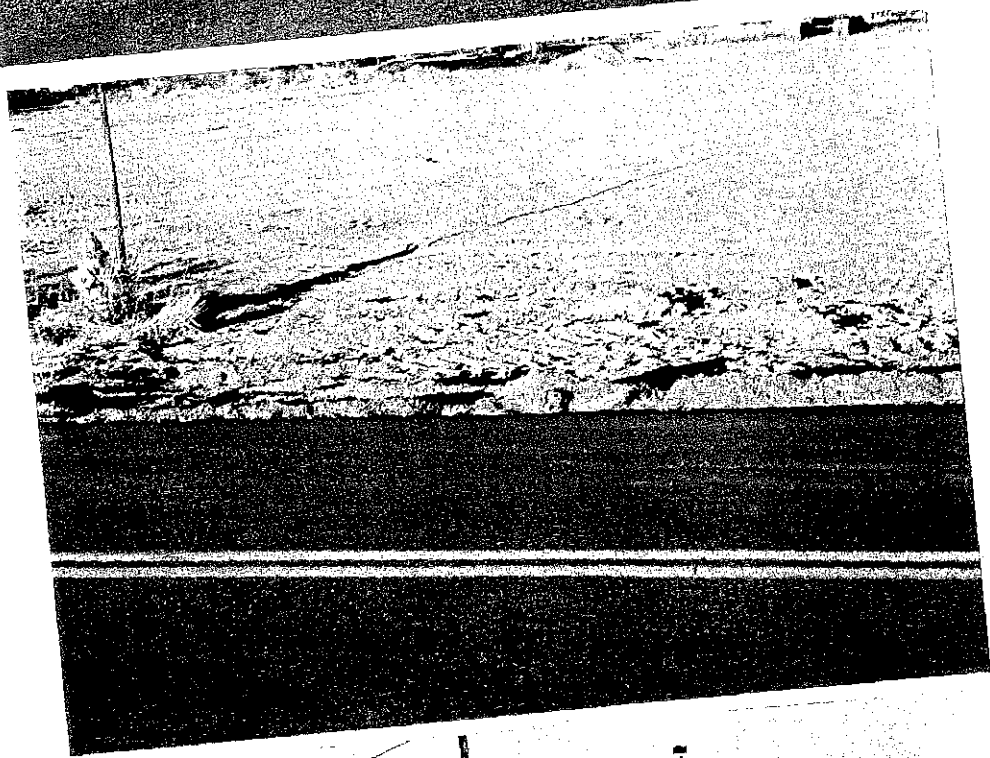
First testing of the vented valve concept was done at the Vehicle Research Institute at Western Washington University, in Bellingham, Washington. The vented valves were installed in an '89 2.0-liter Mitsubishi SOHC two-valve engine. Installation required only that the standard valve guides be reamed 1 millimeter oversize, to accommodate the slightly larger valve stems of the vented valves. Ignition timing was reduced as mentioned above, but in all other respects, the engine was standard.

Since this was the first test of the vented-valve concept, no changes were made to the engine computer to optimize the fuel/air ratio for the increased airflow. In spite of that, the gains were significant. Power was increased across the entire rev range an average of approximately 35 percent, and torque increased even more. Of particular interest is the flatness of the torque curve with vented valves. Flat torque curves are the Holy Grail for engine designers because they make powerplants highly flexible, improving performance at low engine speeds, where they're more fuel efficient.

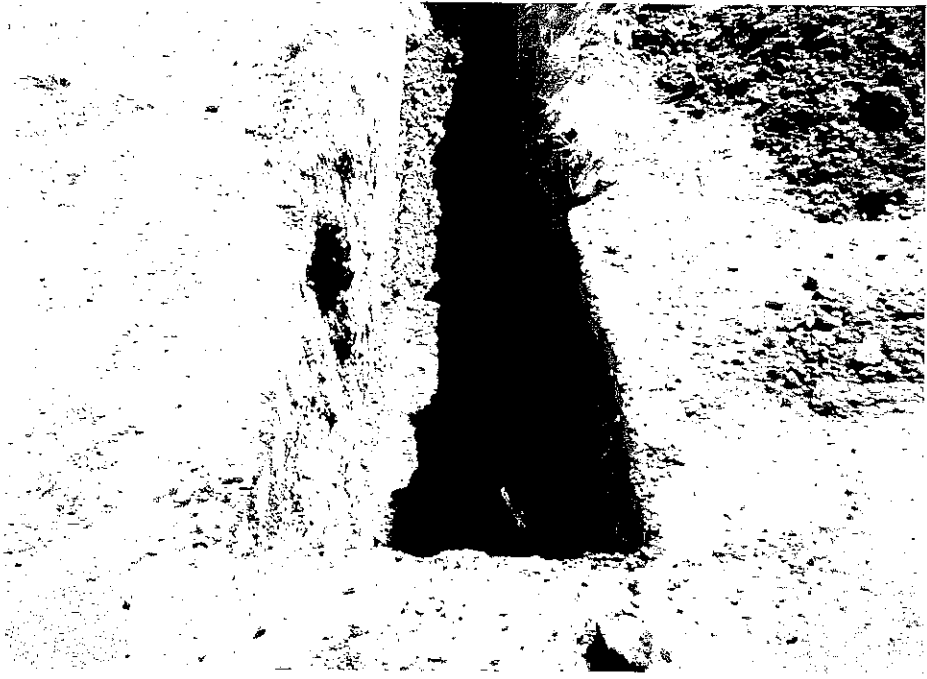
The potential of this vented-valve concept seems enormous. Further work to tune the engine to better accommodate the valves, and additional development of the valve itself, hint at greater improvements. Adapting vented valves to four-valve layouts could perhaps be the most promising application of all, addressing the four-valve layout's typical poor torque at low engine speeds.

It's just such innovations as these that continue to breathe new life into the internal-combustion engine. **MT**









COLUMBIA COUNTY



OREGON

**DEPARTMENT OF LAND DEVELOPMENT SERVICES**

Columbia County Courthouse, St. Helens, Oregon 97051

Phone: (503)397-1501 Fax: (503)366-3902

www.CoColumbia.or.us

August 17, 2000

To Whom it may concern,

This office has performed On-site work at each of the properties indicated by a star on the attached map. At each site, a soils evaluation was performed to a depth of five feet. These evaluations have been performed at varying times throughout the year. At no time has groundwater been observed to be within the top five feet of soil. Some of the soils in the area do demonstrate Indicators Associated with Saturation but the indicators have been found to be relic features. This area is well know by the local population (i.e. Columbia county contractors and county Environmental Services [Soils] staff) as one of the deepest and best drained area available in the entire county.

Should you have any questions, please call.

Sincerely,

A handwritten signature in black ink, appearing to read "Ron Wilson".

Ron Wilson  
Soil Scientist

enc: Tax map 3N-2W-13-030-(approximately east half)

RECEIVED  
FEB 14 2001  
Employment Hearings

EXHIBIT # 23



# Oregon

John A. Kitzhaber, M.D., Governor

Department of Environmental Quality

811 SW Sixth Avenue  
Portland, OR 97204-1390  
(503) 229-5696  
TDD (503) 229-6993

September 18, 2000

Mr. Reggie D. Huff  
51377 S.W. Old Portland Road  
Scappoose OR 97056

Re: Mutual Agreement and Order  
In the Matter of:  
Reggie D. Huff  
No. WQ/I -NWR-00-125  
Columbia County

Dear Mr. Huff:


On August 1, 2000, the Department issued you a Notice of Assessment of Civil Penalty (Notice) for violations of Oregon's water quality statutes. The Notice assessed a penalty of \$4,200 for the violation. You responded to the Notice and requested an informal discussion with the Department.

Based upon the information you provided to the Department in the informal discussion, the Department has approved mitigation of the \$4,200 civil penalty to \$1,200 by changing the class of the violation from Class I to Class II and reducing the negligence factor from 2 to 0.

I have enclosed a Mutual Agreement and Order (MAO) reflecting these reductions for your signature. After the document is signed, please return it to me by September 29, 2000. A check for \$1,200 made payable to: "State Treasurer, State of Oregon" must accompany the signed MAO. When the MAO is approved by the administrator of the enforcement section, I will send you a copy of the fully signed MAO.

If you have any questions or need more time to respond, please contact me at (503) 229-5152.

Sincerely,

  
Susan Greco  
Environmental Law Specialist

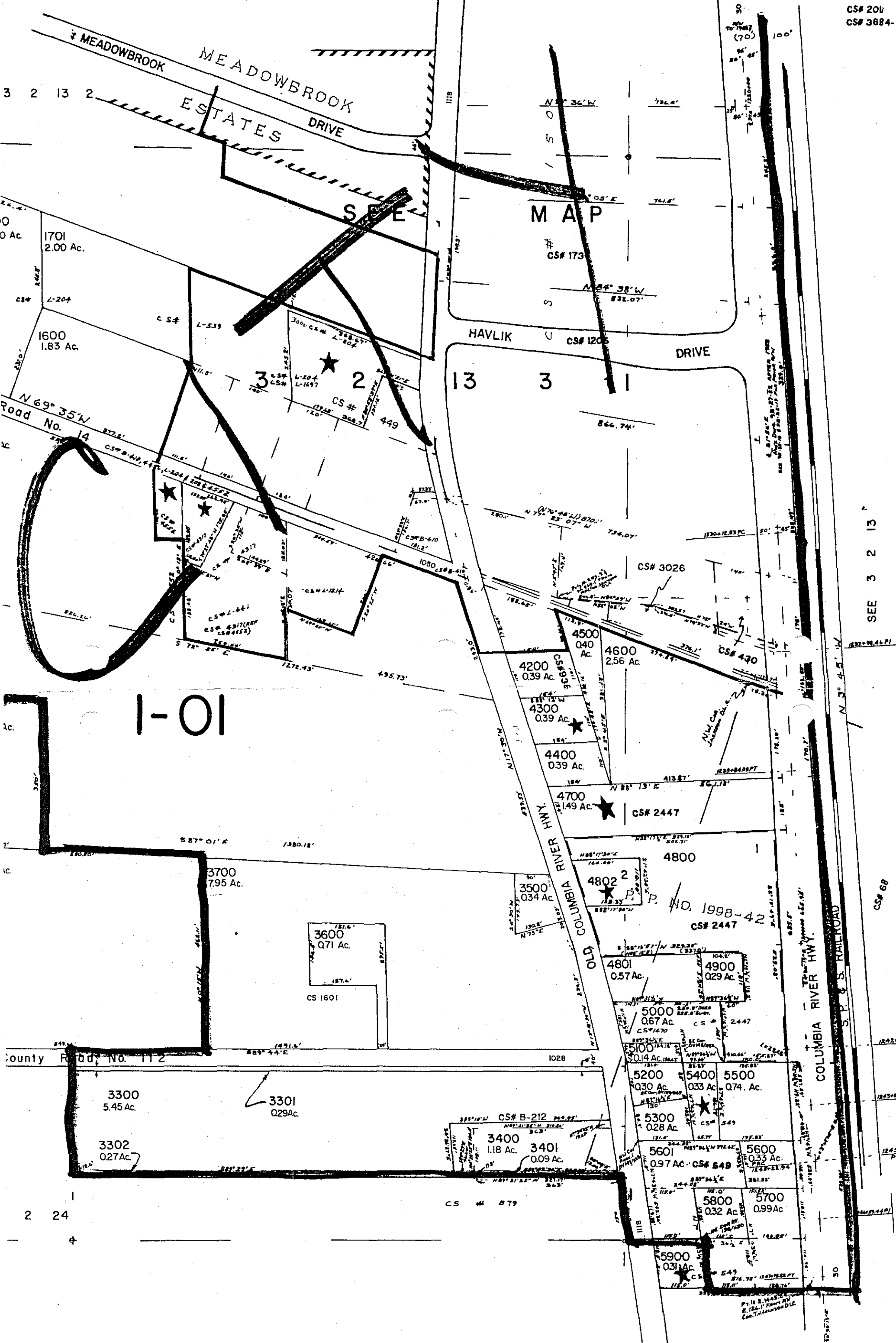
Enclosure(s)

cc: Anne Cox, Northwest Region, DEQ

EXHIBIT #

24

DEQ-1



SEE 3 2 13

CS# 68



1 7. Pursuant to OAR 340-12-030(14), the violation(s) alleged in the Notice will be  
2 treated as (a) prior significant action(s) in the event a future violation occurs.

3 8. The Commission shall enter a final order:

4 a. Imposing upon Reggie D. Huff a total civil penalty of \$1,200 for the  
5 violations alleged in the Notice.

6 b. Finding that the Department and Commission have satisfied all the  
7 requirements of law and that mitigation of the civil penalty is consistent with public health and  
8 safety, and is in the public interest.

9  
10  
11 \_\_\_\_\_ Signature  
12 Date Name (print) \_\_\_\_\_  
13 Title (print) \_\_\_\_\_

14  
15 DEPARTMENT OF ENVIRONMENTAL QUALITY

16  
17  
18 \_\_\_\_\_  
19 Date Neil Mullane, Administrator, Enforcement Section

20  
21 FINAL ORDER

22  
23 IT IS ORDERED:

24 ENVIRONMENTAL QUALITY COMMISSION

25  
26 \_\_\_\_\_  
27 Date Neil Mullane, Administrator, Enforcement Section  
Pursuant to OAR 340-011-0136(1) & OAR 340-012-0047

## EXHIBIT 1

### FINDINGS AND DETERMINATION OF RESPONDENT'S CIVIL PENALTY PURSUANT TO OREGON ADMINISTRATIVE RULE (OAR) 340-012-0045

VIOLATION: Placing wastes such that the wastes are likely to enter public waters by any means.

CLASSIFICATION: This is a Class II violation pursuant to OAR 340-012-0055(2)(c).

MAGNITUDE: The magnitude of the violation is moderate pursuant to OAR 340-012-0045(1)(a)(B), because there is no selected magnitude for this violation.

CIVIL PENALTY FORMULA: The formula for determining the amount of penalty of each violation is:  
$$BP + [(0.1 \times BP) \times (P + H + O + R + C)] + EB$$

- "BP" is the base penalty, which is \$1000 for a Class II moderate magnitude violation in the matrix listed in OAR 340-012-0042.
- "P" is Respondent's prior significant action(s) and receives a value of 0.
- "H" is the past history of Respondent in taking all feasible steps or procedures necessary to correct any prior significant action(s) and receives a value of 0.
- "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 because the violation was repeated over ten days.
- "R" is the cause of the violation and receives a value of 0 because there is insufficient information on which to base a finding.
- "C" is Respondent's cooperativeness in correcting the violation and receives a value of 0 because the violation could not be corrected.
- "EB" is the approximate dollar sum of the economic benefit that the Respondent gained through noncompliance according to OAR 340-012-0045(1)(c)(F), and receives a value of 0 because Respondent did not delay or avoid any costs in committing the violation.

#### PENALTY CALCULATION:

$$\begin{aligned} \text{Penalty} &= BP + [(0.1 \times BP) \times (P + H + O + R + C)] + EB \\ &= \$1000 + [(0.1 \times \$1000) \times (0 + 0 + 2 + 0 + 0)] + (\$0) \\ &= \$1000 + [(\$1000 \times 2)] + \$0 \\ &= \$1000 + \$200 + \$0 \\ &= \$1200 \end{aligned}$$



## Center for Hazardous Materials Research

University of Pittsburgh Applied Research Center  
320 William Pitt Way - Pittsburgh, PA 15238  
Fax (412) 826-5552  
(412) 826-5320

January 7, 1994

Small Business Innovative Research Program  
U.S. Environmental Protection Agency  
401 M Street, SW (RD-675)  
Washington, DC 20460

To Whom It May Concern:

This letter is written on behalf of Acro-Tech, Inc. of Tigard, Oregon in support of their application to the Small Business Innovative Research Program.

In October 1991, Mr. Huff submitted an application to the U.S. Environmental Protection Agency's Pollution Prevention By and For Small Business Grant Program. Administered by the Center for Hazardous Materials Research (CHMR), this unique national program was designed to assist small businesses develop and demonstrate innovative pollution prevention technologies and techniques. Acro-Tech's proposal, *Phase II and III Vented Two-Stage Valves for Internal Combustion Engines*, was selected as one of 14 award winners from 203 proposals submitted for FY 1992.

In May 1993, Acro-Tech successfully completed its project. Acro-Tech's conduct of work during the Grant Program was most satisfactory. All technical progress reports and financial updates were complete and submitted on time. The final report was well written, and EPA is expected to publish the results of the project in early 1994. We are hopeful that their forward-thinking research in auto emissions reductions through increased engine efficiency can continue.

Thank you for your consideration of Acro-Tech's application for your grant program. We are looking forward to following Acro-Tech's progress as they expand their research efforts.

Sincerely,

Edgar Berkey, Ph.D.  
President

RECEIVED  
FEB 21 2001  
EMPLOYMENT HEARINGS



Ref No.: G60417  
Case Type: DEQ

STATE OF OREGON  
Before the Hearing Officer Panel  
For the  
DEPT OF ENVIRONMENTAL QUALITY  
875 Union Street NE  
Salem, Oregon 97311

Mailed: 03/08/01  
Mailed by: LMV



REGGIE D. HUFF  
51377 SW OLD PORTLAND RD  
  
SCAPPOOSE OR 97056 4018

DEPT OF ENVIRONMENTAL QUALITY  
811 SW 6TH AVE  
  
PORTLAND OR 97204 1334

SUSAN GRECO  
DEQ ENFORCEMENT SECTION  
811 SW 6TH AVE  
PORTLAND OR 97204 1334

The following **DOCUMENT** was served to the parties at their respective addresses.



# Oregon

John A. Kitzhaber, M.D., Governor

Employment Department

875 Union Street NE

Salem, OR 97311

(503) 947-1394

TTY 1-503-947-1391

www.emp.state.or.us

March 8, 2001

Susan Greco  
Environmental Law Specialist  
DEQ Enforcement Section  
2020 SW 4<sup>th</sup> Ave., Suite 400  
Portland, Oregon 97201-4959



Re: Transmittal of Question regarding Reggie D. Huff and the Department of Environmental Quality Civil Penalty No: WQ/I-NWR-00-125/G60417

Dear Ms. Greco:

Pursuant to OAR 137-003-0635, I am transmitting a question to you regarding the Department of Environmental Quality's interpretation of ORS 468.130 and OAR 340-012-0045. Please advise me immediately if this request should be addressed to another person.

In the Huff case, the Department includes a factor in the civil penalty determination for a negligent act (OAR 340-012-0045(1)(D) Civil Penalty Determination Procedure). ORS 468.130 also requires that various factors be considered in imposing a civil penalty including, (2)(f) "whether the cause of the (1)(D). violation was...negligence..."

***What is the Department's interpretation of the meaning of the terms negligent and negligence in the referenced rule and statute?***

I would appreciate your response at your earliest convenience. If I should not expect a response by March 30, 2001, would you please let me know when I may expect your response so that I can determine whether I need to advise the parties to anticipate a different issue timeline for the proposed order? Thank you for your continued courtesies.

Sincerely,

Kevin Anselm  
Hearing Officer

cc: Reggie D. Huff





# Oregon

John A. Kitzhaber, M.D., Governor

Employment Department

875 Union Street NE

Salem, OR 97311

(503) 947-1394

TTY 1-503-947-1391

www.emp.state.or.us

March 21, 2001



Reggie D. Huff  
51377 SW Old Portland Rd.  
Scappoose, OR 97311

Re: March 15, 2001 request letter

Dear Mr. Huff:

I received your letter requesting an opportunity to rebut the Department of Environmental Quality's (DEQ) response to my letter of March 8, 2001. I will accept your written comments or rebuttal postmarked or faxed no later than 10 calendar days after the DEQ response is postmarked. Your timely filed comments or rebuttal will be included as part of the hearing record as will the DEQ response. Please provide a copy of anything you file with me to Ms. Greco.

Thank you for your continued courtesies in this matter.

Sincerely,

*Kevin Anselm*

Kevin Anselm  
Hearing Officer

Fax: 503/606-2950

cc: Susan Greco, Department of Environmental Quality

EXHIBIT # 28



# FAX

**Date** 3/29/01

**Number of pages including cover sheet** 1

**TO:** Kevin Anselm  
503 606-2950

**CC:** Reggie Huff  
(503) 543-8221

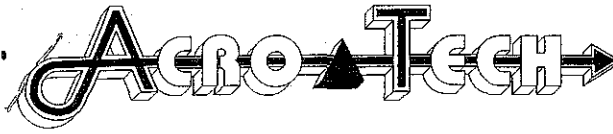
**FROM:** Susan M. Greco  
Department of  
Environmental Quality  
Office of Compliance and  
Enforcement  
811 SW 6<sup>th</sup>  
Portland Oregon 97204

**Phone** (503) 229-5152

**Fax Phone** (503) 229-6762

**REMARKS:**  Urgent  For your review  Reply ASAP  Please Comment

The Department plans to submit its response to your transmittal of question dated March 8, 2001 prior to April 4<sup>th</sup>. If this timeline presents a problem, please let me know .



RECEIVED  
MAR 16 2001

Employment Hearings

Hon. Judge Kevin Anselm  
Oregon Employment Department  
875 Union Street NE  
Salem, OR 97311

RE: Question regarding Reggie D. Huff and DEQ Civil Penalty No. WQ/1-NWR-00-125/G60417

March 15, 2001

Dear Hon. Judge Anselm:

I am in receipt of a request for the DEQ's own interpretation of the meaning of the terms 'negligent' and 'negligence'. Since the DEQ is an adverse party in the above action I would respectfully submit that its answer to this important question will be biased and therefore I respectfully request an opportunity to rebut their response.

Thank you for considering this request.

Sincerely,

Reggie D. Huff  
President

RDH/lgh

CC: Susan Greco

EXHIBIT # 27

51377 SW Old Portland Scappoose 97056 503.543.3388 FAX 503.543.3388



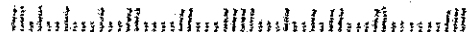
51377 SW Old Portland Road  
Scappoose, OR 97056



RECEIVED  
MAR 16 2001  
EMPLOYMENT HEARINGS

Hon. Judge Kevin Anselm  
Oregon Employment Department  
875 Union Street NE  
Salem, OR 97311

97311+0800





DEPARTMENT OF JUSTICE  
GENERAL COUNSEL DIVISION

April 4, 2001

Kevin Anselm  
Hearing Officer  
875 Union Street NE  
Salem, OR 97311

Subject: Response to Transmitted Question  
Reggie D. Huff and the Department of Environmental Quality  
Civil Penalty No. WQ/I-NWR-00-125/G60417

Dear Hearing Officer Anselm:

Susan Greco of the Department of Environmental Quality (DEQ or the Department) has asked our office to respond to the question you transmitted in your letter dated March 8, 2001. We respectfully do so in this letter.

The Agency's Interpretation of the Term "Negligence"

Your question was: "What is the Department's interpretation of the meaning of the terms negligent and negligence in the referenced rule and statute?" The statute you referenced was ORS 468.130, which lists several factors that must be considered by the agency in imposing a civil penalty. The factor stated in ORS 468.130(2)(f) is: "Whether the cause of the violation was unavoidable accident, *negligence* or an intentional act." Emphasis added.

Using its rulemaking authority, the Environmental Quality Commission (EQC) has adopted a set of rules to interpret and implement its statutory enforcement powers. *E.g.*, ORS 468.020. As the hearing officer correctly noted, these rules include a provision that specifically parallels the civil penalty factors in ORS 468.130. The negligence factor is found in OAR 340-012-0045(1)(c)(D)(emphasis added).<sup>1</sup>

With these statutory and rule provisions in mind, we now turn to your specific question—"What is the Department's interpretation of the meaning of the terms negligent and negligence in the referenced rule and statute?" In this case, the answer lies in the same set of rules that the hearing officer is seeking to interpret. The enforcement rules include a definitions section.

<sup>1</sup> It should be noted that the rules clearly use the penalty factors only to determine the *amount* of the civil penalty, not whether to impose a penalty in the first instance.

RECEIVED  
APR 05 2001

EXHIBIT # 30 EMPLOYMENT RELATIONS

OAR 340-012-0030. The section includes the following definition: "Negligence" or "Negligent" means a failure to take reasonable care to avoid a foreseeable risk of committing an act or omission constituting a violation." OAR 340-012-0030(11).

Thus, the agency has specifically interpreted the term in question by an administrative rule, and its interpretation essentially summarizes and adopts Oregon negligence law. Notably, it establishes the duty of reasonable care based upon the foreseeability of the risk. In the following section, we will cite some agency decisions that elaborate on the basic principles. If the hearing officer wants further elaboration on Oregon negligence law, we would certainly provide it.

**In sum, the answer to your question is short: DEQ interprets the term "negligence" as specifically established in an administrative rule adopted by the EQC—namely, as a failure to take reasonable care to avoid a foreseeable risk of committing an act or omission constituting a violation.**

Our response could well stop at this point. We proceed, however, to offer a couple additional thoughts, in hopes that we might anticipate other questions the hearing officer may face as she considers and applies the agency's definition of negligence.

#### Agency Application of the "Negligence" Factor

Our office has not been asked to, and will not, apply the negligence factor to the particular facts of this case. For the hearing officer's information, however, there are a number of agency (both EQC and hearing officer) decisions that discuss the negligence factor in ORS 468.130(2)(f). In some cases, the negligence factor is discussed solely in the context of concluding that the enforcement statutes impose strict liability.<sup>2</sup> A few of the other, more pertinent agency decisions are as follows:

(1) In *DEQ v. Lakea Corporation*, HW-NWR-91-130, 1992 WL 90309, April 14, 1992 (Or. Env. Qual. Com.), the corporation received multiple citations relating to storing hazardous waste for over 90 days without a permit, actions which the DEQ urged were grossly negligent or at least negligent. The level of negligence was a factor in determining the penalty.

(2) The fact that the violations were seen by DEQ as negligent affected the amount of the penalty for failing to remove friable asbestos materials before dismantling a facility and for openly storing/accumulating friable asbestos materials in *DEQ v. Fuel Processors, Inc.*, AQAB-NWR-90-18, 1991 WL 105467, May 20, 1991 (Or. Env. Qual. Com.).

---

<sup>2</sup> We are not aware that there is an issue of strict liability in this case, and therefore we will not address it.



(3) Illegally storing hazardous waste and violating a previous compliance order in *DEQ v. Bolch, Bolch and Star Concrete, Inc.*, HW-SWR-92-241, 1995 WL 870802, Sept. 8, 1995 (Or. Env. Qual. Com.), was found to be a negligent action in the penalty assessments by DEQ. Additionally, the parties to *Bolch* asked the hearing officer to address whether respondents were legally negligent.

(4) The value of the "R" factor in the penalty calculation was assigned based the city's alleged negligence where the city discharged wastes into state waters that reduced the water quality below water quality standards established by the EQC and violated a condition for its NPDES permit by allowing sewage to bypass treatment facilities. *EQC v. City of Coos Bay*, WQMW-WR-96-277, 1998 WL 481883, August 11, 1998 (Or. Env. Qual. Com.), *rev'd on other grounds*, 171 Or. App 106, 14 P.3d 649 (2000).

#### Deference to Agency's Interpretation

DEQ appreciates your courtesy in allowing Respondent an opportunity to respond to the agency's interpretation of the statutes and rules in question. At the same time, however, both DEQ and the Department of Justice urge care in how the Respondent's position is used. The hearing officer must give deference to an agency's interpretation of a statute or rule unless the agency's interpretation is unreasonable and inconsistent with the wording and policy of the statute or rule. *See, e.g., Jeld-Wen v. Environmental Quality Commission*, 162 Or App 100, 986 P2d 582 (1999).<sup>3</sup> This is particularly true when the legislature has delegated the authority to define a statutory term to the agency, as in this case. The opportunity to respond should be limited to those issues.

---

<sup>3</sup> This case also involved interpretation of a statutory term, "available," that the EQC had sought to interpret itself through administrative rulemaking, as well as in the order under review. The court's analysis is notable in at least two regards. First, the court offers, albeit briefly, its view of the relationship between *Springfield* and *PGE*, the two seminal administrative law cases dealing with the respective roles of the agency and courts in interpreting statutory terms. Second, while avoiding use of the word "deference," the court strongly argued for acknowledging the value of having the agency offer its view of what the legislature intended. The court concluded this portion of its analysis with the following passage:

Under *Springfield* and *PGE*, when a term is both inexact and ambiguous, the administrative process may assist both in applying the legislative policy to the specific situation and in resolving the overall ambiguity in the term. In complying with its obligations under *Springfield*, the agency may describe the practical application of the term in a way that will suggest the meaning that the legislature intended in using it. Under both cases, this court has the responsibility for construing the statute, but we do so in the context of the agency's initial authority to act under it. In this case, where we reach the third level of analysis under *PGE*, EQC's explanation of the practical application of the statute can be particularly helpful in understanding what the legislature intended by adopting it.

162 Or App at 105-106 (citations omitted).

Kevin Anselm  
April 4, 2001  
Page 4

Thank you very much for employing the tool of transmitting questions to the agency under ORS 137-003-0635 and thereby allowing the agency to offer and explain its interpretation of a statutory term.

Sincerely,

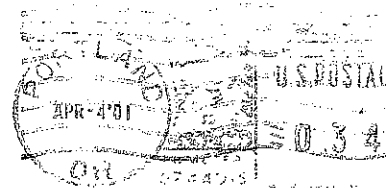
*Michael B. Huston*<sub>LSS</sub>

Michael B. Huston  
Assistant Attorney General

MBH:lan/GEN80155.DOC  
cc: Susan Greco, DEQ  
Reggie D. Huff



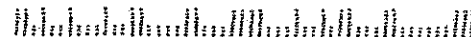
**STATE OF OREGON**  
**DEPARTMENT OF JUSTICE**  
1515 SW 5TH AVENUE  
SUITE 410  
PORTLAND, OR 97201

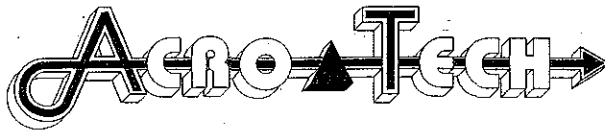


Kevin Anselm  
Hearing Officer  
875 Union Street NE  
Salem, OR 97311

RECEIVED  
APR 05 2001  
EMPLOYMENT HEARINGS

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RECEIVED  
APR 13 2001  
Employment Hearings

Hon. Judge Kevin Anselm  
Oregon Employment Department  
875 Union Street NE  
Salem, OR 97311

RE: Rebuttal to Transmitted Answer to Question  
Reggie D. Huff and the Department of Environmental Quality  
Civil No. WQ/1-NWR-00-125/G60417

April 11, 2001

Dear Hon. Judge Anselm:

I am in receipt of an answer to your question regarding "Negligence" from the Department of Justice and Michael B. Huston on behalf of the DEQ.

The DEQ has chosen to answer your question in general terms and not in the context of this case. In your March 8<sup>th</sup>, 2001 letter to the DEQ you used the term "in the Huff case" [emphasis quoted] in the context of asking your question. Since the term "Negligence", as well as many other key terms, can and do have multiple interpretations, depending on the context. The general interpretation with no arguments on its relevance to this particular case is insufficient.

The response cites a case on Page 2 (DEQ v. Lakea Corporation, HW-NWR-91-130, 1992 WL 90309, April 14, 1992) and states that "the level of negligence was a factor in determining the penalty." [Emphasis supplied.]

This aptly illustrates my point that there are varying interpretations of negligence depending on the individual facts in a particular case, and these varying interpretations are factored in determining the penalty, as they should be.

The response also states:

"The agency has specifically interpreted the term in question by an administrative rule, and its interpretation essentially summarizes and adopts Oregon negligence law."

This further illustrates my point, since "Oregon negligence law" requires many factors to be considered, such as level of fault, culpability, etc.

Therefore, I will state that I disagree with the agency's application and definition of the terms "negligence" and/or "negligent" as it applies to this case.

The only way to properly answer your question as asked is to first define the charge and then apply the relevant facts, and thereby demonstrate what interpretation or "level" of negligence should be applied, if any. All of the following is directly related to the question of negligence "in the Huff case".

ARGUMENTS & AUTHORITIES

We now know that the DEQ ignored the recommendations of two of its own investigators to properly investigate the site of the alleged violation, and other relevant facts before assessing a penalty.

On August 1, 2000 the DEQ charged me with a violation of ORS 468.025(1)(a) and charged that I had "disposed of approximately 500 gallons of waste antifreeze into a dry well that discharged to groundwater." [Emphasis supplied.] This was charged as a Class I violation pursuant to OAR 340-012-0055(1)(b), stating as if to fact that I had "caused pollution of the waters of the state".

I subsequently conducted my own investigation and presented the results to the DEQ at an informal meeting a few weeks later. At this meeting I proved that the DEQ had no evidence that the discharge ever went to groundwater or any other "waters" of the state. I also proved that such a charge could never be proven to any standard.

Since an actual discharge that in fact "enters waters of the state" is necessary to sustain a Class I charge the DEQ was forced to retreat to charging a Class II violation on October 30, 2000 pursuant to OAR 340-012-0055(2)(c), and thus attempting to hide its error by using the more ambiguous language of that rule as a cover.

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The Class II violation is stated specifically as:

**“Placing wastes such that the wastes are likely to enter public waters by any means.”** [Emphasis added.]

This is very important because the assessment of civil penalties for violations of ORS is done through the OAR. The Assistant Attorney General himself made arguments that the legislature has given the authority to state agencies to adopt rules that reflect its interpretation of the statutes and he argued using case authorities that the courts give some deference to the various state agencies.

Therefore, in order for the DEQ to assess a penalty it must find a violation within the language of its own rules. According to the DEQ and the Justice Department, any distinction between the statute language and that of the OAR should be weighed in favor of the OAR. Right or wrong that appears to be their position.

All this being said, in order to properly apply any negligence standard we must first understand specifically what the charge is.

The charge is specifically that a Class II violation pursuant to OAR 340-012-0055(2)(c) has occurred.

There is a clear distinction between the OAR rule and that of the ORS.

ORS 468B.005(8) defines “the waters of the state” to include both public and private waters with a clearly defined exception. This statute affirms that there is a distinction between public and private waters in the law. A Class I violation under OAR 340-012-0055(1)(d) uses the term “waters of the state”, but a Class II violation in the same section under (2)(c) clearly applies only to “public” waters. I will illustrate the relevance of this later, but now we can focus on the actual language of the actual charge that the DEQ is making.

#### **DEFINITIONS:**

The DEQ must first prove its charge before any definition of “**negligence**” can be applied.

By “definition” the DEQ has not and can not do so. By definition I mean as defined in the ORS and/or the OAR.

ORS 468B.005(7) defines “wastes” as:

**“Sewage, industrial wastes, and all other liquid, gases, solids, radioactive or other substances which will or may *cause pollution* or tend to cause pollution of any waters of the state.”** [Emphasis supplied.]

Therefore, the term “wastes” is directly linked to the definition of “**pollution**” which is paraphrased to mean: ‘the alteration of the water to a degree that it is either physically perceptible and/or factually detrimental to the safety and welfare of humans, livestock, and/or wildlife.’

Accordingly, unless the substance in question alters the water in this manner it does not meet the definition of “wastes” no matter where it comes from.

Some proportionality and common sense needs to be applied to the “**cause pollution of any waters of the state**” section of the “wastes” definition. A glass of Alka Seltzer poured into a tide pool containing one gallon of water may technically meet the definition of pollution even though it would do no ecological harm. But what if that same glass is poured in the Columbia River. Now it does not even come close to becoming far away from meeting that definition. Therefore, I should hope that we would never see the DEQ prosecute someone for accidentally dropping a couple of Alka Seltzer in the Columbia River, even though in another context it technically would cause pollution. The DEQ and the legislature would be the laughing stock of the civilized world if this was the way these terms were meant to be defined.

Therefore, technically, in order for the DEQ to charge that “wastes” were placed where they were likely to enter the waters of Oregon, it must first show that if the discharge ever got to where they claim it was going it would meet the common sense standard of causing pollution.

This causes serious problems for the DEQ case. The elements of proof necessary are as follows:

- 1<sup>st</sup> - The DEQ must prove that if the organic, biodegraded and biodegradable, highly diluted cooling water, which is the subject of this case, was gradually discharged unaltered over a 10-12 day period directly into the waters of Oregon it would meet the common sense definition of "pollution".
- 2<sup>nd</sup> - The DEQ must prove that it is "likely", meaning 'reasonably certain or probable or foreseeable', (Sierra Club v. Marsh, C.A.1(Me.), 976 F.2d 763, 767, and Crenshaw v. Pendleton Mfg. Co., 54 S.E.2d 61, 64, 215 S.C. 66.) that the substance would be unaltered and indeed still meet the definition of "wastes", despite whatever it would come into contact with along the way before it reached the "waters".
- 3<sup>rd</sup> - The DEQ must prove that the location and the timing of the discharge provides a "likely" clear path for all or most of the substance to actually reach the "waters" in whatever condition.
- 4<sup>th</sup> - The DEQ must prove that the "waters" it reached are in fact "public waters".
- 5<sup>th</sup> - The DEQ must prove that reasonable care, based on the average person's understanding of modern public waterworks technical nomenclature, was not exercised, therefore proving "negligence".

It is important to note that the DEQ must prove all five elements to sustain its case as charged, which is the only context in which negligence can be considered.

The DEQ has in fact proven zero (0) of these elements

### DISCUSSION OF ELEMENTS OF PROOF

1. The question is:

**If the subject cooling water was discharged unaltered, gradually, over a 10-12 day period, into the underground aquifer, which runs 40-60 feet below the discharge point, would this event be like dumping a glass of Alka Seltzer in the small tide pool or something more akin to dumping a glass of Alka Seltzer into the Columbia River?**

The fact is it is far closer to the latter than the Former.

The City of Scappoose maintains a well approximately 300 feet south of the subject discharge point. (See Well Log #D-159-78; Owner: City of Scappoose). The city states that it pulls up to 700,000 gallons of water from this well per day. Taking this fact, along with the other operating wells in the area, and the fact that the aquifer levels are not negatively impacted by this usage, and by any measure you have literally 10s of millions of gallons of water passing through this aquifer every day.

I submit that if samples were taken directly from the aquifer 5 feet away from the discharge area, (if by some miracle the discharge got there unchanged), not one would meet the definition of "pollution".

2. The rule states that it is a violation to place "wastes" where they are "likely" to enter public waters. It does **not** say that placing wastes where they will become non-wastes before entering public waters is a violation. Nor does the definition of "wastes" even imply that wastewater is always wastewater forever. Wastes are only "wastes" when they meet the definition of "wastes". Otherwise simply watering lawns could be a violation.

We now know there are only two scenarios in which the discharge could have ever reached the waters of the state, which are:

- A:** It followed the only downward slope leaving the discharge property, made its way due east, 1-3 feet below the surface, above the clay layer, over ½ mile, to the only available wetlands in the area, namely a private wetlands and lake in the middle of a manufactured housing development owned by Dave Scharf;

**OR,**

**B:** It traveled straight down through 30-35 feet of clay to the huge underground public aquifer.

Testimony from Miss Cox at the hearing revealed that biological and microbial activity takes place down to 3 feet below the surface. I believe that it is typically even further than 3 feet because the roots of trees can go far deeper and would encourage this bio-activity. Miss Cox also testified that microbes would eat the ethylene glycol. After all, it is a simple organic compound. (See Enclosure.) The DEQ's own evidence stated that ethylene glycol begins to break down almost immediately in water and soil.

The DEQ's own evidence and simple logic dictates that it is impossible for the cooling water to pass through Scenario A and not be transformed into non-waste before exiting. Mountain spring water is so good because it is water that has been filtered through the ground. The ground is the most universally effective water filtration system. This is especially so where simple organic compounds are involved.

Scenario B is simply far closer to the *impossible* than the probable. Even if it did occur the cooling water would be transformed into something more akin to mountain spring water than "wastes".

Remember, the statute and the rule employ the term "**likely**", which has a clear meaning in law, essentially 'reasonable certainty'. **The DEQ has not even proven that its fantastic scenarios are possible, let alone probable. Even if the DEQ could prove a 50/50 probability it would not meet the statutory requirements and their case must be dismissed.**

3. The discussion of element two illuminates the problems of proving element #3.

The discharge amount was 450-500 gallons. 500 gallons spread 1/16 of an inch thick over solid glass, with evaporation held to zero (0), would only cover 13,670 FT<sup>2</sup>. In other words, it would not even leave the property. But, this discharge, apportioned out in small amounts over ten to twelve days, went into the ground where it would not be able to create a plume that covered even a tiny fraction of that area. Therefore, on its own, the discharge was not large enough to even leave the confines of the small property it was on. It would take an enormous amount of water coming continually behind it to push the discharge over ½ mile away. I do not believe we came anywhere near that amount of water in the spring of 1999. However, even if there was enough water to accomplish this, the original discharge would be so highly diluted from this activity that even if there was no filtration effect by the time it reached its destination the dilution effect would have transformed it into a non-waste. Therefore no "wastes" would have entered the "**waters of Oregon**" and the statute and the rule have not been violated in any manner, shape, or form.

As to traveling straight down through 30-35 feet of clay, this is just ridiculous. You don't have to be a scientist to know that fluid will always take the path of least resistance, and porous soil has far less resistance than hard clay. Once again we are talking about impossibility rather than probability. The DEQ must prove their scenario, which they have not even put forward, is "**likely**", or it is wasting everyone's time and the taxpayers' money.

The theory that since aquifers are charged by rain water then the subject discharge had to have gone to groundwater is based on pure nonsense, and is defeated by simple common sense. Since aquifers can run for hundreds of miles, this kind of reasoning would have to assume that all points provide equal access to the groundwater. This is simply absurd reasoning.

4. The DEQ must prove that whatever impossible odds were defied, the waters that would be effected are in fact "**public waters**". The wetlands and lake over ½ mile east of the discharge point are in fact "**private**". This leaves only the clay scenario.
5. Since no violation has occurred, the DEQ cannot claim "**negligence**" under any definition. I do not feel that I in any way demonstrated "**negligence**", but rather took extra precautions to ensure that I was doing the right thing. However, if, by the opinion of some, my precautions did not extend to their preference, a charge of "**negligence**" still cannot be maintained if no violation has occurred.

### CONCLUSION:

The definition of "**negligence**" has to be taken in context with the facts in this case. The "degree" of negligence must be considered, and the degree can only be measured against any actual violation. Since no violation has occurred in this case the "degree" of negligence is **zero (0)**.

In order to illustrate the true meaning of "**negligence**" a contrasting example is helpful.

We now know and can prove that the DEQ ignored the recommendations of at least two (2) of its own investigators, and decided to charge me with violations that it had no evidence to support.

I subsequently conducted my own investigation, which revealed many relevant facts that countered the DEQ's charges. Only after I brought these facts to the DEQ, which they could have easily uncovered with a minimum of effort, did they recognize they had erred.

In addition, they became aware that the source of their false and slanderous information had sworn, both on tape and in writing, that he would bury my family and my business in frivolous litigation if we did not turn over our business to his criminal enterprise. This should have been ample incentive for them to put forth the effort to truly confirm or rule out the legitimacy of the information.

However, rather than drop the case and allow me to try to focus on developing products to help the environment, to save face they simply shifted to another charge for which they have no facts to support.

Furthermore, they really crossed the line when it appears they purposely released false information to the media for publication, at a particularly strategic time, within days following my refusal to accept their altered accusation. And/or they negligently allowed false information to be released two and one-half (2 ½) months after they knew the charges were false, and after they had already admitted in writing they were false.

The local newspaper did a special little article just about me and these false charges, and other media in other areas may have done the same. The DEQ has done nothing to rectify this slander.

The DEQ has been absolutely "**negligent**" in this case.

The DEQ has wasted taxpayer money on a case it should have dropped a long time ago.

The DEQ has conducted itself in a manner that has opened up to a potential lawsuit for liable.

The DEQ has acted maliciously and recklessly to stigmatize an innocent citizen as a polluter for the rest of his life, and damage the reputation of his legitimately environmentally conscientious business, and its 165 investors, creating a stigma that can have far reaching consequences today.

The DEQ has abused its political capital as an agency that protects the environment. The DEQ should be held to the same, if not a greater standard of conduct, since its charges can be so much more damaging than those of other agencies.

Therefore, my answer to your question is that "**negligence**" is best defined by the conduct of the DEQ, not myself, and I therefore once again move that the hearing officer dismiss this case on the basis of lack of evidence and/or prosecutorial misconduct.

Please advise me of any other questions you may have as I will do my best to answer them in a timely manner, and in accord with how they are asked.

Thank you sincerely for your conscientious approach to this matter.

Yours truly,

  
Reggie D. Huff  
President

RDH/lgh  
Enclosures

CC: Susan Greco, DEQ



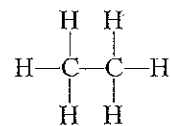
cates the fundamental unit may be repeated  $n$  times and the resulting chainlike structure is called a **polymer**. For example, if  $n = 3$ , the resulting compound is propane (see Section 13-8). This simple example is meant to introduce the concept of repeating units, and it should be kept in mind that the polymers occurring in nature, or prepared synthetically, may have repetition numbers ( $n$ ) which may be in the thousands or hundreds of thousands. In addition, the fundamental unit may itself be quite complex and the chain configurations and variations may differ greatly.

Nature has been in the business of making large complex molecules for a long time. All living and growing matter is composed of these molecules, some being so complex that they are still not completely understood. The complexity of nature's molecules should come as no surprise since they compose the structure of life itself. The newest frontier of science is concerned with determining the structures and interactions of the complex molecules of which living things are made. Society someday may be forced to make some fundamental decisions regarding how far it will allow science to go in solving the mysteries of life.

## 16-1 COMMON ORGANIC COMPOUNDS

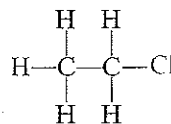
The number and complexity of the organic compounds in nature can, in large part, be attributed to the ability of the carbon atom to form single, double, and even triple bonds with itself and other elements. There are over a million organic compounds, and their identification, classification, and structural determination has been—and still is—the task of workers in the field of organic chemistry. Only a few of the more common compounds will be presented here, most of which should be familiar to the student because of their usage and occurrence in everyday life.

First, consider the following list of classes of compounds. A specific example from each class is given to show how the complexity of molecules can develop, starting with just a simple hydrocarbon.



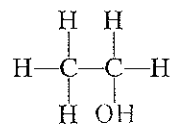
Hydrocarbon (Ethane)

1. *Alkyl halides*



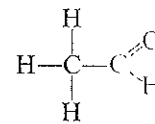
(Ethyl chloride)

2. *Alcohols*



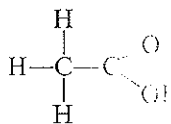
(Ethyl alcohol)

3. *Aldehydes*



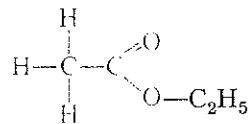
(Acetaldehyde)

4. *Acids (organic)*



(Acetic acid)

5. *Esters*

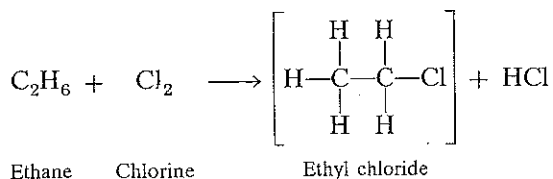


(Ethyl acetate)

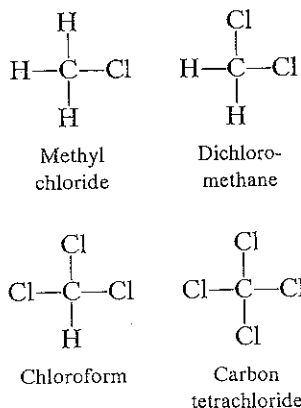
The colored portions of the formulas indicate the organic functional group that characterizes the general physical and chemical properties of these compounds.

### Alkyl Halides

An **alkyl halide** is formed by replacing the hydrogen atom(s) in hydrocarbons with halogens—chlorine, bromine, fluorine, and iodine. Ethyl chloride, the example given in the list, is used as a local anesthetic and is the product of the reaction of ethane with chlorine.



The halogen may replace more than one of the hydrogen atoms; in fact, they may all be replaced as the following series shows:



The latter two compounds are common as an anesthetic and a cleaning fluid, respectively. However, the toxicity of carbon tetrachloride is a serious hazard, and caution should be exercised when using it.

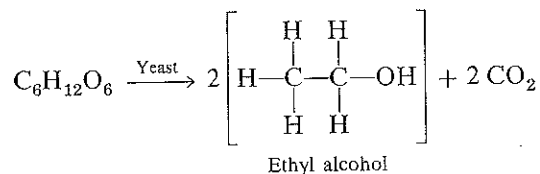
### Alcohols

**Alcohols** are organic compounds that contain one or more OH groups that have been substituted for one or more hydrogen atoms. Examples of some common alcohols are shown in Fig. 16-1a. Ethyl

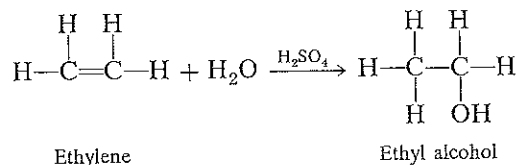


**Figure 16-1a** Commercial products that contain a common alcohol. (Photo courtesy James Crouse.)

alcohol ( $\text{C}_2\text{H}_5\text{OH}$ ) is probably the most important alcohol known. It is made from sugars by the action of yeast in the process of fermentation.

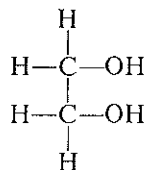


or synthetically from ethylene and water



Ethyl alcohol is a colorless liquid that mixes with water in all proportions. It is the least toxic of all alcohols and is used in alcoholic beverages. Ethyl alcohol is also used as a solvent and in the production of many substances including perfumes, dyes, varnishes, antifreeze, and ethyl ether.

Alcohols are characterized by the —OH, or hydroxyl group; hence they are the organic equivalent to the inorganic bases. Many alcohols exist, some with one (—OH) group, others with two or more (—OH) groups. Ethylene glycol is an example of an alcohol with two hydroxyl groups.



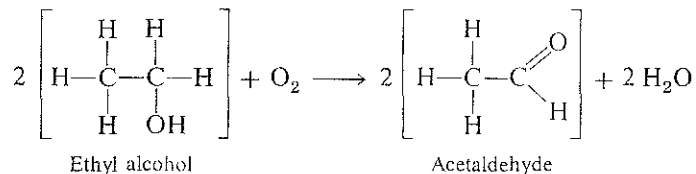
Ethylene Glycol

Ethylene glycol is widely used as an antifreeze in automobiles.

#### Aldehydes

**Aldehydes** are characterized by the  $\begin{array}{c} \text{O} \\ // \\ -\text{C} \\ | \\ \text{H} \end{array}$  group

and are formed when alcohols react with oxygen (are oxidized). When ethyl alcohol is oxidized, acetaldehyde is formed.



Ethyl alcohol

Acetaldehyde

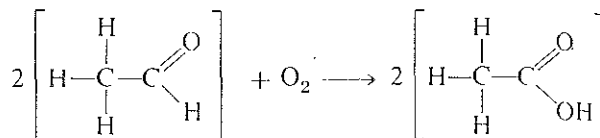
A more common aldehyde, formaldehyde is prepared similarly from methyl alcohol (CH<sub>3</sub>OH). Formaldehyde is used as a disinfectant and tissue preservative.

#### Organic Acids

The further action of oxygen on aldehydes produces a group of compounds known as **organic acids**,

which are characterized by the molecular arrangement  $\begin{array}{c} \text{O} \\ // \\ -\text{C} \\ \backslash \\ \text{OH} \end{array}$  called the **carboxyl** group. There are

many of these carboxylic acids. Acetic acid, whose dilute natural form is vinegar, is formed by the following reaction:



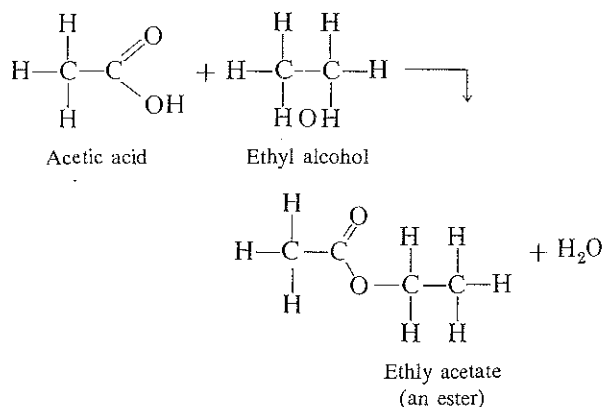
Acetaldehyde

Acetic acid

The simplest carboxyl acid, formic acid, is common in insects and is the cause of painful discomfort from insect bites. It is prepared by the oxidation of formaldehyde.

#### Esters

When a carboxylic acid reacts with an alcohol, an ester is formed. For example,

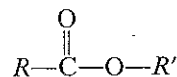


Acetic acid

Ethyl alcohol

Ethyl acetate  
(an ester)

An **ester** is a compound which conforms to the general formula





# Oregon Watershed Enhancement Board

## Meeting Schedule

January 4-5, 2001, in Bend

March 29-30, 2001, in Portland

May 17-18, 2001, in Salem

September 20-21, 2001, in Ashland  
(Joint with Environmental Quality Commission)

January 10-11, 2002, location to be determined

The Oregon Watershed Enhancement Board (OWEB) consists of 17 members — 5 representatives of state boards or commissions (Environmental Quality Commission, State Fish and Wildlife Commission, State Board of Forestry, State Board of Agriculture, and the Water Resources Commission), 6 public members representing all geographic regions of the state including at least 1 tribal representative, and 6 non-voting members representing the Agricultural Extension Service of Oregon State University, and the following federal agencies: EPA, NMFS, USFS, BLM, and NRCS.

- **Mark Reeve (Co-Chair)**  
*Environmental Quality Commission Representative*
- **John Esler**  
*Fish and Wildlife Commission Representative*
- **Brad Witt**  
*Board of Forestry Representative*
- **Pat Wortman**  
*Board of Agriculture Representative*
- **Nancy Leonard**  
*Water Resources Commission Representative*
- **Peter Bloome**  
*Agricultural Extension Service Representative*
- **Phil Mattson**  
*Representative of U.S. Forest Service*
- **Hugh Barrett**  
*Representative of U.S. Bureau of Land Management (BLM)*
- **Gayle Norman**  
*Representative of Natural Resources Conservation Service (NRCS)*
- **Dave Powers**  
*Representative of U.S. Environmental Protection Agency (EPA)*
- **Michael Tehan**  
*Representative of National Marine Fisheries Service (NMFS)*
- **George Brown**  
*Citizen at Large*
- **Jack Shipley**  
*Citizen at Large*
- **Jane O'Keeffe**  
*Citizen at Large*
- **Mark Suwyn (Co-Chair)**  
*Citizen at Large*
- **Ron Nelson**  
*Citizen at Large*
- **Bobby Brunoe**  
*Tribal Representative*

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**Representative of EPA**

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Oregon State Branch for Habitat Conservation  
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**Representative of NMFS**

## **Final 2001 Legislative Update: OWEB-Related Legislation**

Following is a description of OWEB-related legislation that was passed by the 2001 Legislative Assembly, and will soon be signed by the Governor.

### **Senate Bill 945**

Gives OWEB the responsibility for collecting all monitoring data from the state's natural resource agencies and reporting on progress in implementation of the Oregon Plan for Salmon and Watersheds. Defines the mission of the Oregon Plan.

### **Senate Bill 946**

Directs OWEB to set uniform standards for data collection by state natural resource agencies, and to coordinate with agencies to implement these standards in a manner that makes this data available to meet the needs of all local, state, regional, tribal and federal entities involved in implementation of the Oregon Plan.

### **House Bill 2536**

Requires OWEB to take a title restriction for all acquisitions with OWEB funds that gives the Board the authority to approve, approve with conditions, or deny the subsequent sale or transfer of the land. Institutes a no profit limitation for subsequent transfers of land acquired with OWEB funds. OWEB is directed to define profit by administrative rule. These provisions are meant to ensure that OWEB agrees with the management capability of an entity an acquisition made with OWEB funds is later transferred to, and that no entity profits from the transfer of property acquired with OWEB funds.

### **House Bill 3002**

Contains the recommendations of the State Fish Passage Task Force, including requiring fish passage in all waters of the state (with the possibility of exemptions), and requiring ODFW to complete a statewide inventory of artificial obstructions to fish passage in the state, and prioritize specific barriers for enforcement actions. Establishes a Salmon Recovery Task Force to define recovery for anadromous salmonid populations in Oregon and recommend legislation to 72<sup>nd</sup> legislative assembly. A representative of OWEB will sit on the task force.

### **House Bill 3564**

Establishes a Flexible Incentives Account in OWEB to fund stewardship activities on private land. Directs OWEB to develop criteria for using the private sector (not-for-profits and for-profits) to provide technical assistance for watershed restoration projects. Directs the Department of Forestry and the Department of Agriculture to, in consultation with other state natural resources agencies and stakeholders, develop recommendations for changes to Oregon statutes and additional conservation incentives to the 72<sup>nd</sup> legislative assembly.

### **House Bill 3948**

Creates the Institute for Natural Resources at Oregon State University. The purposes of the institute include serving as a scientific information clearinghouse in a way that is compatible with the role of the State Geographic Information Center, and facilitating and conducting research.

## 2001-2003 OWEB Grant Program Expenditures

updated 7/10/01

Fund Source	Remaining Funds Available for OWEB Grant Program for 2001-2003 Biennium		Committed Funds						2001-03 TOTAL	Remaining Funds Available
			Mar-01	May-01	Sep-01	Jan-02	May-02	Sep-02		
		Grant Applications Submitted	56	207	136				399	
		Grant Funds Requested	\$5,940,710	\$20,271,896	\$13,375,622				39,588,228.0	
		Grants Approved	51	62					113	
		Total Grant Funds Awarded	\$4,589,739	\$2,718,021					\$7,307,760	
		Total Non Grants		\$143,381					\$143,381	
2001-03 Lottery Watershed Improvement Grant Fund	\$30,239,395			Grants \$2,718,021					Grants \$2,718,021	\$23,377,993
				Non-Grants \$143,381	Non-Grants \$4,000,000				Non-Grants \$4,143,381	
Lottery Watershed Improvement Operating Fund	\$2,800,000		\$2,400,000 to watershed council support						\$2,800,000	\$0
			\$400,000 to IMST							
Federal Pacific Coastal Salmon Recovery Pgm Funds (2001)	\$8,630,000		\$1,789,739 to watershed council support	Grants \$1,383,434					Grants \$3,173,173	\$5,456,827
									Non-Grants \$0	
Lottery Restoration and Protection Research Fund	\$1,384,846								\$0	\$1,384,846
1999-01 Lottery Watershed Improvement Grant Fund	\$1,949,269								\$0	\$1,949,269
Salmon Plates	\$176,563 \$584,122								\$0	\$176,563* \$584,122**

\* Current Balance of Uncommitted Funds

\*\* Projected Funds Available for 2001-03



## 2001-2003 OWEB Grant Program Revenues

Fund Source	Total Projected Biennium Revenues	2001-2003 Legislative Allocations to Other Agencies	Projected Biennium Revenues for the OWEB Programs	2001-2003 Legislative Allocations to OWEB	Remaining Funds Available for OWEB Grant Program for 2001-2003 Biennium
Lottery Watershed Improvement Grant Fund	\$32,242,500	State Police \$770,000 Dept of Ag \$1,233,105	\$30,239,395	\$0	\$30,239,395
Lottery Watershed Improvement Operating Fund	\$17,064,835	State Police \$3,952,074 ODFW \$3,942,273 AG-SWCDs \$2,400,000 DEQ \$192,000	\$6,578,488	3.8 million for Agency Operations 2.4 million to watershed council support 0.4 million to IMST	\$2,800,000 (Reserved for council support grants and IMST)
Federal Pacific Coastal Salmon Recovery Program Funds (2001)	\$8,900,000	\$0	\$0	\$270,000	\$8,630,000
Lottery Restoration, Protection Research Account Funds	\$1,384,846	\$0	\$1,384,846	\$0	\$1,384,846
Salmon Plates	\$176,563* \$583,813**	\$0	\$0	\$0	\$176,563* \$583,813**

\* Current Balance of Uncommitted Funds

\*\* Projected Funds Available for 2001-03



Minutes are not final until approved by the Commission.

## **Environmental Quality Commission Minutes of the Two Hundred and Ninety-Seventh Meeting**

**August 9-10, 2001  
Regular Meeting<sup>1</sup>**

On August 9, the Commission toured the Wallowa Lake Tramway and held a dinner with local officials at the Outlaw Restaurant in Joseph, Oregon.

The following Environmental Quality Commission members were present for the regular meeting at the Wallowa County Courthouse, 101 South River Street, Enterprise, Oregon.

Melinda Eden, Chair  
Tony Van Vliet, Vice Chair<sup>2</sup>  
Mark Reeve, Member  
Deirdre Malarkey, Member

Also present were Larry Knudsen, Oregon Department of Justice (DOJ), Stephanie Hallock, Department of Environmental Quality (DEQ) Director, and DEQ staff.

On August 9, Chair Eden called the meeting to order at approximately 2:00 p.m. Agenda items were taken in the following order.

### **A. EQC/DEQ Strategic Planning Work Session**

Director Hallock provided an overview of strategic planning and introduced Helen Lottridge, Management Services Division Administrator, and Dawn Farr, Strategic Planning Coordinator, to facilitate discussion with the Commission. Ms. Lottridge explained the primary steps in DEQ's strategic planning and budgeting process and the integration of executive performance measures for agency priorities. Commissioners, the Director, and Division Administrators discussed key actions for involving Oregonians in solving environmental problems, protecting Oregon's water, protecting public health from toxic chemicals, and achieving excellence in agency performance. Commissioners asked the Department to plan a second strategic planning work session for the September 20-21, 2001, EQC meeting.

Chair Eden adjourned the meeting at approximately 4:30 p.m.

On August 10, the Commission held an executive session at 8:30 a.m., to consult with counsel concerning legal rights and duties with regard to current and potential litigation involving the Department. Executive session was held pursuant to ORS 192.660(1)(h).

Chair Eden called the meeting to order at approximately 9:00 a.m.

### **F. Discussion Item: Development of Performance Appraisal Process for Director**

Commissioner Van Vliet reported that he and Commissioner Bennett had discussed development of a formal performance appraisal process for the Director, and suggested scheduling a full report to the Commission

<sup>1</sup> Staff reports and written material submitted at the meeting are made part of the record and available from DEQ, Office of the Director, 811 SW Sixth Avenue, Portland, Oregon 97204.

<sup>2</sup> present via conference call

during the September 20-21, 2001, EQC meeting. Commissioners agreed to hold a discussion at the September meeting.

Director Hallock and Ms. Lottridge explained a new state requirement for Commission review and approval of agency head transactions. The Commission agreed to continue discussion of options for implementing the policy at the September 20-21, 2001, EQC meeting as part of the performance appraisal process topic.

## **B. Approval of Minutes**

June 22, 2001 Minutes: Commissioner Malarkey and Commissioner Reeve proposed amendments to draft minutes. On page one, paragraph one, the words "and Sandy River Basin stakeholders" were added to the first sentence, and the meeting location was added to the third sentence. Commissioner Malarkey moved the Commission approve minutes as amended for June 22, 2001. Commissioner Reeve seconded the motion and it passed with four "yes" votes.

## **C. Rule Adoption: General Air Contaminant Discharge Permits**

Director Hallock explained that the proposed rules were part of a larger streamlining effort to improve permitting and billing processes in Air and Water Quality permit programs. Andy Ginsburg, Air Quality Division Administrator, provided background information on the permit program and reviewed proposed changes to OAR 340-216-0060. Eighteen General Air Contaminant Discharge Permits were developed as part of the rulemaking and proposed to apply to a majority of facilities regulated under the Air Quality program. Mr. Ginsburg reviewed one of the general permits in detail.

The Commission discussed the proposed rules and general permits and commended Mr. Ginsburg and Department staff for their work. Commissioner Reeve moved the Commission amend OAR 340-216-0060 to incorporate by reference eighteen general permits, and include Commission recommendations regarding (1) the testing of shipments or batches of used oil for the content of hazardous materials, and (2) the use of a specific word common to all permits (recur vs. re-occur). Commissioner Van Vliet seconded the motion and it passed with four "yes" votes.

## **D. Director's Report**

Director Hallock gave the Director's report to the Commission. Lauri Aunan, Assistant to the Director for Legislative Affairs, provided a summary of the 2001 Legislative Session. Helen Lottridge, Management Services Division Administrator, provided an update on pollution control tax credit law. In addition, Commissioners discussed dates and locations for 2002 Commission meetings.

## **G. Public Forum**

At approximately 11:30 a.m., Chair Eden asked whether anyone wished to provide public comment. No public comment was provided.

## **E. Information Item: Columbia River Gorge National Scenic Area Air Quality Workplan**

Andy Ginsburg, Air Quality Division Administrator, explained the development and key elements of the Columbia River Gorge National Scenic Area Air Quality Workplan. Mr. Ginsburg explained that the workplan represents a multi-year effort to create a clean-air strategy for the scenic area, developed by Oregon and Washington environmental agencies.

Chair Eden adjourned the meeting at approximately 1:00 p.m.

State of Oregon  
Department of Environmental Quality

Memorandum

**Date:** August 31, 2001  
**To:** Environmental Quality Commission  
**From:** Stephanie Hallock, Director *S. Hallock*  
**Subject:** Agenda Item G, Action Item: Tax Credit Application Consideration  
September 21, 2001 EQC Meeting

**Proposed Action** Commission decision on DEQ's analysis and recommendations on Pollution Control Facilities, and Reclaimed Plastic Product Tax Credit applications. Attachment A summarizes all applications.

**Key Issues** There are no key issues.

**EQC Action Alternatives** Any application may be postponed to a future meeting if the Commission:

- Requires the Department or the applicant to provide additional information; or
- Makes a determination different from the Department's recommendation and that determination may have an adverse effect on the applicant.

**Department Recommendation** The Department recommends the Commission

- Approve certification of the facilities represented in Attachment B
- Deny certification of the facility represented in Attachment C

**Attachments**

- A. Summary & Recommendations
- B. Approvals
- C. Denial

**Available Upon Request**

1. ORS 468.150 to 468.190 & OAR 340-016-0005 to 340-016-0080
2. ORS 468.451 to 468.491 & OAR 340-017-0010 to 340-017-0055

Approved:

Section:

Division:

*J. R. Reynolds*  
*Deputy Director*

Report Prepared By: Maggie Vandehey  
Phone: 503-229-6878

*Attachment A*

Summary  
&  
Recommendations

Commission Action	App.No.	Applicant	Media	Claimed Facility Cost	Certified Facility Cost	Percent Allocable
Approve	5295	Synthetech, Inc	Water	\$187,064.00	\$187,064.00	100
Approve	5492	Ferschweiler Farms, Inc.	Air:Field Burning	\$56,549.00	\$10,744.00	100
Approve	5495	Langdon & Sons, Inc.	Air:Field Burning	\$70,270.00	\$70,270.00	100
Approve	5509	Rosboro Lumber Company, LLC	Air	\$188,743.00	\$188,241.00	100
Approve	5522	Fujimi America Inc.	Water	\$547,106.00	\$330,268.00	100
Approve	5551	David A. Vanasche	Air:Field Burning	\$28,134.00	\$28,134.00	100
Approve	5552	David A. Vanasche	Air:Field Burning	\$104,045.00	\$51,544.00	100
Approve	5553	Freres Lumber Co., Inc.	Water	\$154,541.00	\$154,020.00	100
Approve	5555	ITT Flyte	Water	\$36,070.00	\$15,301.00	100
Approve	5556	Weyerhaeuser Company	Air	\$871,551.00	\$828,717.00	100
Approve	5557	Weyerhaeuser Company	Air	\$755,682.00	\$724,298.00	100
Approve	5559	City Garbage Service	Material Recovery:SW	\$1,259,813.00	\$1,203,421.00	100
Approve	5565	Truax Corporation	UST/AST	\$48,457.70	\$48,458.00	100
Approve	5566	Pope & Talbot, Inc.	Air	\$1,235,100.00	\$1,235,100.00	100
Approve	5568	Newberg Transfer & Recycling Center, Inc.	Material Recovery:SW	\$35,358.00	\$35,358.00	100
Approve	5569	PED Manufacturing, Ltd.	Air	\$19,303.00	\$19,303.00	100
Approve	5570	WSCO Petroleum Corp.	UST/AST	\$138,441.00	\$152,241.00	90
Approve	5572	Superior Tire Service, Inc.	Air	\$127,603.00	\$124,234.00	100
Approve	5573	Willamette Industries, Inc.	Water	\$79,262.49	\$79,262.00	100
Approve	5574	Willamette Industries, Inc.	Water	\$84,194.74	\$84,195.00	100
Approve	5575	Willamette Industries, Inc.	Water	\$99,002.10	\$97,744.00	100
Approve	5576	Cascade Steel Rolling Mills, Inc.	Air	\$973,288.59	\$858,412.00	100
Approve	5577	Bowco Industries, Inc.	Reclaimed Plastics	\$8,200.00	\$8,200.00	100
Approve	5578	Truax Corporation	UST/AST	\$88,643.33	\$85,978.00	98
Approve	5579	Van Loon Dairy	Water	\$244,584.24	\$244,584.00	100
Approve	5580	Western Pulp Products Co.	Material Recovery:SW	\$40,557.96	\$40,558.00	100
Approve	5581	Truax Harris Energy, LLC	UST/AST	\$299,904.38	\$299,348.00	91
Approve	5582	Salem Black Top and Asphalt Paving, Inc.	Water	\$82,995.00	\$82,995.00	100
Approve	5583	Columbia Steel Casting Co., Inc.	Air	\$38,855.60	\$38,856.00	100
Approve	5584	Craig & Craig, Inc.	UST/AST	\$51,954.60	\$51,636.00	91
Approve	5585	Corvallis Disposal & Recycling Co.	Material Recovery:SW	\$109,492.50	\$109,493.00	100
Approve	5586	Robberson Ford Sales Inc.	Water	\$39,721.00	\$39,721.00	100
Approve	5588	Dan & Rhonda Hawkins	Air:NPS	\$6,495.00	\$6,495.00	100
Approve	5589	Portland General Electric	Water:Secondary Containment	\$289,719.95	\$238,725.00	100
Approve	5590	Pope & Talbot, Inc.	Water	\$1,139,133.00	\$1,134,037.00	100
Approve	5591	Columbia Steel Casting Co., Inc.	Air	\$186,553.58	\$178,399.00	100

Approve	5592	Steven J. Taylor	Air:NPS	\$2,995.00	\$2,995.00	100
Approve	5594	Portland General Electric Co.	Water:Secondary Containment	\$138,067.67	\$98,761.00	100
Approve	5595	Portland General Electric Co.	Water:Secondary Containment	\$118,649.52	\$81,853.00	100
Approve	5597	Denton Plastics, Inc.	Reclaimed Plastics	\$4,756.00	\$4,756.00	100
Approve	5598	John P. Lehl Company	Material Recovery:SW	\$24,517.83	\$24,518.00	100
Approve	5600	Ideal Door Components, Inc.	Reclaimed Plastics	\$34,800.00	\$34,800.00	100
Approve	5602	New Pacific Corporation	UST/AST	\$49,501.00	\$49,501.00	100
Approve	5605	Wilco Farmers	UST/AST	\$430,836.00	\$429,808.00	96
Approve	5607	Leathers Enterprises, Inc.	UST/AST	\$922,164.00	\$963,950.00	96
Approve	5609	Columbia Steel Casting Co., Inc.	Air	\$31,067.00	\$31,067.00	100
Deny	5498	Berger Brothers	Air:Field Burning	\$32,685.00	\$0.00	0

# *Attachment B*

## Approvals

The Department presents **46** applications for approval in this attachment. The Department recommends the facility cost be certified for an amount less than the amount claimed on **23** of the applications. The Department considers:

1. All applications in this attachment meet the eligibility requirements for certificate issuance according to the Pollution Control Facilities Tax Credit or the Reclaimed Plastic Product Tax Credit regulations.
2. Application 5492 is a replacement facility.
3. There are no applications presented for preliminary certification as a pollution control facility.

### *Replacement:*

#### **468.155 Definitions for ORS 468.155 to 468.190.**

(3) As used in ORS 468.155 to 468.190, “pollution control facility” or “facility” does not include:

- ...(e) Replacement or reconstruction of all or a part of any facility for which a pollution control facility certificate has previously been issued under ORS 468.170, except:
  - (A) If the cost to replace or reconstruct the facility is greater than the like-for-like replacement cost of the original facility due to a requirement imposed by the department, the federal Environmental Protection Agency or a regional air pollution authority, then the facility may be eligible for tax credit certification up to an amount equal to the difference between the cost of the new facility and the like-for-like replacement cost of the original facility; or
  - (B) If a facility is replaced or reconstructed before the end of its useful life then the facility may be eligible for the remainder of the tax credit certified to the original facility;



State of Oregon  
Department of  
Environmental  
Quality

# Tax Credit Review Report

EQC 0109

## **Pollution Control Facility: Water**

### **Final Certification**

ORS 468.150 -- 468.190

OAR 340-016-0005 -- 340-016-0080

Director's  
Recommendation: **APPROVE**

Applicant: **Synthetech, Inc.**  
Application No.: **5295**  
Facility Cost: **\$187,064**  
Percent Allocable: **100%**  
Useful Life: **5 years**

### ***Applicant Identification***

Organized as: **C corporation**

Business: **producer of amino acid  
derivatives in pharmaceuticals**

Taxpayer ID: **84-0845771**

The applicant's address is:

**1290 Industrial Way  
Albany, OR 97321**

### ***Facility Identification***

The facility is identified as:

#### **Wastewater Pretreatment System**

The applicant is the owner of the facility located at:

**1290 Industrial Way  
Albany, OR 97321**

### ***Technical Information***

The claimed facility is a wastewater pretreatment system consisting of two aboveground storage tanks, an acid/caustic pump, associated piping and valves, and a pH controller. The tanks are located on a concrete slab with a perimeter wall that contains any spills or unanticipated releases.

Wastewater is pumped into the tanks from various areas in the manufacturing plant. When a sufficient quantity has been accumulated, the wastewater is circulated through the neutralization system. A pH controller measures the wastewater pH and signals the acid/caustic injection system to add the appropriate neutralizing agent. The wastewater is discharged to the City of Albany's municipal public owned treatment works when the pH is maintained between 7.0 and 8.0. The Discharge Permit requires the pH range be between 6.0 and 10.0.

The pretreatment system is part of a business expansion. The plant operations generated a small amount of wastewater prior to the expansion, which was collected in tanks and neutralized manually on a batch



basis prior to discharge to the sewer or ground. There was no secondary containment for the tanks.

**Eligibility**

ORS 468.155 (1)(a)(A) The **principal purpose** of this **new equipment installation** is to **control** a substantial quantity of water pollution by providing spill containment and wastewater treatment. The City of Albany Wastewater Discharge Permit imposes the requirement.

ORS 468.155 (1)(b) The **control** is accomplished by the elimination of industrial waste and the use of treatment works for industrial waste as defined in ORS 468B.005.

<b>Timeliness of Application</b> The application was submitted within the timing requirements of ORS 468.165 (6).	<i>Construction Started</i>	<u>6/1/1996</u>
	<i>Construction Completed</i>	<u>11/1/1997</u>
	<i>Facility Placed into Operation</i>	<u>12/1/1997</u>
	<i>Application Received</i>	<u>10/29/1999</u>
	<i>Application Substantially Complete</i>	<u>7/26/2001</u>

**Facility Cost**

Claimed Facility Cost	<u>\$ 187,064</u>
Eligible Facility Cost	<u>\$ 187,064</u>

Arthur Anderson LLP performed an accounting review on behalf of the applicant. Invoices substantiated the claimed cost.

**Facility Cost Allocable to Pollution Control**

The following factors were used to determine the percentage of the facility cost allocable to pollution control.

<u>Factor</u>	<u>Applied to This Facility</u>
ORS 468.190(1)(a) Salable or Usable Commodity	No salable or useable commodity.
ORS 468.190(1)(b) Return on Investment	The useful life of the facility used for the return on investment consideration is 5 years. No gross annual revenues are associated with this facility.
ORS 468.190(1)(c) Alternative Methods	Other alternatives were considered during design but were not as cost effective as the installed system.
ORS 468.190(1)(d) Savings or Increase in Costs	Construction of this facility may result in a future reduction in water through reuse for non-critical manufacturing activities. No other savings or increase in costs were identified.
ORS 468.190(1)(e) Other Relevant Factors	There are no other relevant factors.

### **Compliance**

The applicant states the facility is in compliance with Department rules and statutes and with EQC orders.

The following DEQ permits have been issued to the facility:

- Hazardous Waste Generator ORD085979474, issued 1/12/88
- Storm Water Permit 1200Z, issued 7/22/97
- Industrial Wastewater Discharge Permit 2834-1, issued 1/1/97
- Air Contaminant Discharge Permit 22-6009, issued 4/1/96

Other tax credits issued to **Synthetech, Inc.:**

<b>App. #</b>	<b>Description of Facility</b>	<b>Certified Cost</b>	<b>Cert. #</b>	<b>Issue Date</b>
4445	Installed a closed loop vacuum pump system	\$24,845.00	3555	11/17/1995
5297	Solvent recovery condensers, Jet Venturi scrubber & separator system, and dust collector	\$346,554.00	4364	9/29/2000

Reviewers: Lois L. Payne, P.E., SJO Consulting Engineers  
Dennis Cartier, Associate, SJO Consulting Engineers  
Maggie Vandehey, DEQ



State of Oregon  
Department of  
Environmental  
Quality

# Tax Credit Review Report

EQC 0109

Director's  
Recommendation: **APPROVE**

Applicant	<b>Ferschweiler Farms, Inc.</b>
Application No.	<b>5492</b>
Facility Cost	<b>\$10,744</b>
Percentage Allocable	<b>100%</b>
Useful Life	<b>10 years</b>

## **Pollution Control Facility: Field Burning Final Certification**

ORS 468.150 -- 468.190

OAR 340-016-0005 -- 340-016-0080

### ***Applicant Identification***

Organized as: **an S Corporation**

Business: **a farm**

Taxpayer ID: **93-1191816**

The applicant's address is:

**6070 Hwy 219  
Gervais, OR 97026**

### ***Facility Identification***

The certificate will identify the facility as:

**A 60' x 156' x 22' straw storage building**

The applicant is the owner of the facility  
located at:

**6500 Block of Lebrun Rd. NE  
Gervais, OR 97026**

### ***Technical Information***

The applicant stores approximately 875 tons of baled grass seed straw in the new 60' x 156' x 22' building. The applicant claims that as a result of the storage potential of this building, they have been able to **remove all 350 acres** under perennial grass seed production from being open field burned.

### ***Eligibility***

ORS 468.155 (1)(a)(A) The **principal purpose** of this **new facility** is to reduce **air pollution** by reducing the maximum acreage to be open-burned in the Willamette Valley in compliance with OAR 340-266-0060 (Acreage Limitations, Allocations).

OAR 340-016-0060 (4)(b)(A) Equipment, **facilities**, and land for gathering, densifying, handling, **storing**, transporting and incorporating **grass straw** or straw based products which will result in reduction of open field burning is eligible for certification.

ORS 468.155 **Replacement:** Tax credit certificate # 4081 certified a storage shed located at the same address as the claimed facility and issued to Edward Ferschweiler. The Staff Report supporting the EQC's certification indicates that the previously certified building was capable of storing straw from 285 acres of the 350 acres owned by the applicant. This is eighty-one percent (**81%**) of the total acreage owned by the applicant, based on the information in record, and is the basis for determining the percentage of the new building that **is a replacement facility**.

***Timeliness of Application***

The application was submitted within the timing requirements of ORS 468.165 (6). The Department requested additional information to determine if the claimed facility addressed the same acreage as the previously certified building. The applicant did not respond to the Department's request for additional information.

<i>Construction Started</i>	<u>12/18/98</u>
<i>Construction Completed</i>	<u>4/30/99</u>
<i>Facility Placed into Operation</i>	<u>4/30/99</u>
<i>Application Received</i>	<u>11/02/00</u>
<i>Additional Information Requested</i>	<u>12/14/00</u>

***Facility Cost***

Claimed Facility Cost	\$56,549
Ineligible Cost: Replacement Facility at 81%	(\$45,805)
Eligible Facility Cost	<u>\$10,744</u>

David F. Buck, CPA, performed an accounting review on behalf of the applicant. Invoices substantiated the cost of the facility.

***Facility Cost Allocable to Pollution Control***

According to ORS 468.190 (1), the following factors were considered in determining the percentage of the facility cost allocable to pollution control.

<u>Factor</u>	<u>Applied to This Facility</u>
ORS 468.190(1)(a) Salable or Usable Commodity	The baled straw is a salable commodity.
ORS 468.190(1)(b) Return on Investment (ROI)	The useful life of the facility used for the ROI consideration is 25 years. The average annual cash flow is negative.
ORS 468.190(1)(c) Alternative Methods	No alternative investigated.
ORS 468.190(1)(d) Savings or Increase in Costs	No savings or increase in costs were identified.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

***Compliance and Other Tax Credits***

The facility is in compliance with Department rules and statutes and with EQC orders. There are no DEQ permits issued to the facility. Tax credits issued to Edward Ferschweiler at claimed facility location:

<b>App. #</b>	<b>Description of Facility</b>	<b>Facility Cost</b>	<b>Cert. #</b>	<b>Issue Date</b>
4081	Storage building for straw	\$48,408	3143	7/23/1993

Reviewers: Jim Cramer, ODA  
John Hamblin, ODA  
Maggie Vandehey, DEQ



State of Oregon  
Department of  
Environmental  
Quality

# Tax Credit Review Report

EQC 0109

Director's  
Recommendation: **APPROVE**

Applicant	<b>Langdon &amp; Sons, Inc.</b>
Application No.	<b>5495</b>
Facility Cost	<b>\$70,270</b>
Percentage Allocable	<b>100%</b>
Useful Life	<b>10 years</b>

## **Pollution Control Facility: Field Burning Final Certification**

ORS 468.150 -- 468.190  
OAR 340-016-0005 -- 340-016-0080

### ***Applicant Identification***

Organized as: **a C Corporation**  
Business: **a grass seed farm**  
Taxpayer ID: **93-0639905**

The applicant's address is:

**30600 Diamond Hill Dr.  
Harrisburg, OR 97446**

### ***Facility Identification***

The certificate will identify the facility as:

**Case IH 9280 Tractor S/N JCB0027285**

The applicant is the owner of the facility located at:

**30600 Diamond Hill Dr.  
Harrisburg, OR 97446**

### ***Technical Information***

The applicant **currently owns and leases 1854 acres** of which 324 are under perennial grass seed production and 1530 are under annual grass seed production. The applicant uses alternative practices including flail chopping straw loads, baling, and plowing under straw residue to reduce the amount of acreage that is open field burned.

The claimed 385 horsepower Case IH 9280 tractor used in combination with the previously certified tractor and equipment is capable of addressing field sanitation on **all 1854 acres**.

**Eligibility**

- ORS 468.155 (1)(a)(A) The **principal purpose** of this **new equipment** is to **reduce air pollution** by reducing the maximum acreage to be open-burned in the Willamette Valley in compliance with OAR 340-266-0060 (Acreage Limitations, Allocations).
- OAR 340-016-0060 (4)(b)(A) Equipment, facilities, and land for gathering, densifying, handling, storing, transporting and incorporating grass straw or straw based products which will result in reduction of open field burning is eligible for certification.
- ORS 468.155 (3)(e) **Replacement:** The applicant continues to use a tractor certified in 1991. The staff report supporting the EQC's certification represented that 630 of the applicant's acres were addressed.

**Timeliness of Application**

The application was submitted within the timing requirements of ORS 468.165 (6).

<i>Construction Started</i>	<b>12/30/98</b>
<i>Construction Completed</i>	<b>5/20/99</b>
<i>Facility Placed into Operation</i>	<b>6/15/99</b>
<i>Application Received</i>	<b>11/13/00</b>

**Facility Cost**

Facility Cost	\$70,270
Eligible Facility Cost	<b>\$70,270</b>

The reviewers performed an analysis of the facility cost on behalf of the Department. Invoices supplied by the applicant substantiated the cost of the facility.

**Facility Cost Allocable to Pollution Control**

According to ORS 468.190 (1), the following factors were considered in determining the percentage of the facility cost allocable to pollution control.

<b>Factor</b>	<b>Applied to This Facility</b>
ORS 468.190(1)(a) Salable or Usable Commodity	The baled straw is a salable commodity
ORS 468.190(1)(b) Return on Investment	The useful life used for the return on investment is 10 years. The average annual cash flow for the tractor is negative.
ORS 468.190(1)(c) Alternative Methods	No alternative investigated.
ORS 468.190(1)(d) Savings or Increase in Costs	No savings or increase in costs.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

***Compliance and Other Tax Credits***

The facility is in compliance with Department rules and statutes and with EQC orders. There are no DEQ permits issued to the facility.

Other tax credits issued to **Langdon & Sons, Inc. and George Langdon**:

<b>App. #</b>	<b>Description of Facility</b>	<b>Certified Cost</b>	<b>Cert. #</b>	<b>Issue Date</b>
3542	Allis-Chambers 8070 tractor (120 hp), MF 33 Wheel loader, Rugby bale mover, New Holland 855 baler, rototiller, and 5 wheel hay rake	\$69,832	2663	9/18/1991
3809	Recovery of Freon to Reuse	\$2,306	2923	9/11/1992
4877	A 75' x 100' x 18' steel straw storage building with concrete floor on Tax Lot 03400	\$153,060	3867	12/30/1997
5118	Alloway 30-ft flail shredder, serial # 23044.	\$27,100	4086	12/11/1998

Reviewers: Jim Cramer, ODA  
John Hamblin, ODA  
Maggie Vandehey, DEQ





State of Oregon  
Department of  
Environmental  
Quality

# Tax Credit Review Report

EQC 0109

Director's  
Recommendation: **APPROVE**

Applicant	<b>Rosboro Lumber Co., LLC</b>
Application No.	<b>5509</b>
Facility Cost	<b>\$188,241</b>
Percentage Allocable	<b>100%</b>
Useful Life	<b>10 years</b>

## **Pollution Control Facility: Air Final Certification**

ORS 468.150 -- 468.190

OAR 340-016-0005 -- 340-016-0080

### ***Applicant Identification***

Organized as: **a Limited Liability Corp.**

Business: **a wood products manufacturer**

Taxpayer ID: **93-0398134**

The applicant's address is:

**PO Box 20  
Springfield, OR 97477**

### ***Facility Identification***

The certificate will identify the facility as:

**A Western Pneumatics remote filter,  
serial # FLT210-0016270**

The applicant is the owner of the facility  
located at:

**2509 Main St.  
Springfield, OR 97477**

### ***Technical Information***

The claimed facility is a planer cyclone baghouse with spark detection. The baghouse is a Western Pneumatics remote filter, model 630-NEG, S/N FLT210-0016270, 56,000 cfm, 7:1 air to cloth ratio, with ¾-hp sweep arm motor.

The new baghouse captures fine particulate from two existing cyclones that convey shavings and sawdust from the sawmill planers and trim saws to a truck bin. The baghouse reduced particulate emissions from 13,800 pounds per year to about 0.007 pounds.

### ***Eligibility***

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new installation** is exclusively to provide a substantial quantity of pollution control.

ORS 468.155 (1)(b)(B) The **control** is accomplished by the **reduction of air pollution** through the use of the baghouse which is an air cleaning device as defined in ORS 468A.005

ORS 468.155 (3)(e) **Replacement:** The Western Pneumatics baghouse does not replace a previously certified facility.

**Timeliness of Application**

The application was submitted within the timing requirements of ORS 468.165 (6).

<i>Construction Started</i>	<u>03/15/2000</u>
<i>Construction Completed</i>	<u>05/22/2000</u>
<i>Facility Placed into Operation</i>	<u>05/22/2000</u>
<i>Application Received</i>	<u>12/27/2000</u>

**Facility Cost**

Claimed Facility Cost	\$188,743
Ineligible Cost— calculation error	(\$502)
Eligible Facility Cost	<u>\$188,241</u>

Moss-Adams, LLP performed an accounting review on behalf of the applicant. Invoices substantiated the facility cost.

**Facility Cost Allocable to Pollution Control**

The following factors were considered in determining the percentage of the facility cost allocable to pollution control.

<u>Factor</u>	<u>Applied to This Facility</u>
ORS 468.190(1)(a) Salable or Usable Commodity	No salable commodity.
ORS 468.190(1)(b) Return on Investment (ROI)	The useful life of the facility used for the ROI consideration is 10 years. There is no revenue associated with this facility.
ORS 468.190(1)(c) Alternative Methods	No alternative investigated.
ORS 468.190(1)(d) Savings or Increase in Costs	No savings or increase in costs were identified.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

**Compliance and Other Tax Credits**

The applicant claims the facility is in compliance with Department rules and statutes and with EQC orders. DEQ permits issued to facility:

- NPDES #101467, issued 03/24/1999
- LRAPA authority to construct: #NC-207050-A00

**Other tax credits issued to Rosboro Lumber Co.:**

App. #	Description of Facility	Certified Cost	Cert. #	EQC Date
13	A HAMMER HOG TO CONVERT BARK AND SLABS.	\$36,877	Denied	3/29/68
1167	CONVERSION OF STEAM VENEER BLOCK HEATING TO HOT WATER RECYCLE.	\$95,156		2/31/80

1490	VENEER DRYER EXHAUST DUCT TO INCINERATE AIR EMISSIONS IN HOGGED FUEL BOILERS.	\$278,851		4/16/82
1743	CARTER DAY BAGHOUSE FOR AN EXISTING WOOD DUST COLLECTION SYSTEM	\$84,920		1/31/86
4017	REGENERATIVE FLY ASH COLLECTORS	\$400,611	3232	12/10/93
4093	UPGRADE EQUIPMENT TO MEET EPA REQUIREMENTS	\$92,290	3184	9/10/93

Reviewers: Maggie Vandehey, DEQ



State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant: **Fujimi America Inc.**  
Application No.: **5522**  
Facility Cost: **\$330,268**  
Percent Allocable: **100%**  
Useful Life: **10 years**

# Tax Credit Review Report

EQC 0109

## **Pollution Control Facility: Water Final Certification**

ORS 468.150 -- 468.190  
OAR 340-016-0005 -- 340-016-0080

### ***Applicant Identification***

Organized as: **a C corporation**  
Business: **liquid polishes for use in  
manufacture of wafers and  
disk products**  
Taxpayer ID: **93-0982049**

The applicant's address is:

**11200 SW Leveton Drive  
Tualatin, OR 97062**

### ***Facility Identification***

The certificate will identify the facility as:

**A batch thermal hydrolysis cyanide destruct  
system (CDS)**

The applicant is the owner of the facility located at:

**11200 SW Leveton Drive  
Tualatin, OR 97062**

### ***Technical Information***

The claimed facility is a new batch thermal hydrolysis cyanide destruct system (CDS) used to remove cyanide from process wastewater. Components of the CDS system include two 125-gallon cyanide destruct reactors, one 500-gallon pH Adjust tank, one 3000-gallon concentrate tank, one 3,000-gallon dilute tank, a closed collection pit, a caustic tank, an acid tank, seven pumps, piping, mixers, and the containment curb surrounding the system.

The installation of the CDS was part of a larger production improvement project. Cyanide levels are below 0.5 ppm as a result of the claimed facility. Approximately 1,000 gallons of process wastewater containing about 250 pounds of cyanide would have been discharged on a daily basis without the claimed facility.

The system pumps process waste to the pH adjust tank and then to the two reactors for treatment. The CDS reactors raise the temperature and pressure of the waste stream, converting the cyanide

compounds in the process wastewater into ammonia (NH3) and formate (HCOO).

The CDS reactors discharge to the collection pit for sampling. If sampling indicates additional treatment is needed then the wastewater is routed to the concentrate tank or dilute tank for additional treatment; otherwise, it is discharged to the applicant's wastewater treatment plant and then to the sanitary sewer.

**Eligibility**

- ORS 468.155 (1)(a)(A) The **principal purpose** of the **new CDS equipment** is to comply with the applicant's Industrial Wastewater discharge permit 111-191-2 issued by Unified Sewerage Agency. The equipment **prevents** water pollution by complying with the maximum allowable concentration for total cyanide of 1.5 ppm.
- ORS 468.155 (1)(b)(A) The **control** is accomplished with the use of **treatment works** for industrial waste as defined in ORS 468B.005.
- ORS 468.155 (1)(a) The primary and most important purpose of the **pipng** is to convey wastewater between the process and the pollution control facility.

Building materials, and other miscellaneous items **claimed on the application** are not part of the pollution control facility.

**Timeliness of Application**

The application was submitted within the timing requirements of ORS 468.165 (6).

<i>Construction Started</i>	<b>1/28/1998</b>
<i>Construction Completed</i>	<b>7/15/1999</b>
<i>Facility Placed into Operation</i>	<b>11/20/1999</b>
<i>Application Received</i>	<b>12/29/2000</b>
<i>Application Substantially Complete</i>	<b>6/29/2001</b>

**Facility Cost**

Claimed Cost	\$547,106
Ineligible Costs:	
Piping	-\$31,749
Building	-96,352
Electrical	-58,576
Labor	-19,449
Repair work	-1,498
Tools	-6,128
Safety Equipment	-1,415
Misc.	-1,671
	<b>\$ (216,838)</b>
Eligible Cost	<b>\$330,268</b>

Merina, McCoy & Co., PC performed an independent accounting review on behalf of the applicant. A copy of the Cost Report Detail and copies of invoices substantiated the claimed facility cost.

The CDS system was part of a larger project. The building cost claimed for the CDS system was not in proportion to the area shown on the drawings in the application as 21'x31' or 650 square feet. The application record also shows the cost of the project was \$70 per square foot and this amount included gravel, concrete, lumber, electrical work, tools, and miscellaneous building materials and supplies. The building cost allocated to the CDS system is \$45,500 based on multiplying the area by the square footage cost. The remaining building costs were subtracted from the claimed facility cost. Costs included in the square footage cost and included as a separate line item were duplicate claims and subtracted from the eligible facility cost.

***Facility Cost Allocable to Pollution Control***

According to ORS.190 (1), the following factors were used to determine the percentage of the facility cost allocable to pollution control.

<b>Factor</b>	<b>Applied to This Facility</b>
ORS 468.190(1)(a) Salable or Usable Commodity	The facility is not used to recover and convert waste products into a salable or usable commodity.
ORS 468.190(1)(b) Return on Investment	The useful life of the facility used for the return on investment consideration is 10 years. No gross annual revenues were associated with this facility.
ORS 468.190(1)(c) Alternative Methods	The CDS was found to be the most cost-effective means of removing cyanide compounds from the wastewater.
ORS 468.190(1)(d) Savings or Increase in Costs	There is an operating cost associated with the facility; no savings were associated with installing this facility.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

***Compliance and Other Tax Credits***

The applicant states the facility is in compliance with Department rules and statutes and with EQC orders. The following permits have been issued to facility:

- DEQ Stormwater permit 1200-Z, and
- Unified Sewerage Agency Industrial Wastewater discharge permit 111-191-2.

Other tax credits issued to Fujimi America, Inc.:

<b>App. #</b>	<b>Description of Facility</b>	<b>Certified Cost</b>	<b>Cert. #</b>	<b>Issue Date</b>
431	Hydrokinetic HCN Scrubber	\$61,356	4411	12/01/2000

Reviewers: Lois L. Payne, SJO Consulting Engineers  
Dennis Cartier, SJO Consulting Engineers  
Maggie Vandehey, DEQ

### Claimed Cost Evaluation

The items claimed in the application were put together by the accounting firm (Merina, McCoy & Co.) based on the information provided to them. Copies of invoices were provided with the application but upon review they did not total to the costs listed in Appendix D. The reason was not apparent and there wasn't a clear correlation between the numbers listed in Appendix D and the invoices. The reviewers met with John Merina and a representative from Creekside Environmental to discuss the costs, what was claimed and how the numbers were derived.

Merina, McCoy & Co. provided the attached "HCC MCCR Monthly Combined Cost Report" for the period ending July 31, 2000, and copies of their paperwork: "Invoice\_Recap" and "Cost Report Detail" (CRD).

Lois Payne of SJO performed a site visit. In the visit, she found that when Fujimi first started to add the CDS line to their business, they needed a place to put it and decided to remodel what used to be the warehouse. (Hoffman was the contractor.) They poured a new concrete floor and added walls, among other things.

The Excel document titled "Fujimi\_Cost" contains the following tabs (info was scanned from applicant supplied hardcopies):

Summary	The summary of all costs – it matches the costs listed in the Table in the report.
Worksheet	Worksheet totaling the claimed costs, costs included in the CRD, invoice amounts, eligible costs, & ineligible costs. The comment column contains notes explaining eligibility or ineligibility.
Worksheet(2)	Totals the claimed costs, costs included in the CRD, invoice amounts, eligible costs, & ineligible costs for the following cost categories: Building, Equipment, Ineligible, Piping Components & Supports, and Scrubber Blowdown System.
CRD-Matl&Eqpt	Worksheet of all material costs claimed in alphabetical order by Supplier name. The costs are totaled for each supplier.
CRD-Matl&Eqpt	(not sorted)Worksheet of all material costs claimed in the same order as the CRD. The costs are totaled.
Invoices	Itemized list of the Supplier and cost amount from the copies of all invoices received. The costs are totaled for each supplier.
CRD Labor	A list of the labor costs included in the labor CDR, totaled.
Hoffman	A breakdown of the Hoffman Invoices, Billing Summaries and Pay Requests, copies were provided.
Exhibit D	According to John Merina, the costs listed in each category on Exhibit D are prorated to the pollution control project. For example, the claimed cost for the Dilute Tank with Piping In was: \$19,482 for Labor \$23,151 for Materials \$5,546 for Subcontractors Total: \$48,179

Exhibit D was scanned into a spreadsheet to determine the percentages were for each of the categories and cost types. The percentages are not clear because

they are different for each element of the application as can be seen in the spreadsheet.

**Building Costs** The basis for the claimed cost of the building (Warehouse) is described in an email from Darin MacKenzie (a Hoffman employee) to Rob Beal (a Fujimi employee) and states that the CDS room is 1,400 square feet and the cost of the warehouse was \$70 per square foot. The drawing shows the CDS system area to be 21'x31', or 650 square feet (not 1,400). The CRD costs identify gravel, concrete, lumber, electrical work, tools, and miscellaneous building materials and supplies for a grand total of \$103,512. For example, the CRD showed Tigard Sand & Gravel provided a total of \$6,915.51 for 664.3 Tons of rock, sand and gravel and copies of invoices were provided to substantiate that cost. Subcontractor costs included excavation and concrete. The \$98,000 is added in on top of all the other costs for the cost of the building. These costs are redundant because it is impossible to use that much gravel and concrete in the CDS area. The items identified in the CRD material list and the subcontractor costs are listed as ineligible because they are redundant. The actual square footage under the CDS system multiplied by \$70/square foot was used to determine the eligible building cost (\$45,500) but this still seems high!

**Piping Costs** The CRD for materials includes piping and piping materials from numerous suppliers and in numerous sizes. Piping that conveys the wastewater from different processes to the CDS system is ineligible. That piping is all PVC. The piping used at the CDS system is SS Schedule 40, 1 1/2" and smaller. Schedule 80 is for plant air. Anything larger than 1 1/2" is used somewhere other than the CDS system. All drain piping is ineligible.

**Scrubber Costs** The blowdown off the scrubber was routed to the CDS for treatment. This is an ineligible cost because it is material handling only and there is no pollution control benefit.

**Labor** an estimate of eligible labor costs is proportional to the eligible material costs (approximately 75% eligible).





State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **Approve**

Applicant **David A. Vanasche**  
Application No. **5551**  
Facility Cost **\$28,134**  
Percentage Allocable **100%**  
Useful Life **10 years**

# Tax Credit Review Report

EQC 0109

## **Pollution Control Facility: Field Burning Final Certification**

ORS 468.150 -- 468.190

OAR 340-016-0005 -- 340-016-0080

### ***Applicant Identification***

Organized as: **a Sole Proprietor**  
Business: **a grass seed farm**  
Taxpayer ID: **542-56-8787**

The applicant's address is:

**36130 NW Wren Rd.  
Cornelius, OR 97113**

### ***Facility Identification***

The certificate will identify the facility as:

**A drainage tile installation on 90 acres**

The applicant is the owner of the facility located at:

**36130 NW Wren Rd.  
Cornelius, OR 97113**

### ***Technical Information***

The applicant has **2350 acres; 2000 of which is under perennial grass seed** cultivation. David Vanasche has progressively reduced grass seed acres open field burned over the last several years. He continues to increase his efforts to remove grass seed straw by baling and flail chopping.

Tiling was installed as an alternative to field burning. Providing adequate drainage will allow the applicant to select crops that do not require flame sanitation as rotation crops with grass seed production. This crop rotation provides for non-thermal sanitation following a grass seed stand.

The applicant received two tax credits in 1991, claiming to remove 730 acres for open field burning. The applicant claims, according to their calculations including application 5552 considered separately, as a result of continued alternative practices they have **removed 2000 acres** from being open field burned.

**Eligibility**

ORS 468.155 (1)(a)(A) The **principal purpose** of this **new facility** is to reduce **air pollution** by reducing the maximum acreage to be open-burned in the Willamette Valley in compliance with OAR 340-266-0060 (Acreage Limitations, Allocations).

OAR 340-016-0060 (4)(b)(C)(iii) The facility is an alternative to open field burning by reducing or eliminating grass seed acreage that requires open field burning through the use of a drainage tile system.

**Timeliness of Application**

The application was submitted within the timing requirements of ORS 468.165 (6).

<i>Construction Started</i>	<b>09/01/1999</b>
<i>Construction Completed</i>	<b>09/25/1999</b>
<i>Facility Placed into Operation</i>	<b>09/25/1999</b>
<i>Application Received</i>	<b>03/23/2001</b>

**Facility Cost**

Facility Cost	<b>\$28,134</b>
Ineligible costs	<b>\$0</b>
Eligible Facility Cost	<b>\$28,134</b>

Bernards & O'Rourke, P.C., CPA performed an accounting review on behalf of the applicant. Invoices and canceled checks substantiated the facility cost.

**Facility Cost Allocable to Pollution Control**

According to ORS 468.190 (3), the only factor used in determining the percentage allocable to pollution control is the percentage of time the facility is used for pollution control. Therefore, the percentage of the facility cost allocable to pollution control is **100%**.

**Compliance and Other Tax Credits**

The facility is in compliance with Department rules and statutes and with EQC orders. There are no DEQ permits issued to the facility.

Other tax credits issued to **Vanasche Farms**:

App. #	Description of Facility	Certified Cost	Cert. #	Issue Date
3424	Rears propane mobile field burner; International 22" - 8" tandem disk	\$24,680	2541	6/14/1991
3425	John Deere tractor and loader	\$41,550	2542	6/14/1991

Reviewers: John Hamblin, ODA



State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **Approve**

Applicant **David A. Vanasche**  
Application No. **5552**  
Eligible Facility Cost **\$51,544**  
Percentage Allocable **100%**  
Useful Life **10 years**

# Tax Credit Review Report

EQC 0109

## Pollution Control Facility: Field Burning

### Final Certification

ORS 468.150 -- 468.190

OAR 340-016-0005 -- 340-016-0080

### *Applicant Identification*

Organized as: **a Sole Proprietor**

Business: **a grass seed farm**

Taxpayer ID: **542-56-8787**

The applicant's address is:

**36130 NW Wren Rd.  
Cornelius, OR 97113**

### *Facility Identification*

The certificate will identify the facility as:

**A John Deere 8400 MFWD Tractor, 225  
HP (S/N 20073); and an Alloway 30'  
Flail Shredder (S/N 25936)**

The applicant is the owner of the facility located  
at:

**36130 NW Wren Rd.  
Cornelius, OR 97113**

### *Technical Information*

The applicant has **2000 acres** under perennial grass seed cultivation. David Vanasche has progressively reduced grass seed acres open field burned over the last several years. He continues to increase his efforts to remove grass seed straw by baling and flail chopping.

The applicant received two tax credits in 1991, claiming to remove approximately 730 acres. The claimed tractor and flail shredder enables the applicant to remove approximately 1270 additional acres from open field burning.

The applicant claims that as a result of continued alternative practices he has **removed 2000 acres** from being open field burned.

**Eligibility**

- ORS 468.155 (1)(a)(A) The **principal purpose** of this **new facility** is to reduce **air pollution** by reducing the maximum acreage to be open-burned in the Willamette Valley in compliance with OAR 340-266-0060 (Acreage Limitations, Allocations).
- OAR 340-016-0060 (4)(b)(A) **Equipment**, facilities, and land for gathering, densifying, handling, storing, transporting and incorporating grass straw or straw based products which will result in **reduction of open field burning**.
- ORS 468.155 (3)(e) **Replacement:** The applicant traded in a tractor and shredder on the claimed equipment. The tractor certified in 1991 is still in use.

**Timeliness of Application**

The application was submitted within the timing requirements of ORS 468.165 (6).

<i>Construction Started</i>	<b>1/1999</b>
<i>Construction Completed</i>	<b>12/1999</b>
<i>Facility Placed into Operation</i>	<b>7/2000</b>
<i>Application Received</i>	<b>3/23/2001</b>

**Facility Cost**

Facility Cost	<b>\$129,857</b>
Trade-in on tractor	<u>\$62,000</u>
Trade-in on flail shredder	<u>\$6,000</u>
25% of cost of tractor	<u>\$10,313</u>
Ineligible costs	<u><b>(\$78,313)</b></u>
Eligible Facility Cost	<b>\$51,544</b>

Bernards & O'Rourke, P.C., CPA, performed an accounting review according to Department guidelines on behalf of the applicant. Invoices and canceled checks substantiated the facility cost. The reviewers performed a facility cost analysis on behalf of the Department.

The applicant stated that the tractor is only used for pollution control purposes 75% of the time, making 25% ineligible.

**Facility Cost Allocable to Pollution Control**

According to ORS 468.190 (1), the following factors were considered in determining the percentage of the facility cost allocable to pollution control.

<b>Factor</b>	<b>Applied to This Facility</b>
ORS 468.190 (1)(a) Salable or Usable Commodity	The baled straw is a salable commodity.
ORS 468.190(1)(b) Return on Investment (ROI)	The useful life of the facility used for the ROI consideration is 10 years. The average annual cash flow is negative. Calculated according to rule, the percentage of the facility cost properly allocable to pollution control is <b>100%</b> .
ORS 468.190(1)(c) Alternative Methods	No alternatives investigated.

ORS 468.190(1)(d) Savings or Increase in Costs      No savings or increase in costs were identified.  
ORS 468.190(1)(e) Other Relevant      No other relevant factors.

***Compliance and Other Tax Credits***

The facility is in compliance with Department rules and statutes and with EQC orders. There are no DEQ permits issued to the facility.

Other tax credits issued to **Vanasche Farms**:

<b>App. #</b>	<b>Description of Facility</b>	<b>Certified Cost</b>	<b>Cert. #</b>	<b>Issue Date</b>
3424	Rears propane mobile field burner; International 22" - 8" tandem disk	\$24,680	2541	6/14/1991
3425	John Deere tractor and loader	\$41,550	2542	6/14/1991

Reviewers: John Hamblin, ODA  
Maggie Vandehey, DEQ



State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant	<b>Freres Lumber Co., Inc.</b>
Application No.	<b>5553</b>
Facility Cost	<b>\$154,020</b>
Percentage Allocable	<b>100%</b>
Useful Life	<b>10 years</b>

## Tax Credit Review Report

EQC 0109

### **Pollution Control Facility: Water Final Certification**

ORS 468.150 -- 468.190

OAR 340-016-0005 -- 340-016-0080

#### ***Applicant Identification***

Organized as: **a C corporation**

Business: **manufacturer of plywood**

Taxpayer ID: **93-0357299**

The applicant's address is:

**Plant #2  
141 14th St.  
Lyons, OR 97358**

#### ***Facility Identification***

The certificate will identify the facility as:

#### **Truck Wash Facility**

The applicant is the owner of the facility located at:

**141 14th St.  
Lyons, OR**

#### ***Technical Information***

The applicant claimed an enclosed two-stage truck washing facility with two concrete wash lanes, a self-contained concrete recycling sump station, a reverse trench drain, and a cleaning ramp. The facility removes oils and solids from trucks, trailers, and heavy equipment. It recycles approximately 7,200 gallons per week through the continuous loop of filtered water.

Wash water flows to an open containment trench in the center of the facility where dirt and other solids settle. Three containment basins below the wash areas collect oils and floating debris from the wash water prior to filtration. The cycle allows for a continuous loop of filtered water with very little supplementation with fresh water. Fresh water is introduced to the filter system on a monthly basis to flush out large contaminants. The added water remains in the system and the discharged water is collected in a storage tank for later use in production processes. No water from the truck washing facility is discharged to any drainage system. Solids are disposed of in a landfill.

An independent steam cleaning and degreasing contractor washed the trucks and discharged the wash water into a drainage ditch prior to the installation of the new facility.

**Eligibility**

- ORS 468.155 (1)(a)(B) The **sole purpose** of this **new installation of equipment** is to **prevent** a substantial quantity of water pollution.
- ORS 468.155 (1)(b) The **prevention** is accomplished by the elimination of industrial waste and the use of treatment works for industrial waste as defined in ORS 468B.005.
- OAR-016-0025 (2)(g) The installation of this facility will prevent spills or unauthorized releases on land or waters of the state.

**Timeliness of Application**

The application was submitted within the timing requirements of ORS 468.165 (6).

<i>Construction Started</i>	<b>11/01/1999</b>
<i>Construction Completed</i>	<b>02/29/2000</b>
<i>Placed into Operation</i>	<b>03/01/2000</b>
<i>Application Received</i>	<b>03/26/2001</b>
<i>Application Substantially Complete</i>	<b>6/26/2001</b>

**Facility Cost**

Claimed Cost	\$ 154,020
Eligible Costs	<b>\$ 154,020</b>

Invoices substantiated the claimed facility cost. The applicant did not include truck-washing equipment such as pressure washers and spray nozzles in the facility cost.

**Facility Cost Allocable to Pollution Control**

The following factors were considered in determining the percentage of the facility cost allocable to pollution control.

<b>Factor</b>	<b>Applied to This Facility</b>
ORS 468.190(1)(a) Salable or Usable Commodity	No salable commodity.
ORS 468.190(1)(b) Return on Investment (ROI)	The useful life of the facility used for the ROI consideration is 10 years. The wash facility does not produce income for the applicant.
ORS 468.190(1)(c) Alternative Methods	No alternative investigated.
ORS 468.190(1)(d) Savings or Increase in Costs	No savings or increase in costs were identified. The cost for independent contractor cleaning has been eliminated. The applicant states there has been no noticeable effect on the company water bill.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

**Compliance and Other Tax Credits**

The facility is in compliance with Department rules and statutes and with EQC orders. DEQ permits issued to the site: Other tax credits issued to **Freres Lumber Co., Inc.**:

App. #	Description of Facility	Certified Cost	Cert. #	EQC Date
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1704	Log scaling and log deck paving	\$270,989		11/02/1984
1792	Hot water recycling system for peeler block conditioning	\$74,230		4/25/1986
2669	Anti-stain lumber dip tank spill containment and drip collection equipment			Withdrawn
5119	A negative air system to evacuate plytrim from the trimmsaw and saw dust from a flying cut off saw and discharge into an existing drag chain conveyer	\$27,962		Denied 3/19/1999
5222	The applicant installed a different system than the preliminarily approved closed loop wash water recycling system.	\$120,000		Preliminary Approved 10/01/1999

Reviewers: Lois Payne, SJO Consulting Engineers  
Dennis Cartier, Associate, SJO Consulting Engineers  
Maggie Vandehey, DEQ





State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant **ITT Flygt Corporation**  
Application No. **5555**  
Facility Cost **\$15,301**  
Percentage Allocable **100%**  
Useful Life **5 years**

# Tax Credit Review Report

EQC 0109

## **Pollution Control Facility: Water Final Certification**

ORS 468.150 -- 468.190  
OAR 340-016-0005 -- 340-016-0080

### ***Applicant Identification***

Organized as: **a C corporation**  
Business: **Assembly, sales, service and  
rental of submersible pumps**  
Taxpayer ID: **22-2334939**

The applicant's address is:

**PO Box 1004  
35 Nutmeg Drive  
Trumbull, CT 06611-9043**

### ***Facility Identification***

The certificate will identify the facility as:

**A Landa Water Evaporator**

The applicant is the owner of the facility located at:

**2630 N. Marine Drive  
Portland, OR 97217-7710**

### ***Technical Information***

The applicant claimed a submersible pump washing facility. It consists of a concrete block building with a water collection sump, a Landa hot water pressure washer (model ENG4-20021C), a hand wash station, and a Landa natural gas fired evaporator (model HBG-15D.) The system is used to clean and sanitize submersible pumps prior to repair.

The entire facility is inside a concrete building to prevent rainwater from being introduced to the system. The sump collects wastewater containing glycol, oils, and degreasing agents during the cleaning process and discharges it to an evaporator. The hand wash station from the shop also discharges into the evaporator. The residual waste is stored in a 55-gallon drum and later disposed of with other waste oils through an industrial waste contractor.

A maximum of 250-gallons of water is used weekly in the washing process. All wastewater from the pump washing process is evaporated.

**Eligibility**

ORS 468.155 (1)(a)(B) The **sole purpose** of the **new evaporator and building installation** is to **prevent** a substantial quantity of water pollution.

The **sole purpose** of the **new Landa pressure washer installation** is **not to prevent** a substantial quantity of water pollution. It's primary purpose is to clean pumps; it does not contribute to pollution control, prevention, or reduction.

The **sole purpose** of the **new plumbing installation** is **not to prevent** a substantial quantity of water pollution. It's primary purpose is to convey the water to the evaporator; the plumbing system would be required with or without the evaporator and does not contribute to pollution control, prevention, or reduction.

The **sole purpose** of the **new lighting installation** is **not to prevent** a substantial quantity of water pollution. It's primary purpose is to provide light and is an ineligible cost because it does not contribute to pollution control, prevention, or reduction.

The **sole purpose** of the **new hand wash installation** is **not to prevent** a substantial quantity of water pollution. It's primary purpose is for hand washing; it does not contribute to pollution control, prevention, or reduction.

ORS 468.155 (1)(b)(B) The water pollution **prevention** is accomplished by the disposal of industrial waste and the use of treatment works for industrial waste as defined in ORS 468B.005.

ORS 468.155 (3)(e) Replacement: This is a new facility and is not replacing any existing equipment.

**Timeliness of Application**

The application was submitted within the timing requirements of ORS 468.165 (6).

<i>Application Received</i>	<b>03/29/2001</b>
<i>Additional Information Requested</i>	<b>5/1/2001</b>
<i>Additional Information Received</i>	<b>5/29/2001</b>
<i>Construction Started</i>	<b>10/2000</b>
<i>Construction Completed</i>	<b>12/2000</b>
<i>Placed into Operation</i>	<b>12/2000</b>

**Facility Cost**

**Claimed Cost** **\$ 36,070**

**Ineligible Costs:**

Landa Pressure Washer	- \$5,262
Plumbing	- \$13,677
Lighting	- 180
Hand Wash Station	- 1,650
	<hr/>
	<b>- \$7,092</b>

**Eligible Costs** **\$15,301**

The applicant provided copies of invoices that substantiated 100% of the claimed facility cost.

***Facility Cost Allocable to Pollution Control***

The only factor used to consider the percentage allocable to pollution control is the 100% percentage of time the facility is used for pollution control.

***Compliance and Other Tax Credits***

The applicant claims the facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits or other tax credits have been issued to the site.

Reviewers: Lois Payne, SJO Consulting Engineers  
Maggie Vandehey, DEQ



State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant **Weyerhaeuser Company**  
Application No. **5556**  
Facility Cost **\$828,717**  
Percentage Allocable **100%**  
Useful Life **10 years**

## Tax Credit Review Report

EQC 0109

### **Pollution Control Facility: Air Final Certification**

ORS 468.150 -- 468.190  
OAR 340-016-0005 -- 340-016-0080

#### ***Applicant Identification***

Organized as: **a C corporation**  
Business: **manufacturer of  
engineered wood products**  
Taxpayer ID: **91-0470860**

The applicant's address is:

**93747 Highway 99 S  
Junction City, OR 97448-9701**

#### ***Facility Identification***

The certificate will identify the facility as:

**Geoenergy GeoTherm Regenerative  
Thermal Oxidizer (RTO)**

The applicant is the owner of the facility located at:

**93747 Highway 99 S  
Junction City, OR 97448-9701**

#### ***Technical Information***

The applicant receives both green and dry veneer from outside suppliers. The green veneer is dried in one of two gas-fired dryers. Emissions from the dryers include volatile organic compounds (VOCs).

The claimed facility is a Geoenergy, model GeoTherm, regenerative thermal oxidizer (RTO) that destroys 90% of the VOC emissions from the dryers. It is designed to handle 44,750 cfm exhaust and the gas burner has a maximum output of 4,000 million BTUs per hour. VOCs are converted to carbon dioxide and water at 1500°F in the heat recovery section of the RTO. Also included is a 150 HP system fan, controls, and 100 feet of exterior exhaust duct.

Prior to installing the RTO, the plant was failing to conform to the DEQ average operating opacity limit of 10%. Although the plant was operating at reduced temperatures to minimize emissions, the opacity was still excessive. The plant is able to conform to both the 10% average opacity limit and the 20% maximum opacity limit with the installation of the RTO.

**Eligibility**

- ORS 468.155 (1)(a)(A) The **principal purpose** of this **new RTO installation** is to comply with a requirement imposed by LRAPA and the applicants Title V permit to **control** air pollution. The applicants Title V Operating Permit conditions 14 and 31 and the Stipulations and Final Order Agreement no. 97-1427 requires the veneer dryers will not exceed an average opacity of 10% or a maximum opacity of 20%.
- ORS 468.155 (1)(b) The control is accomplished by the elimination of air contaminants and the use of an RTO that meets the definition in ORS 468A.005 of an air-cleaning device.
- ORS 468.155 (3)(3) **Replacement:** The claimed facility does not replace any previously certified equipment.

**Timeliness of Application**

The application was submitted within the timing requirements of ORS 468.165 (6).

<i>Construction Started</i>	<u>3/1/1999</u>
<i>Construction Completed</i>	<u>5/10/1999</u>
<i>Facility Placed into Operation</i>	<u>6/14/1999</u>
<i>Application Received</i>	<u>4/2/2001</u>

**Facility Cost**

Claimed Facility Cost	\$ 871,551
Ineligible Costs:	
Excavation for lunchroom	- \$ 2,400
Press foundation drawings	- 6,200
Fan bearing maintenance	- 150
Emissions testing	- 7,515
Lighting fixtures	- 570
Title V permit fees	- 23,134
Asbestos sampling	- 148
Stoel Rives, LLP (attorney fees related to SFO action)	- 2,158
Ducting-scoop fitting for dryer #2	- 459
Modem	- 100
Subtotal	<u>- \$ 42,834</u>
Eligible Facility Cost	<u>\$ 828,717</u>

The applicant provided an accountants statement in accordance with Department guidelines. A copy of an internal accounting budget form was provided that identified all of the internal labor charges and invoices paid to substantiate 100% of the claimed facility cost. Copies of all invoices were provided. The ineligible costs listed above are ineligible in accordance with ORS 468.155 and OAR 340-016-0070 because they do not make a significant contribution to pollution control and do not directly relate to the acquisition and installation of the claimed facility.

**Facility Cost Allocable to Pollution Control**

The following factors were considered in determining the 100% percentage of the facility cost allocable to pollution control.

<b>Factor</b>	<b>Applied to This Facility</b>
ORS 468.190(1)(a) Salable or Usable Commodity	No salable or useable commodity.
ORS 468.190(1)(b) Return on Investment	The useful life of the facility used for the return on investment consideration is 12 years. No gross annual revenues were associated with this facility.
ORS 468.190(1)(c) Alternative Methods	Three other types of devices were evaluated for use to control opacity: scrubbers, wet electrostatic precipitators, and regenerative catalytic oxidizers. The RTO was considered the most dependable and cost effective for this application.
ORS 468.190(1)(d) Savings or Increase in Costs	No additional costs were identified in the application, however, there would be an operating cost.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

### ***Compliance and Other Tax Credits***

The applicant states the facility is in compliance with all DEQ, Regional Air Authority, and EPA regulations. DEQ permits issued to facility include:  
Title V Permit Number 208263

The EQC has not issued any tax credit certificates to this facility location.

Reviewers: Lois L. Payne, SJO Consulting Engineers  
Dennis Cartier, SJO Consulting Engineers



State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant **Weyerhaeuser Company**  
Application No. **5557**  
Facility Cost **\$724,298**  
Percentage Allocable **100%**  
Useful Life **10 years**

# Tax Credit Review Report

EQC 0109

## **Pollution Control Facility: Air Final Certification**

ORS 468.150 -- 468.190  
OAR 340-016-0005 -- 340-016-0080

### ***Applicant Identification***

Organized as: **a C corporation**  
Business: **manufacturer of engineered  
wood products**  
Taxpayer ID: **91-0470860**

The applicant's address is:

**195 N Bertelson Rd  
Eugene, OR 97402-5311**

### ***Facility Identification***

The certificate will identify the facility as:

**Geoenergy GeoTherm Regenerative  
Thermal Oxidizer (RTO)**

The applicant is the owner of the facility located at:

**195 N Bertelson Rd  
Eugene, OR 97402-5311**

### ***Technical Information***

The applicant receives both green and dry veneer from outside suppliers. The green veneer is dried in one of two gas-fired dryers. Emissions from the dryers include volatile organic compounds (VOCs).

The claimed facility is a Geoenergy, model GeoTherm, regenerative thermal oxidizer (RTO) that destroys 90% of the VOC emissions from the dryers. It is designed to handle 44,750 cfm exhaust and the gas burner has a maximum output of 4,000 million BTUs per hour. VOCs are converted to carbon dioxide and water at 1500°F in the heat recovery section of the RTO. Also included is a 150 HP system fan, controls, and 100 feet of exterior exhaust duct.

Prior to installing the RTO, the plant was failing to conform to the DEQ average operating opacity limit of 10%. Although the plant was operating at reduced temperatures to minimize emissions, the opacity was still excessive. The plant is able to conform to both the 10% average opacity limit and the 20% maximum opacity limit with the installation of the RTO.

**Eligibility**

- ORS 468.155 (1)(a)(A) The **principal purpose** of this **new RTO installation** is to comply with a requirement imposed by LRAPA and the applicants Title V permit to **control** air pollution. The applicants Title V Operating Permit conditions 14 and 31 and the Stipulations and Final Order Agreement no. 97-1427 requires the veneer dryers will not exceed an average opacity of 10% or a maximum opacity of 20%.
- ORS 468.155 (1)(b) The control is accomplished by the elimination of air contaminants and the use of an RTO that meets the definition in ORS 468A.005 of an air-cleaning device.
- ORS 468.155 (3)(e) **Replacement:** The claimed facility does not replace any previously certified equipment.

**Timeliness of Application**

The application was submitted within the timing requirements of ORS 468.165 (6).

<i>Construction Started</i>	<u>3/1/1999</u>
<i>Construction Completed</i>	<u>5/10/1999</u>
<i>Facility Placed into Operation</i>	<u>6/14/1999</u>
<i>Application Received</i>	<u>4/2/2001</u>

**Facility Cost**

Claimed Facility Cost	\$ 755,682
Ineligible Costs:	
Air Conditioner	- \$ 5,840
Emissions readings	- 7,300
Title V permit Fees	- 16,660
Stoel Rives, LLP	- 1,584
Subtotal	<u>- \$ 31,384</u>
Eligible Facility Cost	<u>\$ 724,298</u>

The applicant provided an accountants statement in accordance with Department guidelines. A copy of an internal accounting budget form was provided that identified all of the invoices paid on this project project and copies of invoices were provided that substantiated the cost of the facility. The ineligible costs listed above are ineligible in accordance with ORS 468.155 and OAR 340-016-0070 because they do not make a significant contribution to pollution control and do not directly relate to the acquisition and installation of the claimed facility.

**Facility Cost Allocable to Pollution Control**

The following factors were considered in determining the 100% percentage of the facility cost allocable to pollution control.

<u>Factor</u>	<u>Applied to This Facility</u>
ORS 468.190(1)(a) Salable or Usable Commodity	No salable or useable commodity.
ORS 468.190(1)(b) Return on Investment	The useful life of the facility used for the return on investment consideration is 12



ORS 468.190(1)(c) Alternative Methods

years. No gross annual revenues were associated with this facility.

Three other types of devices were evaluated for use to control opacity: scrubbers, wet electrostatic precipitators, and regenerative catalytic oxidizers. The RTO was considered the most dependable and cost effective for this application.

ORS 468.190(1)(d) Savings or Increase in Costs

No additional costs were identified in the application, however, there would be an operating cost.

ORS 468.190(1)(e) Other Relevant Factors

No other relevant factors.

### ***Compliance and Other Tax Credits***

The applicant states the facility is in compliance with all DEQ, Regional Air Authority, and EPA regulations. DEQ permits issued to facility include:

Title V Permit Number 208256  
Stormwater Permit 1200-Z, issued 7/22/97

The EQC has issued **Trus Joist Corporation 3** tax credit certificates to this facility location. Weyerhaeuser Company bought this Eugene division from Trus Joist Corporation.

Reviewers: Lois L. Payne, SJO Consulting Engineers  
Dennis Cartier, SJO Consulting Engineers



State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant: **City Garbage Service**  
Application No.: **5559**  
Facility Cost: **\$1,203,421**  
Percentage Allocable: **100%**  
Useful Life: **10 years**

# Tax Credit Review Report

EQC 0109

## **Pollution Control Facility: Solid Waste Final Certification**

ORS 468.150 -- 468.190

OAR 340-016-0005 -- 340-016-0080

### ***Applicant Identification***

Organized As: **an S corporation**

Business: **Solid waste collection  
and recycling facility**

Taxpayer ID: **96-06698452**

The applicant's address is:

**12202 Willow Street  
La Grande, OR 97850**

### ***Facility Identification***

The certificate will identify the facility as:

**A material recovery facility**

The applicant is the owner of the facility located at:

**Waste Pro  
3412 Highway 30  
La Grande, OR 97850**

### ***Technical Information***

The applicant claimed a material recovery facility (MRF) used to sort and process recyclable materials collected for customers in La Grande and Union County. Cardboard, scrap paper, metal, glass, and aluminum are processed at the MRF prior to shipment to other recycling companies where they are manufactured into new products. This material recovery facility also includes equipment to process yard debris and wood waste for composting.

The specific elements of this material recovery facility include:

- fifteen acres,
- one 22,400 square foot steel and metal building,
- one Powell 40X10 pit scale serial number 908-97,
- two JCB 505-19 reach forklifts serial numbers 550519561199 and 505195561456,
- one North Country steel belt conveyor model ST-6-20-4,
- one Rexnord 15D-48600F shaker serial number 15896,
- one Barco 80 loader serial number 10607,

- one Balo 40-80 wood hog serial number A4-105 and related machinery,
- one Marathon M1000 compactor serial number 14079,
- one 1992 Kenworth tractor VIN 1XKDDR9XXNJ569163,
- one 1991 Volvo tractor VIN 4V2JCBMD6MN810128, and
- one Alloy trailer VIN ALSL0389N5920687.

All the equipment was used except for the building, which was new.

**Eligibility**

- ORS 468.155 The **principal purpose** of this **land, new building and used equipment** is to  
 (1)(a) reduce a substantial quantity of **solid waste**. The material recovery facility is the only recycling center serving Union County.
- ORS 468.155 **Replacement:** The material recovery facility does not replace a previously certified  
 (3)(e) facility.
- ORS 468.155 This MRF is used to collect recyclable material and is part of a **material recovery**  
 (1)(b)(D) **process** that obtains useful material from material that would otherwise be solid waste as defined in ORS 459.005.

**Timeliness of Application**

The application was submitted within the timing requirements of ORS 468.165(6). The MRF was constructed with used components that were rebuilt as time and

<i>Construction Started</i>	<b>01/01/95</b>
<i>Construction Completed</i>	<b>12/31/99</b>
<i>Facility Placed into Operation</i>	<b>07/01/00</b>
<i>Application Received</i>	<b>04/19/01</b>

economics would allow; thereby, accounting for the long construction period.

**Facility Cost**

Claimed	\$ 1,259,813
Increases found in accounting review	
Freight on Metal Building	+ 6,478
Conveyor System	+ 44,682
Ineligible Costs	
Bale ties for different location	- 50
Vise	- 392
Restrooms, Office, Shop Area	- 11,311
9.5 acres not used for MRF	- 95,799
Eligible Cost	<u>\$ 1,203,421</u>

Invoices and payment vouchers substantiated 97% of the claimed cost. Employee labor was charged at the actual pay rate plus 33% for cost of employment.

**Facility Cost Allocable to Pollution Control**

The factors listed below were considered in determining that **100%** percentage of the facility cost is allocable to pollution control.

<b>Factor</b>	<b>Applied to This Facility</b>
ORS 468.190(1)(a) Salable or Usable Commodity	This MRF is used to collect recyclable material that is subsequently processed into a salable and useable commodity.
ORS 468.190(1)(b) Return on Investment	The useful life of the facility used for the return on investment consideration is 15 years. The calculated average annual cash flow is negative therefore the percentage return on investment is 0%.
ORS 468.190(1)(c) Alternative Methods	No alternative investigated.
ORS 468.190(1)(d) Savings or Increase in Costs	No savings or increase in costs.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

***Compliance and Other Tax Credits***

The facility is in compliance with Department rules and statutes and with EQC orders. DEQ permits issued to this facility:

Solid Waste number 442 issued 11/24/95  
Compost number CI-008 issued 4/30/99

Reviewer: Maggie Vandehey, DEQ



State of Oregon  
Department of  
Environmental  
Quality

# Tax Credit Review Report

EQC 0109

Director's  
Recommendation: **APPROVE**

Applicant **Truax Corporation**  
Application No. **5565**  
Eligible Facility Cost **\$48,458**  
Percentage Allocable **100%**  
Useful Life **10 years**

## Pollution Control Facility: USTs

### Final Certification

ORS 468.150 -- 468.190

OAR 340-016-0005 -- 340-016-0080

### *Applicant Identification*

Organized as: **an S Corporation**

Business: **a Retail Gas Station**

Taxpayer ID: **93-0673691**

The applicant's address is:

**P O Box 3002  
Corvallis, OR 97339**

### *Facility Identification*

The certificate will identify the facility as:

**Singlewall fiberglass piping, sumps,  
automatic shutoff valves and Stage II vapor  
recovery piping.**

The applicant is the owner of DEQ Facility ID 6979  
located at:

**Texaco Gas Station  
1115 Pacific Highway  
Cottage Grove, OR 97424**

### *Technical Information*

The applicant installed pollution control equipment to meet EPA requirements for underground storage tanks.

### *Eligibility*

ORS 468.155 The **principal purpose** of this **installation** is to prevent, control or reduce a  
(1)(a) substantial quantity of air and water pollution. The claimed facility meets  
EPA requirements for underground storage tanks and the requirements under  
OAR Chapter 340, Division 150.

OAR-016-0025 Installation or construction of facilities which will be used to detect, deter, or  
(2)(g) prevent spills or unauthorized releases.

ORS 468.155 Replacement: The tank upgrade is not a replacement for previously certified (3)(e) equipment.

***Timeliness of Application***

The application was submitted within the timing requirements of ORS 468.165 (6).

<i>Construction Started</i>	<b>05/01/99</b>
<i>Construction Completed</i>	<b>07/01/99</b>
<i>Facility Placed into Operation</i>	<b>07/01/99</b>
<i>Application Received</i>	<b>05/04/01</b>

***Facility Cost***

Claimed	\$48,458
Less Ineligible Costs	(\$0)
Eligible	<b>\$48,458</b>

Invoices or canceled checks substantiated the cost of the facility.

***Facility Cost Allocable to Pollution Control***

The only factor used to determining that **100%** percent of the facility cost is allocable to pollution control is the percentage of time the facility is used for pollution control.

***Compliance and Other Tax Credits***

The facility is in compliance with Department rules and statutes and with EQC orders.

The EQC issued 46 certificates to **Truax Corporation** with the following certificates issued to upgrade tank systems at 1115 Pacific Hwy in Cottage Grove.

<b>App. #</b>	<b>Description of Facility</b>	<b>Certified Cost</b>	<b>% Allocable</b>	<b>Cert. #</b>	<b>Issue Date</b>
3339	UPGRADE UST FACILITY	\$9,409.00	100	2516	14-Jun-91
3661	UPGRADE FACILITY TO MEET EPA REQUIREMENTS	\$42,360.00	100	2785	13-Dec-91

Reviewer: Barbara J. Anderson, DEQ  
Maggie Vandehey, DEQ



State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant **Pope & Talbot, Inc.**  
Application No. **5566**  
Facility Cost **\$1,235,100**  
Percentage Allocable **100%**  
Useful Life **10 years**

## Tax Credit Review Report

EQC 0109

### **Pollution Control Facility: Air Final Certification**

ORS 468.150 -- 468.190  
OAR 340-016-0005 -- 340-016-0080

#### ***Applicant Identification***

Organized as: **a C corporation**  
Business: **manufacturer of bleach kraft  
pulp**  
Taxpayer ID: **91-0470860**

The applicant's address is:

**1500 SW First Avenue, Suite 200  
Portland, OR 97201**

#### ***Facility Identification***

The certificate will identify the facility as:

**Turbosonic Wet Scrubber**

The applicant is the owner of the facility located at:

**30480 American Drive  
Halsey, OR 97348**

#### ***Technical Information***

The claimed facility is a Turbotak cross-flow wet scrubber manufactured by Turbosonic Canada and associated structural steel and concrete, scrubber fan, FRP exterior ductwork, pumps, piping, motors, and instrumentation. The scrubber is sized to treat 27,000 acfm chlorine dioxide process exhaust from the five-stage bleaching process and a small amount from the chlorine storage tanks and chlorine building. The scrubber uses a fine atomized solution of 7-1/2% caustic soda and 2-1/2% sodium sulfide to remove sub-micron and larger particulate, acid gases, odors, fumes and vapors.

Chlorine dioxide emissions were not produced at the plant prior to 2000 when the mill upgraded from a four-stage to a five stage bleaching process and began using chlorine dioxide and hydrogen peroxide as the main bleaching agents.

The new scrubber removal efficiency rating is 94% and reduces chlorinated organics from 5.4 to 0 ppm and reduces chlorine dioxide from 41.4 to 0.4 ppm. The applicants permit requires total chlorinated organics to be below 10 ppm.

**Eligibility**

ORS 468.155 (1)(a)(A) The **principal purpose** of this **new wet scrubber installation** is to comply with a requirement imposed by DEQ to **control** air pollution.

The Pulp & Paper and Paperboard Point Source Category Rules, commonly known as the Pulp & Paper Cluster Rules, were adopted by the DEQ in September 1998, and are imposed by the Code of Federal Regulation (CFR), Title 40, Part 430, part 63.

ORS 468.155 (1)(b) The control is accomplished by the elimination of air contaminants and the use of a wet scrubber that meets the definition in ORS 468A.005 of an air-cleaning device.

ORS 468.155(3)(e) **Replacement:** No pollution control tax credits were issued for the previously existing scrubbers or for the temporary bleaching sequence. A hypochlorous acid bleaching sequence was temporarily used to control the formation of AOX and dioxin while the Cluster Rules were being finalized. The hypochlorous acid bleaching sequence emissions were vented through three existing caustic packed-bed scrubbers. They did not have adequate capacity to scrub the emissions from the new process. CLO<sub>2</sub> requires a solution of caustic and sodium sulfide while chlorine and hypochlorous acid can be scrubbed with caustic.

**Timeliness of Application**

The application was submitted within the timing requirements of ORS 468.165 (6).

<i>Construction Started</i>	<u>1/1/2000</u>
<i>Construction Completed</i>	<u>3/17/2000</u>
<i>Facility Placed into Operation</i>	<u>3/17/2000</u>
<i>Application Received</i>	<u>5/4/2001</u>
<i>Application Substantially Complete</i>	<u>7/25/2001</u>

**Facility Cost**

Claimed Facility Cost	\$ 1,235,100
Ineligible Costs:	<u>\$ 0</u>
Eligible Facility Cost	<b>\$ 1,235,100</b>

Copies of purchase orders, invoices and carbon copies of checks substantiated 100% of the claimed facility cost.

**Facility Cost Allocable to Pollution Control**

The following factors were used to determine the 100% percentage of facility cost allocable to pollution control.

<u>Factor</u>	<u>Applied to This Facility</u>
ORS 468.190(1)(a) Salable or Usable Commodity	No salable or useable commodity.
ORS 468.190(1)(b) Return on Investment	The useful life of the facility used for the return on investment consideration is 20 years. No gross annual revenues were associated with this facility.



ORS 468.190(1)(c) Alternative Methods

No alternative methods were considered. Two scrubber manufacturers were considered. The Turbotak scrubber was considered the most reliable for this application.

ORS 468.190(1)(d) Savings or Increase in Costs

The annual operating costs would be approximately the same as before the installation of the claimed facility.

ORS 468.190(1)(e) Other Relevant Factors

No other relevant factors.

***Compliance and Other Tax Credits***

The applicant states the facility is in compliance with all DEQ, Regional Air Authority, and EPA regulations. DEQ permits issued to facility include:

Air Permit Number 22-3501, issued 3/2/98

Water Permit Number 101114, issued 6/30/93

Stormwater Permit Number 1200Z

The EQC issued **2** tax credit certificates to **Pope & Talbot, Inc.** at this facility location.

App. #	Description of Facility	Certified Cost	% Allocable	Cert. #	EQC Date
1728	Upgrading of existing electrostatic precipitator; installation of additional transformer/rectifier, research Cottrell model no. SIRT-68-135, and 54 pneumatic vibrators.	\$309,401	84	1814	11/22/85
4398	Oxygen delignification facility	\$23,774,824	100	3544	11/17/95 Reissued 12/20/99 to Selco Service Corporation

Reviewers: Lois L. Payne, SJO Consulting Engineers  
Dennis Cartier, SJO Consulting Engineers  
Maggie Vandehey, DEQ



State of Oregon  
Department of  
Environmental  
Quality

# Tax Credit Review Report

EQC 0109

## Pollution Control Facility: Solid Waste Final Certification

ORS 468.150 -- 468.190

OAR 340-016-0005 -- 340-016-0080

### *Applicant Identification*

Organized as: **a S corporation**

Business: **Solid waste collection  
and recycling facility**

Taxpayer ID: **# 93-0870937**

The applicant's address is:

**P. O Box 1000  
2904 S. Wyooski Rd.  
Newberg, Oregon 97132**

Director's  
Recommendation: **APPROVE**

Applicant: **Newberg Transfer & Recycling  
Center, Inc.**

Application No.: **5568**

Facility Cost: **\$35,358**

Percentage Allocable: **100%**

Useful Life: **10 years**

### *Facility Identification*

The certificate will identify the facility as:

**1993 Marathon side eject cardboard baler**

The applicant is the owner of the facility located at:

**2904 S. Wyooski Rd.  
Newberg, Oregon 97132**

### *Technical Information*

This Marathon baler is used to compress loose corrugated cardboard, old boxes, into dense wire tied bales. This baler includes a conveyor belt feed mounted into the floor of the recycling facility. Baled cardboard is sold to paper mills to be recycled into linerboard or corrugated cardboard.

### *Eligibility*

ORS 468.155 (1)(a) The **sole purpose** of this **new equipment** is to prevent, control, or reduce a substantial quantity of **solid waste**. This baler is used exclusively to process old corrugated cardboard, a recyclable material.

ORS 468.155 (3)(e) **Replacement:** The baler replaced an older and smaller model that was not certified.

ORS 468.155 This baler is used to process recyclable material and is part of a process that  
(1)(b)(D) recovers material that would otherwise be solid waste as defined in ORS  
459.005.

***Timeliness of Application***

The application was submitted within the timing requirements of ORS 468.165(6).

<i>Construction Started</i>	<u>01/01/00</u>
<i>Construction Completed</i>	<u>02/01/01</u>
<i>Facility Placed into Operation</i>	<u>02/01/01</u>
<i>Application Received</i>	<u>05/09/01</u>

***Facility Cost***

Facility Cost	\$36,358
Salvage Value	<u>(\$1,000)</u>
Eligible Facility Cost	<b><u>\$35,358</u></b>

Invoices substantiated the facility cost and the salvage value of the old baler.

***Facility Cost Allocable to Pollution Control***

In accordance with ORS 468.190(3), the only factor used in determining the portion of the claimed facility cost allocable to pollution control is the 100% percentage of time the facility is used for pollution control.

***Compliance and Other Tax Credits***

The facility is in compliance with Department rules and statutes and with EQC orders. There were no DEQ permits issued to this facility. The EQC issued **Newberg Garbage Service, Inc.** 9 tax credit certificates at this facility location.

Reviewer: William R Bree, DEQ



State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant	<b>PED Manufacturing, Ltd.</b>
Application No.	<b>5569</b>
Facility Cost	<b>\$19,303</b>
Percentage Allocable	<b>100%</b>
Useful Life	<b>10 years</b>

# Tax Credit Review Report

EQC 0109

## **Pollution Control Facility: Air Final Certification**

ORS 468.150 -- 468.190  
OAR 340-016-0005 -- 340-016-0080

### ***Applicant Identification***

Organized as: **a C corporation**  
Business: **a metal casting foundry**  
Taxpayer ID: **93-0605811**

The applicant's address is:

**13963 Fir St.  
Oregon City, OR 97045**

### ***Facility Identification***

The certificate will identify the facility as:

**A 3,200 cfm LMC-FSD pulse jet filter  
baghouse**

The applicant is the owner of the facility located at:

**13963 Fir St.  
Oregon City, OR 97045**

### ***Technical Information***

The facility is a new baghouse used to capture dust from metal grinding and sandblast operations. The facility is an LMC-FSD pulse jet baghouse with a rated efficiency of 99.8% and air volume of 3,200 cfm.

The dust generated in the past was swept up and disposed of in the landfill prior to the installation of the new baghouse. The sandblast and shotblast cabinets that are now connected to the pulse jet filter baghouse were previously connected to the existing Torit Dust Collector. The new baghouse allows the Torit Dust Collector to run more efficiently and thereby reduces emissions.

The grinding, sandblast and shotblast cabinets now have adequate ventilation to capture fugitive emissions reducing PM and HAP exposure.

**Eligibility**

- ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment installation** is to **reduce** a substantial quantity of air pollution.
- ORS 468.155 (1)(b)(B) The **reduction** is accomplished by the **elimination of air contaminants** and the use of an air cleaning device as defined in ORS 468A.005.
- ORS 468.155 (3)(e) **Replacement:** The baghouse does not replace the existing dust collection system.

**Timeliness of Application**

The application was submitted within the timing requirements of ORS 468.165 (6).

<i>Construction Started</i>	<b>10/30/2000</b>
<i>Construction Completed</i>	<b>12/09/2000</b>
<i>Placed into Operation</i>	<b>12/12/2000</b>
<i>Application Received</i>	<b>05/10/2001</b>

**Facility Cost**

Claimed Cost	\$19,303
Ineligible Cost	(\$0)
Eligible Cost	<b>\$19,303</b>

Invoices substantiated the facility cost.

**Facility Cost Allocable to Pollution Control**

The only factor used in determining the portion of the claimed facility cost allocable to pollution control was the 100% percentage of time the facility is used for pollution control.

**Compliance and Other Tax Credits**

The facility is in compliance with Department rules and statutes and with EQC orders. DEQ permits issued to the site:

- ACDP, #03-2505, issued 2/16/95
- Stormwater 1200Z, #101827, issued 10/30/97

Other tax credits issued to **PED Manufacturing, Ltd.:**

App. #	Description of Facility	Certified Cost	% Allocable	Cert. #	Issue Date
4549	BAGHOUSE	\$25,552.00	0		Denied 7/31/96
4550	Batch pretreatment system: two 1500 gallon equalization tanks, a 2 cubic foot filter press, a 500 gallon acid tank, a 600 gallon treatment tank, and associate electrical and plumbing system.	\$51,307.00	100	3605	2/23/96
4902	New 6,000 CFM FRD Counterflow Vertical Flume Scrubber System manufactured by Active Control Technologies, Inc. Serial # ACSB-2000.	\$39,025.00	100	3902	6/11/98
5380	Flash Fire Furnace Upgrade	\$27,272.00	100	4339	5/17/00

Reviewer: Maggie Vandehey, DEQ



State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant **WSCO Petroleum Corp.**  
Application No. **5570**  
Eligible Facility Cost **\$152,241**  
Percentage Allocable **90%**  
Useful Life **10 years**

# Tax Credit Review Report

EQC 0109

## **Pollution Control Facility: USTs**

### **Final Certification**

ORS 468.150 -- 468.190

OAR 340-016-0005 -- 340-016-0080

### ***Applicant Identification***

Organized as: **a C Corporation**  
Business: **a Retail Gas Station**  
Taxpayer ID: **97-0757213**

The applicant's address is:

**2929 NW 29<sup>th</sup>  
Portland, OR 97210-1705**

### ***Facility Identification***

The certificate will identify the facility as:

**Two doublewall plastic/steel composite underground storage tanks (one has two compartments), doublewall flexible plastic piping, spill containment basins, automatic tank gauge system, turbine leak detectors, overfill alarm, sumps, automatic shutoff valves, oil/water separator, Stage I and Stage II vapor recovery piping.**

The applicant is the owner of DEQ Facility ID **6220** located at:

**Astro #227  
449 E. Main Street  
Ashland, OR 97520**

### ***Technical Information***

The applicant installed pollution control equipment to meet EPA requirements for underground storage tanks.

**Eligibility**

ORS 468.155 (1)(a) The **principal purpose** of this **installation** is to prevent, control or reduce a substantial quantity of air and water pollution. The claimed facility meets EPA requirements for underground storage tanks and the requirements under OAR Chapter 340, Division 150.

OAR 340-016-0025 (2)(g) Installation of the facilities will be used to detect, deter, or prevent spills or unauthorized releases.

**Timeliness of Application**

The application was submitted within the timing requirements of ORS 468.165 (6).

<i>Construction Started</i>	<b>02/01/99</b>
<i>Construction Completed</i>	<b>07/03/99</b>
<i>Facility Placed into Operation</i>	<b>07/03/99</b>
<i>Application Received</i>	<b>05/10/01</b>

**Facility Cost**

Claimed	\$153,113
Less Ineligible Costs – Portion of tank gauge system used for inventory control (10%).	(\$872)
Eligible	<u>\$152,241</u>

Invoices and canceled checks substantiated the cost of the facility.

**Facility Cost Allocable to Pollution Control**

The cost for non-corrosion protected portion of tank and piping system is \$14,671. This is **10%** of the eligible facility cost, leaving the remaining **90%** allocable to pollution control.

**Compliance and Other Tax Credits**

The facility is in compliance with Department rules and statutes and with EQC orders.

The EQC issued **WSCO Petroleum Corp.** 3 tax credit certificates, none of which were issued to this facility location.

Reviewer: Barbara J. Anderson, DEQ  
Maggie Vandehey, DEQ



State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant	Superior Tire Service, Inc.
Application No.	5572
Facility Cost	\$124,234
Percentage Allocable	100%
Useful Life	10 years

# Tax Credit Review Report

EQC 0109

## **Pollution Control Facility: Air Final Certification**

ORS 468.150 -- 468.190  
OAR 340-016-0005 -- 340-016-0080

### *Applicant Identification*

Organized as: **a C corporation**  
Business: **retread tires**  
Taxpayer ID: **93-0454110**

The applicant's address is:

**Michelin Retread Technologies**  
**4230 27th Court SE**  
**Salem, OR 97302**

### *Facility Identification*

The certificate will identify the facility as:

**A Turner Envirollogic orifice scrubber unit, (S/N OS 6.0V3X); 2 LMI pumps, model B921-392SU, (S/N 010112489 and 010112486); and an Industrial Air Products fan, model 182 BSW CL2 APR 9F, (S/N 20772-1)**

The applicant is the owner of the facility located at:

**4230 27th Court SE**  
**Salem, OR 97302**

### *Technical Information*

The applicant claimed an orifice scrubber, two pumps and a fan to capture fine particulate from the buffing machines. Exhaust emissions produced by the buffing system were emitted into the atmosphere without filtration prior to the addition of the orifice scrubber. The opacity readings have been reduced from a range of 15-20% to 0-5% with the addition of the orifice scrubber.

Hoods collect dust at the buffing machines and transport it by an existing exhaust fan to the crumb rubber trailer. The larger particulate settles in the trailer for removal from the site. A second fan delivers the particulate-laden air to the orifice scrubber. Solids collected by the scrubber are removed by a continuous bleed from the bottom hopper.



Probes located in the scrubber sump measure oxidation potential and pH. Sodium hypochlorite is added to provide oxidation potential for the odorous compounds. Caustic is added to maintain a slightly alkaline solution to minimize hypochlorite loss. Metering pumps are provided to add chemicals from drums.

**Eligibility**

- ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment installation** is to reduce a substantial quantity of air pollution.
- ORS 468.155 (1)(b)(B) The **reduction** is accomplished by the **elimination of air contaminants** and the use of an air cleaning device as defined in ORS 468A.005.
- ORS 468.155 (3)(e) **Replacement:** The scrubber does not replace a previously certified facility.

**Timeliness of Application**

The application was submitted within the timing requirements of ORS 468.165 (6).

<i>Construction Started</i>	<u>11/01/2000</u>
<i>Construction Completed</i>	<u>05/04/2001</u>
<i>Placed into Operation</i>	<u>03/30/2001</u>
<i>Application Received</i>	<u>05/14/2001</u>

**Facility Cost**

Claimed Cost	\$127,603
Ineligible Cost	
Start-up costs	(\$3,369)
Eligible Cost	<u>\$124,234</u>

Invoices substantiated the facility cost.

**Facility Cost Allocable to Pollution Control**

The following factors were considered in determining the 100% percentage of the facility cost allocable to pollution control.

<u>Factor</u>	<u>Applied to This Facility</u>
ORS 468.190(1)(a) Salable or Usable Commodity	No salable commodity.
ORS 468.190(1)(b) Return on Investment (ROI)	The useful life of the facility used for the ROI consideration is 10 years. The orifice scrubber does not provide positive revenue.
ORS 468.190(1)(c) Alternative Methods	No alternative investigated.
ORS 468.190(1)(d) Savings or Increase in Costs	No savings or increase in costs were identified.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

**Compliance and Other Tax Credits**

The facility is in compliance with Department rules and statutes and with EQC orders.  
DEQ permits issued to the site:  
ACDP permit number 24-0031, issued 1/25/00

No other tax credits have been issued to the applicant.

Reviewers: Maggie Vandehey, DEQ



State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant	<b>Willamette Industries, Inc.</b>
Application No.	<b>5573</b>
Facility Cost	<b>\$79,262</b>
Percentage Allocable	<b>100%</b>
Useful Life	<b>7 years</b>

# Tax Credit Review Report

EQC 0109

## **Pollution Control Facility: Water Final Certification**

ORS 468.150 -- 468.190

OAR 340-016-0005 -- 340-016-0080

### ***Applicant Identification***

Organized as: **a C corporation**

Business: **manufacturer of linerboard  
and bag paper**

Taxpayer ID: **93-0312940**

The applicant's address is:

**1300 SW Fifth Avenue, Suite 3800  
Portland, OR 97201**

### ***Facility Identification***

The certificate will identify the facility as:

**Vector truck unloading station**

The applicant is the owner of the facility located at:

**Albany Paper Mill  
3251 Old Salem Rd.  
Albany, OR 97321**

### ***Technical Information***

The truck unloading station protects soil and groundwater by capturing liquid waste and directing it to the process sewer. The station consists of a concrete ramp for unloading vector trucks into a dumpster located in a pit. Vector trucks collect debris, primarily wood fiber, from around the mill. Liquid waste is directed to the mill process sewer and solids are disposed of at an appropriate landfill. Liquids drained onto the ground prior to the installation of the truck unloading station.

### ***Eligibility***

ORS 468.155 The **principal purpose** of this **new installation of concrete ramp and pit** is to  
(1)(a)(A) reduce water pollution in compliance with a DEQ NPDES permit.

ORS 468.155 The control is accomplished by the elimination of industrial waste and the use of  
(1)(b)(A) treatment works for industrial waste as defined in ORS 468B.005.

***Timeliness of Application***

The application was submitted within the timing requirements of ORS 468.165 (6).

<i>Construction Started</i>	<u>04/30/1999</u>
<i>Construction Completed</i>	<u>06/15/1999</u>
<i>Placed into Operation</i>	<u>06/15/1999</u>
<i>Application Received</i>	<u>05/17/2001</u>
<i>Application Substantially Complete</i>	<u>07/03/2001</u>

***Facility Cost***

Claimed Cost	\$ 79,262
Eligible Cost	<u>\$ 79,262</u>

KPMG, LLC, performed an accounting review on behalf of the applicant. Copies of invoices substantiated the claimed facility cost.

***Facility Cost Allocable to Pollution Control***

According to ORS 468.190 (1), the following factors were considered in determining the percentage of the facility cost allocable to pollution control.

<u>Factor</u>	<u>Applied to This Facility</u>
ORS 468.190(1)(a) Salable or Usable Commodity	No salable commodity.
ORS 468.190(1)(b) Return on Investment (ROI)	The useful life of the facility used for the ROI consideration is 7 years. There is no positive cash flow associated with the claimed facility.
ORS 468.190(1)(c) Alternative Methods	No alternative investigated.
ORS 468.190(1)(d) Savings or Increase in Costs	No savings or increase in costs were identified.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

***Compliance and Other Tax Credits***

The facility is in compliance with Department rules and statutes and with EQC orders. DEQ permits issued to the site:

- NPDES-Stormwater 1200-Z, issued 7/22/97
- NPDES-Wastewater permit # 101345, issued 11/30/95

The EQC issued 146 tax credit certificates to Willamette Industries, Inc., 7 of which were issued to this facility location:

App. #	Description of Facility	Certified Cost	% Allocable	Cert. #	Issue Date
1729	EVAPORATOR FOUL CONDENSATE OXYGEN TREATMENT SYSTEM.	\$63,798.00	100	1797	27-Sep-85
2905	INSTALL A 36" DIAMETER POLYETHYLENE PIPE FROM MILL TO TREATMENT PONDS.	\$758,874.00	100	2610	24-Jul-91
3361	INSTALL A BIOLOGICAL OXYGEN ANALYZER FOR AERATION BASIN OPERATION	\$49,754.00	100	2612	24-Jul-91
3748	DATA ACQUISITION SYSTEM	\$34,903.00	100	2935	16-Oct-92
3749	A COLLECTION/REDUCTION SYSTEM	\$178,667.00	100	3056	23-Apr-93
5300	Grits and dregs concrete storage and containment and sump system.	\$100,280.00	100	4309	17-May-00
5301	Six Aerators	\$169,065.00	100	4310	17-May-00

Reviewers: SJO Consulting Engineers  
Maggie Vandehey, DEQ



State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant	<b>Willamette Industries, Inc.</b>
Application No.	<b>5574</b>
Facility Cost	<b>\$84,195</b>
Percentage Allocable	<b>100%</b>
Useful Life	<b>7 years</b>

# Tax Credit Review Report

EQC 0109

## **Pollution Control Facility: Water Final Certification**

ORS 468.150 -- 468.190  
OAR 340-016-0005 -- 340-016-0080

### ***Applicant Identification***

Organized as: **a C corporation**  
Business: **manufacturer of printing ink,  
dies, and plates**  
Taxpayer ID: **93-0312940**

The applicant's address is:

**1300 SW Fifth Avenue, Suite 3800  
Portland, OR 97201**

### ***Facility Identification***

The certificate will identify the facility as:

**Beckart wastewater treatment filter press**

The applicant is the owner of the facility located  
at:

**Beaverton Specialty Products Division  
5570 SW Western Ave.  
Beaverton, OR 97005**

### ***Technical Information***

The Beckart wastewater treatment filter press is designed to hold 50 cubic feet of solids and uses 1000 mm filter frames. The filter press was added to an existing wastewater treatment plant and provides a 60% increase in capacity.

The filter press processes water from the Beaverton location and from three other locations that produce corrugated containers, preprinted liner board for corrugated containers and grocery bags. The previously existing system was inadequate to keep up with production volumes.

### ***Eligibility***

- ORS 468.155 (1)(a)(A) The **principal purpose** of this **new installation of equipment** is to reduce water pollution in compliance with a DEQ NPDES permit.
- ORS 468.155 (1)(b)(A) The filter press eliminates industrial waste and the use of treatment works for industrial waste as defined in ORS 468B.005.
- ORS 468.155(3)(e) The filter press did not replace a previously certified pollution control facility.

***Timeliness of Application***

The application was submitted within the timing requirements of ORS 468.165 (6).

<i>Construction Started</i>	<u>06/30/1999</u>
<i>Construction Completed</i>	<u>08/31/1999</u>
<i>Facility Placed into Operation</i>	<u>08/31/1999</u>
<i>Application Received</i>	<u>05/17/2001</u>
<i>Application Substantially Complete</i>	<u>07/03/2001</u>

***Facility Cost***

Claimed Cost	\$ 84,195
Eligible Cost	<u>\$ 84,195</u>

KPMG, LLC, performed an accounting review on behalf of the applicant. Invoices substantiated the entire claimed cost.

***Facility Cost Allocable to Pollution Control***

The following factors were considered to determine that 100% percent of the facility cost is allocable to pollution control.

<u>Factor</u>	<u>Applied to This Facility</u>
ORS 468.190(1)(a) Salable or Usable Commodity	No salable commodity.
ORS 468.190(1)(b) Return on Investment (ROI)	The useful life of the facility used for the ROI consideration is 7 years. No gross annual revenues are associated with the claimed facility.
ORS 468.190(1)(c) Alternative Methods	No alternative investigated.
ORS 468.190(1)(d) Savings or Increase in Costs	No savings or increase in costs were identified.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

***Compliance and Other Tax Credits***

The facility is in compliance with Department rules and statutes and with EQC orders. DEQ permits issued to the site:

- NPDES-Stormwater 1200-Z, issued 7/22/97
- NPDES-Wastewater 100-J, issued 8/28/96
- ACDP 34-0009, issued 7/12/99

The EQC issued 146 tax credit certificates to **Willamette Industries, Inc.**, 4 of which were issued to this facility location:

App. #	Description of Facility	Certified Cost	% Allocable	Cert. #	Issue Date
2732	INSTALL WASTE TREATMENT SYSTEM	\$214,446.00	100	2638	18-Sep-91
2742	RECYCLE WASTE	\$85,341.00	100	2104	19-Jan-90
3522	UPGRADE FACILITY TO MEET EPA REQUIREMENTS	\$88,715.00	93	2760	13-Dec-91
3776	CFC RECYCLING	\$2,800.00	100	2884	24-Jul-92

Reviewers: Lois L. Payne, SJO Consulting Engineers  
Dennis E. Cartier, SJO Consulting Engineers  
Maggie Vandehey, DEQ





State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant **Willamette Industries, Inc.**  
Application No. **5575**  
Facility Cost **\$ 97,744**  
Percentage Allocable **100%**  
Useful Life **7 years**

# Tax Credit Review Report

EQC 0109

## **Pollution Control Facility: Water Final Certification**

ORS 468.150 -- 468.190  
OAR 340-016-0005 -- 340-016-0080

### ***Applicant Identification***

Organized as: **a C corporation**  
Business: **manufacturer of plywood**  
Taxpayer ID: **93-0312940**

The applicant's address is:

**1300 SW Fifth Avenue, Suite 3800  
Portland, OR 97201**

### ***Facility Identification***

The certificate will identify the facility as:

**Karcher ASA600 Water Recycle System and  
Vehicle Washing Cover**

The applicant is the owner of the facility located  
at:

**Springfield Plywood Division  
419 S. 28<sup>th</sup> St.  
Springfield, OR 97477**

### ***Technical Information***

The claimed facility is a Karcher ASA600 recycle water system covered by a three-sided rigid frame building on a 30" x 50' sloped concrete slab floor. The Karcher system includes a prefilter, a 500-gallon clean water storage tank, a reclaimed water storage tank and a concrete settling tank. The facility is used to recover water, oil and residue during vehicle washing. Water used for washing vehicles ran onto the ground prior to installation of the facility.

### ***Eligibility***

- ORS 468.155 (1)(a)(A) The **principal purpose** of this **new installation of equipment** is to reduce water pollution in compliance with the applicant's NPDES permit.
- ORS 468.155 (1)(a)(A) The **principal purpose** of the clean water storage tank is **not** to reduce water pollution. It's purpose is to store water used to wash vehicles.
- ORS 468.155 (1)(b)(A) The control is accomplished by the elimination of industrial waste and the use of treatment works for industrial waste as defined in ORS 468B.005.

**Timeliness of Application**

The application was submitted within the timing requirements of ORS 468.165 (6).

<i>Construction Started</i>	<b>07/01/1999</b>
<i>Construction Completed</i>	<b>03/31/2000</b>
<i>Placed into Operation</i>	<b>03/31/2000</b>
<i>Application Substantially Complete</i>	<b>08/03/2001</b>
<i>Application Received</i>	<b>05/17/2001</b>

**Facility Cost**

Claimed Cost	\$ 99,002
Ineligible Cost	
500-gallon clean water storage tank	-\$625
Maintenance, spare parts, calculation error	- \$ 633
Eligible Cost	<u>\$ 97,744</u>

KPMG, LLC, performed an accounting review on behalf of the applicant. Copies of invoices substantiated 98% of the total claimed cost.

**Facility Cost Allocable to Pollution Control**

The following factors were considered in determining the percentage of the facility cost allocable to pollution control.

<b>Factor</b>	<b>Applied to This Facility</b>
ORS 468.190(1)(a) Salable or Usable Commodity	No salable commodity.
ORS 468.190(1)(b) Return on Investment (ROI)	The useful life of the facility used for the ROI consideration is 7 years. Calculated according to rule, the percentage of the facility cost properly allocable to pollution control is 100%.
ORS 468.190(1)(c) Alternative Methods	No alternative investigated.
ORS 468.190(1)(d) Savings or Increase in Costs	No savings or increase in costs were identified.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

**Compliance and Other Tax Credits**

The facility is in compliance with Department rules and statutes and with EQC orders.

DEQ permits issued to the site:

NPDES-Stormwater 1200-Z.

The EQC issued 146 tax credit certificates to **Willamette Industries, Inc.**, 3 of which were issued to this facility location:

App. #	Description of Facility	Certified Cost	% Allocable	Cert. #	Issue Date
1035	LOG YARD PAVING.	\$113,295.00	100	952	26-Jan-79
1226	FANS, DUCTWORK, AND CONTROLS TO ROUTE THE NEW VENEER DRYER EMISSIONS TO THE BOILER.	\$79,173.00	100	1140	17-Oct-80
4978	A Geoenergy E-Tube Electrostatic Precipitator System, model 1013-248 2TR.	\$1,423,208.00	100	4248	20-Dec-99

Reviewers: SJO Consulting Engineers  
Maggie Vandehey, DEQ



State of Oregon  
Department of  
Environmental  
Quality

Director's Recommendation:	<b>APPROVE</b>
Applicant	<b>Cascade Steel Rolling Mills, Inc.</b>
Application No.	<b>5576</b>
Facility Cost	<b>\$858,412</b>
Percentage Allocable	<b>100%</b>
Useful Life	<b>10 years</b>

# Tax Credit Review Report

EQC 0109

## **Pollution Control Facility: Air Final Certification**

ORS 468.150 -- 468.190  
OAR 340-016-0005 -- 340-016-0080

### ***Applicant Identification***

Organized as: **a C corporation**  
Business: **scrap iron & steel rolling mill**  
Taxpayer ID: **93-0871545**

The applicant's address is:

**3200 N Hwy. 99W  
McMinnville, OR 97128**

### ***Facility Identification***

The certificate will identify the facility as:

**A four-compartment baghouse, one  
800-hp Westinghouse, model 1615H-36  
motor and double inlet Buffalo Forge  
design fan.**

The applicant is the owner of the facility located at:

**3200 N Hwy. 99W  
McMinnville, OR 97128**

### ***Technical Information***

Cascade Steel Rolling Mills owns and operates a scrap iron and steel mini-mill in McMinnville. The mill uses an electric arc furnace to melt scrap metal prior to forming billets. The billets are processed into products in the applicant's hot rolling and rod mills. The furnace process generates considerable particulate emissions that are captured by a direct shell evacuation system and roof canopy on the melt shop.

The applicant claimed a four-compartment baghouse, an 800-horse power double inlet Buffalo Forge design fan with a Westinghouse model 1615H-36 motor. The claimed baghouse adds about 60,000 cfm to the existing 500,000 cfm baghouse. It increases the overall airflow draft from the furnace and canopy while maintaining lower pressure drops across the entire baghouse system. The claimed baghouse reduces melt shop roof emissions when the direct shell evacuation system is not in place on the electric arc furnace during charging and tapping events (loading the furnace with scrap metal and draining the melted metal.) It is installed west of the existing baghouse and is the first of two additions to increase

capacity.

Material collected from the baghouse is classified as hazardous waste (K061) and is disposed in Envirosource, Idaho and Zinc Nacional, Mexico.

### **Eligibility**

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment installation** is to **reduce** a substantial quantity of air pollution.

ORS 468.155 (1)(b)(B) The **reduction** is accomplished by the **elimination of air contaminants** and the use of an air cleaning device as defined in ORS 468A.005.

ORS 468.155 (3)(e) **Replacement:** The company built a new meltshop in 1991 and utilized the 12 compartment baghouse and the two 800 hp motors and Buffalo Forge fans certified in 1984. The system had a design flow rate of 500,000 cfm. The new baghouse system increases capacity and is designed to reduce particulate emissions.

### **Timeliness of Application**

The application was submitted within the timing requirements of ORS 468.165 (6).

*Construction Started*

12/1998

*Construction Completed*

05/2001

*Placed into Operation*

05/2001

*Application Received*

05/23/2001

### **Facility Cost**

Claimed Cost

\$977,542

Ineligible Cost

Serbaco invoices – compartments not installed in this baghouse

-119,130

Eligible Cost

\$858,412

Invoices and labor records substantiated the facility cost. Internal labor was charged to the baghouse project at the actual hourly rate plus 33% for fringe benefits for a total of \$158,222.

### **Facility Cost Allocable to Pollution Control**

The following factors were used to determine the percentage of the facility cost allocable to pollution control.

<b>Factor</b>	<b>Applied to This Facility</b>
ORS 468.190(1)(a) Salable or Usable Commodity	No salable or usable commodity.
ORS 468.190(1)(b) Return on Investment	The useful life of the facility used for the return on investment consideration is 10 years. Calculated according to rule, the percentage allocable to pollution control is 100%.
ORS 468.190(1)(c) Alternative Methods	No alternative methods investigated.
ORS 468.190(1)(d) Savings or Increase in Costs	No savings or increase in costs.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

**Compliance and Other Tax Credits**

The facility is in compliance with Department rules and statutes and with EQC orders.

DEQ permits issued to the site:

- Title V, number 36-5034, issued 9/1/98
- NPDES, number 101487, issued 6/23/97
- Stormwater permit, number 1200-Z, issued 7/22/97

Other tax credits issued to **Cascade Steel Rolling Mills, Inc.:**

App. #	Description of Facility	Certified Cost	% Allocable	Cert. #	Issue Date
1705	Dust collection system consisting of a 500,000 CFM baghouse, two Westinghouse model 1615H-36 motors, two double inlet Buffalo Forge fans, roof canopy, duct work and controls.	\$1,761,104	100		02-Nov-84
1706	4 <sup>th</sup> hole (direct shell evacuation system with water cooled duct work, furnace pressure controls and necessary duct work to connect to the 500,000 CFM baghouse).	\$365,669	100		02-Nov-84

Reviewer: Maggie Vandehey, DEQ



State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant **Bowco Industries, Inc.**  
Application No. **5577**  
Facility Cost **\$8,200**  
Percentage Allocable **100%**  
Useful Life **5 years**

# Tax Credit Review Report

EQC 0109

## Reclaimed Plastic Products

### Final Certification

ORS 468.451 -- 468.491

OAR 340-017-0010 -- 340-017-0055

### *Applicant Identification*

Organized as: **a corporation**

Business: **Plastic recycling company**

Taxpayer ID: **93-1033851**

The applicant's address is:

**5486 SE International Way  
Milwaukie, Oregon 97222**

### *Technical Information*

The facility is a set of eight end piece molds for manufacturing DI style manhole steps using reclaimed plastic.

### *Eligibility*

ORS 468.461 (1) Any person may apply to the EQC for certification of an investment made to allow the person to collect, transport or process reclaimed plastic, or to manufacture a reclaimed plastic product.

### *Facility Identification*

The certificate will identify the facility as:

**One set of eight end piece molds for  
manufacturing DI style manhole  
steps.**

The applicant is the owner of the facility  
located at:

**5486 SE International Way  
Milwaukie, Oregon 97222**

***Timeliness of Application***

The application was submitted within the timing requirements of ORS 468.165(6).

<i>Preliminary Application Received</i>	<u>02/16/2001</u>
<i>Preliminary approval granted</i>	<u>02/16/2001</u>
<i>Date of investment</i>	<u>04/16/2001</u>
<i>Final application received</i>	<u>05/24/2001</u>

***Facility Cost***

Claimed Cost	\$8,200
Eligible Cost	<u>\$8,200</u>

Invoices substantiated the cost of the facility.

***Facility Cost Allocable to Pollution Control***

The following factors were used to determine that **100%** of the investment cost is allocable to the collection, transportation or processing of reclaimed plastic, or the manufacture of reclaimed plastic product.

<u>Factor</u>	<u>Applied to This Facility</u>
OAR 340-017-0030 (2)(a) Extent used to convert reclaimed plastic into a salable or usable commodity.	The equipment is used 100% of the time for processing reclaimed plastic into a salable or useable commodity.
OAR 340-017-0030 (2)(b) The alternative methods, equipment and costs for achieving the same objective;	No alternative methods were considered.
OAR 340-017-0030 (2)(c) Other relevant factors used to establish portion of the cost allocable to collection, transportation or processing of reclaimed plastic or the manufacture of reclaimed plastic products.	No other factors were considered relevant.

***Compliance and Other Tax Credits***

The facility is in compliance with Department rules and statutes and with EQC orders. There were no DEQ permits issued to this facility.

The EQC issued **5** tax credit certificates to **Bowco Industries, Inc.** at this facility location.

Reviewer: William R Bree, DEQ





State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant **Truax Corporation**  
Application No. **5578**  
Eligible Facility Cost **\$85,978**  
Percentage Allocable **98%**  
Useful Life **10 years**

# Tax Credit Review Report

EQC 0109

## **Pollution Control Facility: USTs**

### **Final Certification**

ORS 468.150 -- 468.190

OAR 340-016-0005 -- 340-016-0080

### ***Applicant Identification***

Organized as: **an S Corporation**  
Business: **a Retail Gas Station**  
Taxpayer ID: **93-0730691**

The applicant's address is:

**P O Box 3002  
Corvallis, OR 97339**

### ***Facility Identification***

The certificate will identify the facility as:

**Doublewall flexible plastic piping,  
automatic tank gauge system, sumps and  
oil/water separator.**

The applicant is the owner of **DEQ Facility ID  
4453** located at:

**985 Harvard Street  
Roseburg, OR 97470**

### ***Technical Information***

The applicant installed pollution control equipment to meet EPA requirements for underground storage tanks.

### ***Eligibility***

ORS 468.155 (1)(a) The **principal purpose** of this **installation** is to prevent, control or reduce a substantial quantity of air and water pollution. The claimed facility meets EPA requirements for underground storage tanks and the requirements under OAR Chapter 340, Division 150.

OAR-016-0025 Installation or construction of facilities which will be used to detect, deter, or  
(2)(g) prevent spills or unauthorized releases.

ORS 468.155(3)(e) The tank upgrade is not a replacement for previously certified equipment.

***Timeliness of Application***

The application was submitted within the timing requirements of ORS 468.165 (6).

*Construction Started*

**03/01/99**

*Construction Completed*

**06/01/99**

*Facility Placed into Operation*

**06/01/99**

*Application Received*

**05/25/01**

***Facility Cost***

Claimed

\$88,643

Less Ineligible Costs – Portion (10%) of tank gauge system is used for inventory control (\$1,234) and pump (\$1,431).

(\$2,665)

Eligible

**\$85,978**

Invoices and canceled checks substantiate the cost of the facility.

***Facility Cost Allocable to Pollution Control***

The cost for non-corrosion protected portion of tank and/or piping system is \$1,640. This is **2%** of the eligible facility cost that is not allocable to pollution control leaving the remaining **98%** allocable.

***Compliance and Other Tax Credits***

The facility is in compliance with Department rules and statutes and with EQC orders.

The EQC issued **168** tax credit certificates to **Merritt Truax, Inc., Metrofueling, Inc. dba Merritt Truax, Inc., Truax Corp., Truax Harris Energy Company, Truax Harris Energy Co., LLC, Truax Harris Energy, LLC and Truax Petroleum Sales, Inc.** No certificates were issued to this facility location.

Reviewer: Barbara J. Anderson, DEQ  
Maggie Vandehey, DEQ



State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant	<b>Van Loon Dairy</b>
Application No.	<b>5579</b>
Facility Cost	<b>\$244,584</b>
Percentage Allocable	<b>100%</b>
Useful Life	<b>10 years</b>

# Tax Credit Review Report

EQC 0109

## **Pollution Control Facility: Water Final Certification**

ORS 468.150 -- 468.190

OAR 340-016-0005 -- 340-016-0080

### ***Applicant Identification***

Organized as: **a partnership**

Business: **a dairy**

Taxpayer ID: **93-0543375**

The applicant's address is:

**13121 Jefferson Hwy. 99E SE  
Jefferson, OR 97352**

### ***Facility Identification***

The certificate will identify the facility as:

**Two 40' x 80' manure settling bays, pump  
and motor**

The applicant is the owner of the facility located  
at:

**13121 Jefferson Hwy. 99E SE  
Jefferson, OR 97352**

### ***Technical Information***

The applicant installed two 40' x 80' sloped concrete manure settling bays that use gravity separator basins. They also installed a flush system with a Cornell pump, model 4NNT-15-4, serial #113200 9.25; and a Baldor 15-hp motor, serial #09901. The settling bays are covered to allow the manure to dry. This system allows the applicant to separate the manure and move it off-site to apply to other farmers' fields.

The dairy spread unstored manure on their pastureland prior to installing the settling bays because there was limited storage capacity in their lagoons. High levels of nitrogen, potassium and phosphorus in the soil prompted the applicant to install the settling bays.

### ***Eligibility***

ORS 468.155 The **sole purpose** of this **new installation** is to reduce a substantial quantity of  
(1)(a)(B) water pollution.

***Timeliness of Application***

The applicant began operating the settling bays before all construction was completed. Construction activities were within the timing requirements in ORS 468.165 (6).

<i>Construction Started</i>	<u>05/1999</u>
<i>Construction Completed</i>	<u>10/2000</u>
<i>Placed into Operation</i>	<u>10/1999</u>
<i>Application Received</i>	<u>05/30/2001</u>

***Facility Cost***

Claimed Cost	\$ 244,584
Eligible Costs	<u>\$ 244,584</u>

Invoices substantiated the facility cost.

***Facility Cost Allocable to Pollution Control***

The following factors were considered in determining **100%** percent of the facility is cost allocable to pollution control.

<u>Factor</u>	<u>Applied to This Facility</u>
ORS 468.190(1)(a) Salable or Usable Commodity	No salable commodity.
ORS 468.190(1)(b) Return on Investment (ROI)	The useful life of the facility used for the ROI consideration is 10 years. There is not a positive cash flow for operating the settling bays.
ORS 468.190(1)(c) Alternative Methods	No alternative investigated.
ORS 468.190(1)(d) Savings or Increase in Costs	No savings or increase in costs were significant.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

Considering these factors, the percent allocable to pollution control is **100%**.

***Compliance and Other Tax Credits***

The facility is in compliance with Department rules and statutes and with EQC orders.

DEQ permits issued to the site:

CAFO permit 0800, issued 10/08/1990

No other tax credits have been issued to **Van Loon Dairy**.

Reviewers: Maggie Vandehey, DEQ



State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant: **Western Pulp Products Co.**  
Application No.: **5580**  
Facility Cost: **\$40,558**  
Percentage Allocable: **100%**  
Useful Life: **7 years**

# Tax Credit Review Report

EQC 0109

## **Pollution Control Facility: Solid Waste Final Certification**

ORS 468.150 -- 468.190  
OAR 340-016-0005 -- 340-016-0080

### *Applicant Identification*

Organized as: **an S corporation**  
Business: **Manufacturer of recycled  
pulp products**  
Taxpayer ID: **#93-0469389**

The applicant's address is:

**P. O. Box 968  
5025 SW Hout Street  
Corvallis, Oregon 97339**

### *Facility Identification*

The certificate will identify the facility as:

**Kent CNC Bedmill with Anilam 3300MK  
controller, (S/N 898631) and Teksoft  
CAMWorks 2.5 3-axis Mill Software System.**

The applicant is the owner of the facility located at:

**5025 SW Hout Street  
Corvallis, Oregon 97339**

### *Technical Information:*

The applicant claimed a Kent Bedmill used to manufacture molds to make molded pulp products from recycled paper. The Teksoft CAMWorks 2.5 software operates the milling machine.

### *Eligibility*

- ORS 468.155 (1)(a) The **sole purpose** of this **new equipment** is to prevent, control, or reduce a substantial quantity of **solid waste**.
- ORS 468.155 (3)(e) **Replacement:** The milling machine does not replace previously certified equipment.
- ORS 468.155 (1)(b)(D) The milling machine is part of a process that recovers material that would otherwise be solid waste as defined in ORS 459.005.

***Timeliness of Application***

The application was submitted within the timing requirements of ORS 468.165(6).

<i>Construction Started</i>	<u>03/09/01</u>
<i>Construction Completed</i>	<u>03/15/01</u>
<i>Facility Placed into Operation</i>	<u>04/01/01</u>
<i>Application Received</i>	<u>06/01/01</u>

***Facility Cost***

Facility Cost	\$40,558
Salvage Value	<u>(\$)</u>
Eligible Facility Cost	<u>\$40,558</u>

***Facility Cost Allocable to Pollution Control***

The only factor used to determine that **100%** of the facility cost is allocable to pollution control is the percentage of time the facility is used for pollution control.

***Compliance and Other Tax Credits***

The facility is in compliance with Department rules and statutes and with EQC orders. There were no DEQ permits issued to this facility. The EQC issued 10 certificates to **Western Pulp Products Co.** at the location of this facility.

Reviewer: William R Bree, DEQ



State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant **Truax Harris Energy, LLC**  
Application No. **5581**  
Eligible Facility Cost **\$299,348**  
Percentage Allocable **91%**  
Useful Life **10 years**

# Tax Credit Review Report

EQC 0109

## **Pollution Control Facility: USTs**

### **Final Certification**

ORS 468.150 -- 468.190

OAR 340-016-0005 -- 340-016-0080

### ***Applicant Identification***

Organized as: **a limited liability corp.**

Business: **Cardlock Fueling Station**

Taxpayer ID: **93-1083912**

The applicant's address is:

**P O Box 607  
Wilsonville, OR 97070**

### ***Facility Identification***

The certificate will identify the facility as:

**Three doublewall steel/fiberglass underground storage tanks (one has two compartments), doublewall flexible plastic piping, spill containment basins, automatic tank gauge system, line/turbine leak detectors, overfill alarm, sumps, monitoring wells, automatic shutoff valves, oil/water separator and Stage II vapor recovery piping.**

The applicant is the owner of **DEQ Facility ID 1470** located at:

**85947 Franklin Blvd.  
Goshen, OR 97405**

### ***Technical Information***

The applicant installed pollution control equipment to meet EPA requirements for underground storage tanks.

**Eligibility**

- ORS 468.155 (1)(a) The **principal purpose** of this **installation** is to prevent, control or reduce a substantial quantity of air and water pollution. The claimed facility meets EPA requirements for underground storage tanks and the requirements under OAR Chapter 340, Division 150.
- OAR-016-0025 (2)(g) Installation or construction of facilities which will be used to detect, deter, or prevent spills or unauthorized releases.
- ORS 468.155(3)(e) The tank upgrade is not a replacement for previously certified equipment.

**Timeliness of Application**

The application was submitted within the timing requirements of ORS 468.165 (6).

<i>Construction Started</i>	<u>05/01/99</u>
<i>Construction Completed</i>	<u>08/03/99</u>
<i>Facility Placed into Operation</i>	<u>08/03/99</u>
<i>Application Received</i>	<u>06/01/01</u>

**Facility Cost**

Claimed	\$299,905
Less Ineligible Costs – Portion of tank gauge system not used for pollution control (10%).	(\$557)
Eligible	<u>\$299,348</u>

Kernutt, Stokes, Brandt & Co., a CPA firm, performed an accounting review on behalf of the Applicant. Invoices and canceled checks substantiated the facility cost.

**Facility Cost Allocable to Pollution Control**

The cost for non-corrosion protected portion of tank and/or piping system is \$26,736. This is 9% of the eligible facility cost that is not allocable to pollution control leaving the remaining 91% allocable.

**Compliance and Other Tax Credits**

The facility is in compliance with Department rules and statutes and with EQC orders.

The EQC issued **Merritt Truax, Inc., Metrofueling, Inc. dba Merritt Truax, Inc., Truax Corp., Truax Harris Energy Company, Truax Harris Energy Co., LLC, Truax Harris Energy, LLC and Truax Petroleum Sales, Inc**, 168 tax credit certificates, none of which were issued to this facility location.

Reviewer: Barbara J. Anderson, DEQ





State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant	<b>Salem Black Top &amp; Asphalt Paving, Inc.</b>
Application No.	<b>5582</b>
Facility Cost	<b>\$82,995</b>
Percentage Allocable	<b>100%</b>
Useful Life	<b>10 years</b>

## Tax Credit Review Report

EQC 0109

### Pollution Control Facility: Water

#### Final Certification

ORS 468.150 -- 468.190

OAR 340-016-0005 -- 340-016-0080

#### *Applicant Identification*

Organized as: **a C corporation**

Business: **manufacturer of asphalt  
hot mix**

Taxpayer ID: **93-0711002**

The applicant's address is:

**PO Box 12009  
Salem, OR 97309**

#### *Facility Identification*

The certificate will identify the facility as:

**Two settlement pits, five catch basins, four  
oil/water separators, three grit traps, slopped  
paving, and secondary containment**

The applicant is the owner of the facility located at:

**1815 2<sup>nd</sup> St. SE  
Salem, OR**

#### *Technical Information*

The applicant owns and operates a paving company. The new wastewater treatment system is part of their new asphalt plant. All storm water runoff on the site is routed to a pre-existing settling pond through the claimed facility that includes the following components.

- Two 20' x 11' concrete settlement pits with 10-inch bases and 8-inch walls. The settling pits allow heavy particulate matter to settle out prior to reaching the catch basins;
- Five catch basins, four oil/water separators and three grit traps. The catch basins are either 2' or 2'5" square and are made of 10-gauge steel coated with asphalt;
- Concrete slabs and a valley gutter around the truck loading control area. The slabs are sloped to the catch basins;
- Concrete and asphalt paved areas excluding roadways and parking areas. The sloped pavement prevents site runoff from reaching adjacent city streets and the city storm water system; and
- A 67,000-gallon concrete floor and wall spill containment area for the tank farm.

**Eligibility**

ORS 468.155 (1)(a)(A) The **principal purpose** of this **new installation** is to control water pollution in compliance with DEQ Water Pollution Control Facilities (WPCF) permit # 1000 (file #107957), issued 10/08/97, and a conditional use permit issued June 4, 1998 by City of Salem. The applicant's property crosses a FEMA-designated federal floodway on Pringle Creek.

ORS 468.155 (1)(b)(A) The **control** is accomplished with the use of **treatment works** for industrial waste as defined in ORS 468B.005.

ORS 468.155 (3)(e) **Replacement:** The claimed facility does not replace a previously certified facility.

**Timeliness of Application**

The application was submitted within the timing requirements of ORS 468.165 (6).

<i>Construction Started</i>	<b>01/1999</b>
<i>Construction Completed</i>	<b>05/20/2000</b>
<i>Placed into Operation</i>	<b>05/20/2000</b>
<i>Application Received</i>	<b>06/12/2001</b>

**Facility Cost**

Claimed Cost	\$82,995
Eligible Cost	<b>\$82,995</b>

Boldt, Carlisle & Smith, LLC provided the Accountant's Statement on behalf of the applicant. Invoices and canceled checks substantiated the facility cost. Divisions of Salem Blacktop & Asphalt Paving or companies with common stockholders invoiced \$25,730 of the claimed facility cost at fair market price.

**Facility Cost Allocable to Pollution Control**

The following factors were considered in determining the percentage of the facility cost allocable to pollution control.

<b>Factor</b>	<b>Applied to This Facility</b>
ORS 468.190(1)(a) Salable or Usable Commodity	No salable commodity.
ORS 468.190(1)(b) Return on Investment (ROI)	The useful life of the facility used for the ROI consideration is 10 years. This treatment works for industrial waste does not have a positive cash flow.
ORS 468.190(1)(c) Alternative Methods	No alternative investigated.
ORS 468.190(1)(d) Savings or Increase in Costs	No savings or increase in costs were identified.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

***Compliance and Other Tax Credits***

The facility is in compliance with Department rules and statutes and with EQC orders.

DEQ permits issued to the site:

WPCF permit #1000, file #107957, issued 10/8/97

Conditional use permit issued by the City of Salem on 6/4/98

Other tax credits issued to **Salem Black Top & Asphalt Paving, Inc.:**

<b>App. #</b>	<b>Description of Facility</b>	<b>Certified Cost</b>	<b>Cert. #</b>	<b>Issue Date</b>
5535	Gencor Industries Ultra U II-100 burner	\$11,950.00	4476	3/30/01
5536	Gencor Ultraflo Baghouse and a Blue Smoke Capture/Control System	\$292,886.00	4477	3/30/01

Reviewers: Maggie Vandehey, DEQ



State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant **Columbia Steel Casting Co., Inc.**  
Application No. **5583**  
Facility Cost **\$38,856**  
Percent Allocable **100%**  
Useful Life **10 years**

# Tax Credit Review Report

EQC 0109

## **Pollution Control Facility: Air Final Certification**

ORS 468.150 -- 468.190

OAR 340-016-0005 -- 340-016-0080

### ***Applicant Identification***

Organized as: **an S corporation**

Business: **manufacture alloy steel  
castings**

Taxpayer ID: **93-0336095**

The applicant's address is:

**PO Box 38095  
Portland, OR 97283**

### ***Facility Identification***

The applicant identified the facility as:

**Low-NO<sub>x</sub> burners for Natural Gas Fired  
Oven installed on heat treat oven #4**

The applicant is the owner of the facility  
located at:

**10425 N. Bloss Ave.  
Portland, OR 97203**

### ***Technical Information***

The claimed facility is the overhaul of the combustion system including the installation of low-NO<sub>x</sub> burners on the natural gas fired oven #4. The components are:

- 8 new burners (Eclipse Thermjet # TJ-100),
- a new combustion air blower,
- changes to gas and air piping,
- additional gas and air control valves, and
- modifications to the electrical control system.

The original combustion system on the heat treat oven was built in 1978 and was still functioning as intended. The burners were designed and manufactured before nitrogen oxides were recognized as an environmental problem. Emissions from the old system are calculated using EPA's AP-42 table 1.4-2 for small combustion boilers <10 MMBTU. The manufacturer of the new burners

estimates 37% reduction of NO<sub>x</sub>, and 40% reduction of CO. Actual amounts will depend on usage, which varies depending on product mix and production volumes.

**Eligibility**

- ORS 468.155 (1)(a)(B) The **sole purpose** of this **new combustion system** is to reduce a substantial quantity of air pollution caused by nitrogen oxides and carbon monoxides from natural gas combustion.
- ORS 468.155 (1)(b)(B) The claimed facility eliminates air contaminants with the use of an air cleaning device as defined in ORS 468A.005.
- ORS 468.150 (3)(e) **Replacement:** The claimed facility is not a replacement of any previously certified equipment. The applicant is in the process of upgrading all natural gas oven burners. The Commission issued a certificate on 9/17/98 for low-NOx burners for natural gas fired oven used for heat treating steel castings. These burners are still functioning for their intended pollution control purpose.

**Timeliness of Application**

The application was submitted within the timing requirements of ORS 468.165 (6).

<i>Construction Started</i>	<b>05/01/1999</b>
<i>Construction Completed</i>	<b>06/18/1999</b>
<i>Placed into Operation</i>	<b>06/18/1999</b>
<i>Application Received</i>	<b>06/15/2001</b>

**Facility Cost**

Claimed Cost	\$38,856
Eligible Cost	<b>\$38,856</b>

Staff completed a facility cost analysis according to Department requirements on behalf of the applicant.

**Facility Cost Allocable to Pollution Control**

The only factor used to determining that **100%** percent of the facility cost is allocable to pollution control is the percentage of time the facility is used for pollution control.

**Compliance and Other Tax Credits**

The applicant states the facility is in compliance with Department rules and statutes and with EQC orders. DEQ permits issued to this location:

- ACDP, #26-1869, issued 2/1/1995
- NPDES, #1200-COLS (18696), issued 12/21/1999

The EQC issued 15 certificates to **Columbia Steel Casting Co., Inc.** at this facility location.

Reviewers: Maggie Vandehey, DEQ



State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant **Craig & Craig, Inc.**  
Application No. **5584**  
Eligible Facility Cost **\$51,636**  
Percentage Allocable **91%**  
Useful Life **10 years**

# Tax Credit Review Report

EQC 0109

## **Pollution Control Facility: USTs**

### **Final Certification**

ORS 468.150 -- 468.190

OAR 340-016-0005 -- 340-016-0080

### ***Applicant Identification***

Organized as: **a S Corporation**

Business: **a Retail Gas Station**

Taxpayer ID: **93-0918469**

The applicant's address is:

**P O Box 4001  
Coos Bay, OR 97420**

### ***Facility Identification***

The certificate will identify the facility as:

**Two singlewall fiberglass tanks,  
doublewall flexible plastic piping, spill  
containment basins, automatic tank gauge  
system, line/turbine leak detectors, overfill  
alarm, sumps, monitoring wells, automatic  
shutoff valves and Stage II vapor recovery  
piping.**

The applicant is the owner of DEQ Facility ID  
**1378** located at:

**899 "D" Street  
Coos Bay, OR 97420**

### ***Technical Information***

The applicant installed pollution control equipment to meet EPA requirements for underground storage tanks.

**Eligibility**

- ORS 468.155 (1)(a) The **principal purpose** of this **installation** is to prevent, control or reduce a substantial quantity of air and water pollution. The claimed facility meets EPA requirements for underground storage tanks and the requirements under OAR Chapter 340, Division 150.
- OAR-016-0025 (2)(g) Installation or construction of facilities which will be used to detect, deter, or prevent spills or unauthorized releases.

**Timeliness of Application**

The application was submitted within the timing requirements of ORS 468.165 (6).

<i>Construction Started</i>	<u>03/17/99</u>
<i>Construction Completed</i>	<u>06/28/99</u>
<i>Facility Placed into Operation</i>	<u>06/28/99</u>
<i>Application Received</i>	<u>06/20/01</u>

**Facility Cost**

Claimed	\$51,955
Less Ineligible Costs – Portion of tank gauge system used for inventory control (10%).	(\$319)
Eligible	<u>\$51,636</u>

Invoices or canceled checks substantiated the cost of the facility.

**Facility Cost Allocable to Pollution Control**

The cost for non-corrosion protected portion of tank and/or piping system is \$4,395. This is **9%** of the eligible facility cost that is not allocable to pollution control leaving the remaining **91%** allocable.

**Compliance and Other Tax Credits**

The facility is in compliance with Department rules and statutes and with EQC orders. The EQC has not issued any other tax credit certificates to the applicant.

Reviewer: Barbara J. Anderson, DEQ  
Maggie Vandehey, DEQ



State of Oregon  
Department of  
Environmental  
Quality

# Tax Credit Review Report

EQC 0109

## Pollution Control Facility: Solid Waste Final Certification

ORS 468.150 -- 468.190

OAR 340-016-0005 -- 340-016-0080

### *Applicant Identification*

Organized As: **a C corporation**

Business: **Solid waste collection  
and recycling facility**

Taxpayer ID: **93-0422468**

The applicant's address is:

**P O Box 1  
Corvallis, OR 97339**

Director's  
Recommendation: **APPROVE**

Applicant: **Corvallis Disposal & Recycling Co.**

Application No.: **5585**

Facility Cost: **\$109,493**

Percentage Allocable: **100%**

Useful Life: **5 years**

### *Facility Identification*

The certificate will identify the facility as:

**One Freightliner Model # FL70 truck, (S/N  
1FV6HFBA5XHB62589), and one Labrie  
Expert 2000 body, (S/N CL99101NNK)**

The applicant is the owner of the facility located at:

**110 NE Walnut Blvd.  
Corvallis, OR**

### *Technical Information*

This truck is used solely to collect recyclable materials from residential and commercial customers in the City of Corvallis and Benton County. The collected recyclables are delivered to a processing facility where they are further sorted and subsequently sent to recycling mills to be converted into products of real economic value.

### *Eligibility*

ORS 468.155 (1)(a) The **sole purpose** of this **new equipment** is to prevent, control, or reduce a substantial quantity of **solid waste**. This truck is used solely for collecting source separated recyclable material.

ORS 468.155 (3)(e) **Replacement:** This truck replaces one old recycling collection truck. The old collection truck did not have tax credit certification from the Commission.



ORS 468.155 (1)(b)(D) This truck is used to collect recyclable material and is part of a **material recovery process** that obtains useful material from material that would otherwise be solid waste as defined in ORS 459.005.

***Timeliness of Application***

The application was submitted within the timing requirements of ORS 468.165(6).

<i>Construction Started</i>	<u>10/01/99</u>
<i>Construction Completed</i>	<u>01/14/00</u>
<i>Facility Placed into Operation</i>	<u>01/17/00</u>
<i>Application Received</i>	<u>06/25/01</u>

***Facility Cost***

Facility Cost	\$129,493
Salvage Value	(\$20,000)
Eligible Facility Cost	<u>\$109,493</u>

Invoices substantiated the cost the truck and the salvage value of the old truck.

***Facility Cost Allocable to Pollution Control***

The factors listed below were considered in determining the percentage of the facility cost allocable to pollution control. The percentage of the facility cost allocable to pollution control is **100%**.

<u>Factor</u>	<u>Applied to This Facility</u>
ORS 468.190(1)(a) Salable or Usable Commodity	This truck is used to collect recyclable material that is subsequently processed into a salable and useable commodity.
ORS 468.190(1)(b) Return on Investment	The useful life of the facility used for the return on investment consideration is 5 years. The calculated average annual cash flow is negative, therefore, the percentage return on investment is 0%. The portion of cost allocable to pollution control is 100%.
ORS 468.190(1)(c) Alternative Methods	No alternative investigated.
ORS 468.190(1)(d) Savings or Increase in Costs	No savings or increase in costs.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

***Compliance and Other Tax Credits***

The facility is in compliance with Department rules and statutes and with EQC orders. There were no DEQ permits issued to this facility.

**Corvallis Disposal Co.** has been issued **18** previous tax credits at this facility location.

Reviewer: William R Bree, DEQ



State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant	<b>Robberson Ford Sales Inc.</b>
Application No.	<b>5586</b>
Facility Cost	<b>\$39,721</b>
Percentage Allocable	<b>100%</b>
Useful Life	<b>10 years</b>

## Tax Credit Review Report

EQC 0109

### **Pollution Control Facility: Water Final Certification**

ORS 468.150 -- 468.190

OAR 340-016-0005 -- 340-016-0080

### ***Applicant Identification***

Organized as: **an S Corporation**

Business: **vehicle sales**

Taxpayer ID: **93-0464604**

The applicant's address is:

**2100 NE 3<sup>rd</sup>  
Bend, OR 97701**

### ***Facility Identification***

The applicant identified the facility as:

**Pretreatment unit, sloped concrete slabs,  
trench drains, catch basins, and an oil/water  
separator**

The applicant is the owner of the facility located at:

**2270 NE 2<sup>nd</sup>  
Bend, OR 97701**

### ***Technical Information***

The claimed facility is a pretreatment system that includes an American Equipment Company sewer discharge unit, model SD-25 with 1/3 hp centrifugal pump, pump stand, filter packs, and associated fittings. The system includes sloped concrete slabs, trench drains, catch basins, associated piping, and an oil/water separator.

All wastewater was discharged directly into the sewer before installation of the claimed facility. Contaminants from the metal shop and paint area are removed by the new pretreatment system, dried, and sent to the landfill. The wastewater is discharged to the local sewer system.

### ***Eligibility***

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new installation of equipment** is to reduce a substantial quantity of water pollution.

ORS.468.155. The facility disposes of or eliminates industrial waste with the use of **treatment**  
(1)(b)(A) **works** for industrial waste as defined in ORS 468B.005.

ORS 468.155 **Replacement:** This system does not replace any previously certified equipment.  
(3)(e)

***Timeliness of Application***

The application was submitted within  
the timing requirements of ORS  
468.165 (6).

*Construction Started*  
*Construction Completed*  
*Placed into Operation*  
*Application Received*

<u>08/2000</u>
<u>04/2001</u>
<u>04/2001</u>
<u>06/25/2001</u>

***Facility Cost***

Claimed Cost	<u>\$ 39,721</u>
Eligible Costs	<b>\$ 39,721</b>

Staff performed a facility cost analysis according to Department requirements on behalf of the applicant.

***Facility Cost Allocable to Pollution Control***

The only factor used in determining the percentage allocable to pollution control is the 100% percentage of time the facility is used for pollution control.

***Compliance and Other Tax Credits***

The facility is in compliance with Department rules and statutes and with EQC orders.  
DEQ permits issued to the applicant:

No other tax credits have been issued to the applicant.

Reviewers: Maggie Vandehey, DEQ



State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant	<b>Dan &amp; Rhonda Hawkins</b>
Application No.	<b>5588</b>
Facility Cost	<b>\$6,495</b>
Percentage Allocable	<b>100%</b>
Useful Life	<b>3 years</b>

# Tax Credit Review Report

EQC 0109

## **Pollution Control Facility: NPS: Air Final Certification**

ORS 468.150 -- 468.190

OAR 340-016-0005 -- 340-016-0080

### ***Applicant Identification***

Organized as: **an Individual  
Business:**

Taxpayer ID: **544-90-6839**

The applicant's address is:

**975 S. Third  
Jacksonville, OR 97530**

### ***Facility Identification***

The applicant identified the facility as:

**Bearcat model 71620 Wood chipper, 20 HP,  
(S/N Y06074)**

The applicant is the owner of the **mobile** facility  
garaged at:

**975 S. Third  
Jacksonville, OR 97530**

### ***Technical Information***

The system consists of a wood chipper used to reduce burning of excess woody debris. The ground wood is used as mulch.

### ***Eligibility***

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

***Timeliness of Application***

The application was submitted within the timing requirements of ORS 468.165 (6).

*Construction Started*  
*Construction Completed*  
*Placed into Operation*  
*Application Received*

<u>05/29/2001</u>
<u>05/29/2001</u>
<u>05/29/2001</u>
<u>06/27/2001</u>

***Facility Cost***

Claimed Cost	\$ 6,495
Eligible Costs	<u>\$ 6,495</u>

Invoices substantiated the facility cost.

***Facility Cost Allocable to Pollution Control***

The only factor used in determining the percentage allocable to pollution control is the 100% percentage of time the facility is used for pollution control.

***Compliance and Other Tax Credits***

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits issued to the applicant at this facility location. No other tax credits have been issued to the applicant.

Reviewers: Maggie Vandehey, DEQ



State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant	<b>Portland General Electric Co.</b>
Application No.	<b>5589</b>
Facility Cost	<b>\$285,277</b>
Percentage Allocable	<b>100%</b>
Useful Life	<b>10 years</b>

# Tax Credit Review Report

EQC 0109

## Pollution Control Facility: Water Final Certification

ORS 468.150 -- 468.190

OAR 340-016-0005 -- 340-016-0080

### *Applicant Identification*

Organized as: **a C corporation**

Business: **transmission substation**

Taxpayer ID: **93-0256820**

The applicant's address is:

**121 SW Salmon St.  
Portland, OR 97204**

### *Facility Identification*

The certificate will identify the facility as:

**Oil containment system**

The applicant is the owner of the facility located at:

**Bethel Substation  
5585 State St. E  
Salem, OR 97301**

### *Technical Information*

The oil spill containment facility includes:

- A geomembrane shield around the transformer foundation,
- A geomembrane lined containment pit, and
- A drainage trench.

The membrane prevents oil from spilling on the ground in the unlikely event of an oil spill from one of the transformers. The drain rock and piping direct any spilled oil into the containment pit.

The membrane that covers the ground around the transformers is an XR-5 style 8130 and is sealed to the concrete foundations. This liner is protected from punctures with a geo-fabric under and over the membrane liner. Drain piping is installed around each transformer. A layer of drain rock is then placed over the liner and drain piping. Additional drain piping is laid and connected to the containment pit. Piping from the containment pit is connected to the drain trench.

Without this new oil spill containment system, there was potential for a maximum of approximately

18,000 gallons of transformer oil to drain into the nearby wetlands and drainageway and then into the West Branch of Little Pudding River.

Any spilled oil or contaminated materials can now be contained within the site's drainage system until crews are dispatched to pump oil from the containment pit for disposal at a state-approved facility.

**Eligibility**

ORS 468.155 The **sole purpose** of this **new system installation** is to control water pollution.  
(1)(a)(B)

ORS 468.155 The **control** is accomplished with the use of **treatment works** for industrial waste  
(1)(b)(A) as defined in ORS 468B.005.

ORS 468.155 **Replacement:** There was no existing oil containment system in place.  
(3)(e)

**Timeliness of Application**

The application was submitted within the timing requirements of ORS 468.165 (6).

<i>Construction Started</i>	<b>04/01/1998</b>
<i>Construction Completed</i>	<b>07/02/1999</b>
<i>Placed into Operation</i>	<b>07/02/1999</b>
<i>Application Received</i>	<b>07/02/2001</b>

**Facility Cost**

Claimed Cost		\$289,720
Ineligible Costs	Corporate loading	(\$4,443)
Eligible Cost		<b>\$285,277</b>

Invoices and canceled checks substantiated the facility cost.

**Facility Cost Allocable to Pollution Control**

The following factors were considered in determining the percentage of the facility cost allocable to pollution control.

<b>Factor</b>	<b>Applied to This Facility</b>
ORS 468.190(1)(a) Salable or Usable Commodity	No salable commodity.
ORS 468.190(1)(b) Return on Investment (ROI)	The useful life of the facility used for the ROI consideration is 10 years. The claimed facility does not have a positive cash flow.
ORS 468.190(1)(c) Alternative Methods	No alternative investigated.
ORS 468.190(1)(d) Savings or Increase in Costs	No savings or increase in costs were identified.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

***Compliance and Other Tax Credits***

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits or other tax credits have been issued to **Portland General Electric Co.** at this facility location.

Reviewers: Maggie Vandehey, DEQ





State of Oregon  
Department of  
Environmental  
Quality

Director's Recommendation:	<b>APPROVE</b>
Applicant	<b>Pope &amp; Talbot, Inc.</b>
Application No.	<b>5590</b>
Facility Cost	<b>\$1,134,037</b>
Percentage Allocable	<b>100%</b>
Useful Life	<b>10 years</b>

## Tax Credit Review Report

EQC 0109

### **Pollution Control Facility: Water**

#### **Final Certification**

ORS 468.150 -- 468.190

OAR 340-016-0005 -- 340-016-0080

#### ***Applicant Identification***

Organized as: **a C corporation**

Business: **manufacturer of  
bleach kraft pulp**

Taxpayer ID: **91-0470860**

#### ***Facility Identification***

The certificate will identify the facility as:

**Condensate piping to effluent pond and  
six aerators**

The applicant's address is:

**1500 SW First Avenue, Suite  
200  
Portland, OR 97201**

The applicant is the owner of the facility located at:

**30480 American Drive  
Halsey, OR 97348**

#### ***Technical Information***

##### Condensate Piping:

The claimed facility includes over 1,000 feet of piping installed to convey condensate from various pulp plant processes to the wastewater treatment pond for the removal of hazardous air pollutants (HAPs), primarily methanol. The condensate is removed from three digesters, six evaporators, the non-condensable gas system, and the black liquor tank sump. An 8-inch pipe discharges the effluent through a sparger located beneath the water surface, near the bottom of the treatment pond, thus ensuring 92% removal of HAPs. The new pipe is a closed system that prevents the HAPs from entering the atmosphere before reaching the wastewater treatment. Other components include system valves, pumps and instrumentation, engineering and design, electrical components, and the sampling equipment required to measure and verify adequate removal of HAPs.

Pulp process condensates were discharged to the acid sewer prior to installing the condensate piping components. The acid sewer line is an open pipe that was routed to the effluent pond and

discharged above the pond surface. Methanol and other HAPs were released into the atmosphere in this open pipe.

Aerators:

The claimed facility includes the installation of six additional 40-hp aerators installed in the mill aeration stabilization basin. Aeration increases dissolved oxygen, which lowers the biological oxygen demand (BOD); thereby improving the discharge quality of the water. The added aeration was required to reduce the increased HAPs from the new condensate piping.

The mill had about 1,000-hp of mechanical aeration prior to the installation of the additional aerators, however, additional aeration was required to ensure 92% removal of HAPs. No pollution control tax credits were received for the previously existing aerators.

**Eligibility**

ORS 468.155 (1)(a)(A) The **principal purpose** of the **new condensate piping and aerator installation** is to comply with a requirement imposed by DEQ to **prevent** water pollution. The piping is specifically required by the cluster rules to contain the vapors.

The Pulp & Paper and Paperboard Point Source Category Rules, commonly known as the Pulp & Paper Cluster Rules, were adopted by the Department in September 1998, and are imposed by the Code of Federal Regulation (CFR), Title 40, Part 430, part 63.

ORS 468.155 (1)(b) The prevention is accomplished by the elimination of industrial waste and the use of treatment works for industrial waste as defined in ORS 468B.005.

ORS 468.155 (3)(e) **Replacement:** The claimed facility does not replace any previously certified facilities.

***Timeliness of Application***

The application was submitted within the timing requirements of ORS 468.165 (6).

<i>Construction Started</i>	<b>10/1/1999</b>
<i>Construction Completed</i>	<b>12/19/2000</b>
<i>Facility Placed into Operation</i>	<b>12/19/2000</b>
<i>Application Received</i>	<b>7/3/2001</b>
<i>Application Substantially Complete</i>	<b>8/14/01</b>

***Facility Cost***

Claimed Facility Cost	\$ 1,139,133
Ineligible Costs:	
Electrical Room Air Conditioning System Components	- 5,096
Eligible Facility Cost	<u>1,134,037</u>

The technical reviewers performed the accounting review on behalf of the department in accordance with Department guidelines. Copies of purchase orders, invoices and carbon copies of checks were provided and substantiated 100% of the claimed facility cost.

**Facility Cost Allocable to Pollution Control**

The following factors were used to determine the 100% percentage of facility cost allocable to pollution control.

<b>Factor</b>	<b>Applied to This Facility</b>
ORS 468.190(1)(a) Salable or Usable Commodity	No salable or useable commodity.
ORS 468.190(1)(b) Return on Investment	The useful life of the facility used for the return on investment consideration is 20 years. No gross annual revenues were associated with this facility.
ORS 468.190(1)(c) Alternative Methods	Alternative methods provided by the cluster rules were considered, however were less cost effective.
ORS 468.190(1)(d) Savings or Increase in Costs	There are no cost savings with this system. Operating costs would go up slightly due to the additional pumping required to move the condensate.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

**Compliance and Other Tax Credits**

The applicant states the facility is in compliance with all DEQ, Regional Air Authority, and EPA regulations. DEQ permits issued to facility include:

- Air Permit Number 22-3501, issued 3/2/98
- Water Permit Number 101114, issued 6/30/93
- Stormwater Permit Number 1200Z

The EQC issued **2** tax credit certificates to **Pope & Talbot, Inc.** at this facility location.

<b>App. #</b>	<b>Description of Facility</b>	<b>Certified Cost</b>	<b>% Allocable</b>	<b>Cert. #</b>	<b>EQC Date</b>
1728	Upgrading of existing electrostatic precipitator; installation of additional transformer/rectifier, research Cottrell model no. SIRT-68-135, and 54 pneumatic vibrators.	\$309,401	84	1814	11/22/85
4398	Oxygen delignification facility	\$23,774,824	100	3544	11/17/95 Reissued 12/20/99 to Selco Service Corporation

Reviewers: Lois L. Payne, SJO Consulting Engineers  
Dennis Cartier, SJO Consulting Engineers  
Maggie Vandehey, DEQ



State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant	<b>Columbia Steel Casting Co., Inc.</b>
Application No.	<b>5591</b>
Facility Cost	<b>\$178,399</b>
Percentage Allocable	<b>100%</b>
Useful Life	<b>7 years</b>

# Tax Credit Review Report

EQC 0109

## **Pollution Control Facility: Air Final Certification**

ORS 468.150 -- 468.190

OAR 340-016-0005 -- 340-016-0080

### ***Applicant Identification***

Organized as: **an S corporation**

Business: **manufacture alloy steel  
castings**

Taxpayer ID: **93-0336095**

The applicant's address is:

**PO Box 83095  
Portland, OR 97283**

### ***Facility Identification***

The certificate will identify the facility as:

**A 20,000 cfm fabric filter baghouse, 6:1 air to  
cloth ratio with reverse pulse cleaning**

The applicant is the owner of the facility located at:

**10425 N. Bloss Ave.  
Portland, OR 97203**

### ***Technical Information***

The claimed facility is a:

- Baghouse,
- Concrete foundation,
- Steel support structure,
- Inlet and discharge ductwork,
- Fan and drive motor, and
- Electrical controls and connections for supply of electrical power and compressed air.

The claimed facility filters fine particulate matter generated from new machinery in the sand preparation and recycling system. The baghouse captured about 110 pounds of dust for every ton of sand processed during the first six months of operation. The dust would have been discharged into the atmosphere as fugitive emissions without the installation.

**Eligibility**

- ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment installation** is to **reduce** a substantial quantity of air pollution. The **sole and exclusive purpose** of the interior ductwork and related costs is not considered pollution control because the process equipment would have been installed with or without the pollution control.
- ORS 468.155 (1)(b)(B) The **reduction** is accomplished by the **elimination of air contaminants** and the use of an air cleaning device as defined in ORS 468A.005.
- ORS 468.155 (3)(e) **Replacement:** The claimed facility does not replace any previously certified equipment.

**Timeliness of Application**

The application was submitted within the timing requirements of ORS 468.165 (6).

<i>Construction Started</i>	<b>09/15/1998</b>
<i>Construction Completed</i>	<b>06/30/1999</b>
<i>Placed into Operation</i>	<b>07/15/1999</b>
<i>Application Received</i>	<b>07/05/2001</b>

**Facility Cost**

Claimed Cost	\$186,554
Ineligible Cost: Interior ductwork	(\$8,155)
Eligible Cost	<b>\$178,399</b>

Invoices substantiated the facility cost.

**Facility Cost Allocable to Pollution Control**

The following factors were used to determine the percentage of the facility cost allocable to pollution control.

<b>Factor</b>	<b>Applied to This Facility</b>
ORS 468.190(1)(a) Salable or Usable Commodity	No salable or usable commodity.
ORS 468.190(1)(b) Return on Investment	The useful life of the facility used for the return on investment consideration is 7 years. Calculated according to rule, the percentage allocable to pollution control is 100%.
ORS 468.190(1)(c) Alternative Methods	No alternative methods investigated.
ORS 468.190(1)(d) Savings or Increase in Costs	No savings or increase in costs.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

**Compliance and Other Tax Credits**

The facility is in compliance with Department rules and statutes and with EQC orders. DEQ permits issued to the site: ACDP, number 26-1869, issued 2/1/95; NPDES, number 1200-COLS (18696), issued 12/21/99. The EQC issued 15 tax credits to **Columbia Steel Casting Co., Inc.** at this facility location.

Reviewers: Maggie Vandehey, DEQ



State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant **Steven J. Taylor**  
Application No. **5592**  
Facility Cost **\$2,995**  
Percentage Allocable **100%**  
Useful Life **3 years**

# Tax Credit Review Report

EQC 0109

## Pollution Control Facility: NPS: Air Final Certification

ORS 468.150 -- 468.190

OAR 340-016-0005 -- 340-016-0080

### *Applicant Identification*

Organized as: **an Individual**

Business:

Taxpayer ID: **258-76-2295**

The applicant's address is:

**29500 NW Quail Run Dr.  
Gaston, OR 97119**

### *Facility Identification*

The applicant identified the facility as:

**Bearcat model 73554 Wood chipper, (S/N  
102107)**

The applicant is the owner of the **mobile** facility  
garaged at:

**29500 NW Quail Run Dr.  
Gaston, OR 97119**

### *Technical Information*

The wood chipper is used to reduce open burning of woody debris.

### *Eligibility*

ORS 468.155 (1)(a)(B) The **sole purpose** of this **new equipment** is to reduce a substantial quantity of nonpoint source pollution.

ORS 468.155 (2)(b) The **nonpoint source pollution reduction** is accomplished by the use of a wood chipper to reduce openly burned woody debris.

### *Timeliness of Application*

The application was submitted within the timing requirements of ORS 468.165 (6).

*Construction Started*

06/26/2001

*Construction Completed*

06/26/2001

*Placed into Operation*

06/26/2001

*Application Received*

07/05/2001

***Facility Cost***

Claimed Cost	\$ 2,995
Eligible Cost	<u>\$ 2,995</u>

An invoice substantiated the facility cost.

***Facility Cost Allocable to Pollution Control***

The only factor used in determining the percentage allocable to pollution control is the 100% percentage of time the facility is used for pollution control.

***Compliance and Other Tax Credits***

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits have been issued to the applicant at this facility location. No other tax credits have been issued to the applicant.

Reviewers: Maggie Vandehey, DEQ



State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant	<b>Portland General Electric Co.</b>
Application No.	<b>5594</b>
Facility Cost	<b>\$118,020</b>
Percentage Allocable	<b>100%</b>
Useful Life	<b>10 years</b>

# Tax Credit Review Report

EQC 0109

## **Pollution Control Facility: Water Final Certification**

ORS 468.150 -- 468.190

OAR 340-016-0005 -- 340-016-0080

### ***Applicant Identification***

Organized as: **a C corporation**

Business: **transmission substation**

Taxpayer ID: **93-0256820**

The applicant's address is:

**121 SW Salmon St.  
Portland, OR 97204**

### ***Facility Identification***

The certificate will identify the facility as:

**Oil containment system**

The applicant is the owner of the facility located at:

**Sullivan Substation  
4303 Willamette Falls  
West Linn, OR 97068**

### ***Technical Information***

The oil spill containment facility includes:

- A geomembrane shield around the transformer foundation,
- A geomembrane lined containment pit, and
- A drainage trench.

The membrane prevents oil from spilling on the ground in the unlikely event of an oil spill from one of the transformers. The drain rock and piping direct any spilled oil into the containment pit.

The membrane that covers the ground around the transformers is an XR-5 style 8130 and is sealed to the concrete foundations. This liner is protected from punctures with a geo-fabric under and over the membrane liner. Drain piping is installed around each transformer. A layer of drain rock is then placed over the liner and drain piping. Additional drain piping is laid and connected to the containment pit. Piping from the containment pit is connected to the drain trench.

Without this new oil spill containment system, there was potential for a maximum of approximately



8,200 gallons of transformer oil to drain into the Willamette River.

Any spilled oil or contaminated materials can now be contained within the site's drainage system until crews are dispatched to pump oil from the containment pit for disposal at a state-approved facility.

**Eligibility**

ORS 468.155 The **sole purpose** of this **new system installation** is to control water pollution.  
(1)(a)(B)

ORS 468.155 The **control** is accomplished with the use of **treatment works** for industrial waste  
(1)(b)(A) as defined in ORS 468B.005.

ORS 468.155 **Replacement:** There was no existing oil containment system in place.  
(3)(e)

**Timeliness of Application**

The application was submitted within the timing requirements of ORS 468.165 (6).

<i>Construction Started</i>	<b>09/01/1998</b>
<i>Construction Completed</i>	<b>07/22/1999</b>
<i>Placed into Operation</i>	<b>07/22/1999</b>
<i>Application Received</i>	<b>07/13/2001</b>

**Facility Cost**

Claimed Cost		\$138,068
Ineligible Costs	Corporate loading	(\$20,048)
Eligible Cost		<b>\$118,020</b>

Invoices and canceled checks substantiated the facility cost.

**Facility Cost Allocable to Pollution Control**

The following factors were considered in determining the percentage of the facility cost allocable to pollution control.

<b>Factor</b>	<b>Applied to This Facility</b>
ORS 468.190(1)(a) Salable or Usable Commodity	No salable commodity.
ORS 468.190(1)(b) Return on Investment (ROI)	The useful life of the facility used for the ROI consideration is 10 years. The claimed facility does not produce revenue.
ORS 468.190(1)(c) Alternative Methods	No alternative investigated.
ORS 468.190(1)(d) Savings or Increase in Costs	No savings or increase in costs were identified.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

**Compliance and Other Tax Credits**

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits or other tax credits have been issued to **Portland General Electric Co.** at this facility location.

Reviewers: Maggie Vandehey, DEQ



State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant	<b>Portland General Electric Co.</b>
Application No.	<b>5595</b>
Facility Cost	<b>\$97,815</b>
Percentage Allocable	<b>100%</b>
Useful Life	<b>10 years</b>

# Tax Credit Review Report

EQC 0109

## **Pollution Control Facility: Water Final Certification**

ORS 468.150 -- 468.190

OAR 340-016-0005 -- 340-016-0080

### *Applicant Identification*

Organized as: **a C corporation**

Business: **transmission substation**

Taxpayer ID: **93-0256820**

The applicant's address is:

**121 SW Salmon St.  
Portland, OR 97204**

### *Facility Identification*

The certificate will identify the facility as:

**Oil containment system**

The applicant is the owner of the facility located at:

**Glencullen Substation  
4599 SW Lee St.  
Portland, OR 97221**

### *Technical Information*

The oil spill containment facility includes:

- A geomembrane shield around the transformer foundation,
- A geomembrane lined containment pit, and
- A drainage trench.

The membrane prevents oil from spilling on the ground in the unlikely event of an oil spill from one of the transformers. The drain rock and piping direct any spilled oil into the containment pit.

The membrane that covers the ground around the transformers is an XR-5 style 8130 and is sealed to the concrete foundations. This liner is protected from punctures with a geo-fabric under and over the membrane liner. Drain piping is installed around each transformer. A layer of drain rock is then placed over the liner and drain piping. Additional drain piping is laid and connected to the containment pit. Piping from the containment pit is connected to the drain trench.

Without this new oil spill containment system, there was potential for a maximum of approximately

6,000 gallons of transformer oil to drain into Fanno Creek.

Any spilled oil or contaminated materials can now be contained within the site's drainage system until crews are dispatched to pump oil from the containment pit for disposal at a state-approved facility.

**Eligibility**

ORS 468.155 The **sole purpose** of this **new system installation** is to control water pollution.  
(1)(a)(B)

ORS 468.155 The **control** is accomplished with the use of **treatment works** for industrial waste  
(1)(b)(A) as defined in ORS 468B.005.

ORS 468.155 **Replacement:** There was no existing oil containment system in place.  
(3)(e)

**Timeliness of Application**

The application was submitted within the timing requirements of ORS 468.165 (6).

<i>Construction Started</i>	<b>01/05/1999</b>
<i>Construction Completed</i>	<b>07/15/1999</b>
<i>Placed into Operation</i>	<b>07/15/1999</b>
<i>Application Received</i>	<b>07/13/2001</b>

**Facility Cost**

Claimed Cost		\$118,650
Ineligible Costs	Corporate loading	(\$20,835)
Eligible Cost		<b>\$97,815</b>

Invoices and canceled checks substantiated the facility cost.

**Facility Cost Allocable to Pollution Control**

The following factors were considered in determining the percentage of the facility cost allocable to pollution control.

<b>Factor</b>	<b>Applied to This Facility</b>
ORS 468.190(1)(a) Salable or Usable Commodity	No salable commodity.
ORS 468.190(1)(b) Return on Investment (ROI)	The useful life of the facility used for the ROI consideration is 10 years. The claimed facility does not produce revenue.
ORS 468.190(1)(c) Alternative Methods	No alternative investigated.
ORS 468.190(1)(d) Savings or Increase in Costs	No savings or increase in costs were identified.
ORS 468.190(1)(e) Other Relevant Factors	No other relevant factors.

**Compliance and Other Tax Credits**

The facility is in compliance with Department rules and statutes and with EQC orders. No DEQ permits or other tax credits have been issued to **Portland General Electric Co.** at this facility location.

Reviewers: Maggie Vandehey, DEQ



State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant **Denton Plastics Inc.**  
Application No. **5597**  
Facility Cost **\$4,756**  
Percentage Allocable **100%**  
Useful Life **5 years**

# Tax Credit Review Report

EQC 0109

## Reclaimed Plastic Products

### Final Certification

ORS 468.451 -- 468.491

OAR 340-017-0010 -- 340-017-0055

### *Applicant Identification*

Organized as: **a corporation**

Business: **Plastic recycling company**

Taxpayer ID: **93-0852298**

The applicant's address is:

**4427 NE 158<sup>th</sup>  
Portland, OR 97230**

### *Facility Identification*

The certificate will identify the facility as:

**One HD-20-18 belt conveyor with  
welded steel frame**

The applicant is the owner of the facility  
located at:

**4427 NE 158<sup>th</sup>  
Portland, OR 97230**

### *Technical Information*

This equipment is used to process scrap plastic and reclaimed plastic products in the manufacturing of reclaimed plastic pellets.

### *Eligibility*

ORS 468.461 (1) Any person may apply to the EQC for certification of an investment made to allow the person to collect, transport or process reclaimed plastic, or to manufacture a reclaimed plastic product.

**Timeliness of Application**

The application was submitted within the timing requirements of ORS 468.165(6).

<i>Preliminary Application Received</i>	<b>03/23/2001</b>
<i>Preliminary approval granted</i>	<b>03/23/2001</b>
<i>Date of investment</i>	<b>04/30/2001</b>
<i>Final application received</i>	<b>07/17/2001</b>

**Facility Cost**

Claimed Cost	\$4,756
Eligible Cost	<b>\$4,756</b>

Invoices substantiated the cost of the facility.

**Facility Cost Allocable to Pollution Control**

The following factors were used to determine the 100% percentage of the investment allocable to the collection, transportation or processing of reclaimed plastic, or the manufacture of reclaimed plastic product.

<b>Factor</b>	<b>Applied to This Facility</b>
OAR 340-017-0030 (2)(a) Extent used to convert reclaimed plastic into a salable or usable commodity.	The equipment is used 100% of the time for processing reclaimed plastic into a salable or useable commodity.
OAR 340-017-0030 (2)(b) The alternative methods, equipment and costs for achieving the same objective;	No alternative methods were considered.
OAR 340-017-0030 (2)(c) Other relevant factors used to establish portion of the cost allocable to collection, transportation or processing of reclaimed plastic or the manufacture of reclaimed plastic products.	No other factors were considered relevant.

**Compliance and Other Tax Credits**

The facility is in compliance with Department rules and statutes and with EQC orders. DEQ issued a storm water permit to this facility.

The EQC issued **Denton Plastics, Inc. 16** tax credit certificates to the facility location.  
 The EQC issued **WWDD Partnership 13** tax credit certificates to the facility location.  
 The EQC issued **Neo Leasing, LLC 4** tax credit certificates to the facility location.  
 The EQC issued **DBD Leasing 1** tax credit certificate to the facility location.

Reviewer: William R Bree, DEQ



State of Oregon  
Department of  
Environmental  
Quality

# Tax Credit Review Report

EQC 0109

## **Pollution Control Facility: Solid Waste Final Certification**

ORS 468.150 -- 468.190

OAR 340-016-0005 -- 340-016-0080

### ***Applicant Identification***

Organized As: **a S corporation**

Business: **Solid waste collection  
and recycling facility**

Taxpayer ID: **93-0582081**

The applicant's address is:

**16791 SE 120<sup>th</sup>  
Clackamas, Oregon 97015**

### ***Technical Information***

These containers are used to collect recyclable materials from residential and commercial customers in the City of Portland and Clackamas County. The recyclable materials are delivered to a processing facility where they are sorted and sent to recycling mills to be converted into useable products.

Director's  
Recommendation: **APPROVE**

Applicant: **John P. Lehl Co**  
Application No.: **5598**  
Facility Cost: **\$24,518**  
Percentage Allocable: **100%**  
Useful Life: **7 years**

### ***Facility Identification***

The certificate will identify the facility as:

**Ten 2-yard metal collection bins, (S/N 162437-162446); 14 3-yard metal collection containers, (S/N 162447-162451, 167094-167098, 196478-169481); 200 blue 65-gallon recycling carts, (S/N 1400-1599); and 1000 14-gallon collection bins, with no serial numbers.**

The applicant is the owner of the facility located at:

**16791 SE 120<sup>th</sup>  
Clackamas, Oregon**



**Eligibility**

- ORS 468.155 (1)(a) The **sole purpose** of this **new equipment** is to prevent, control, or reduce a substantial quantity of **solid waste**.
- ORS 468.155 (3)(e) **Replacement:** These containers do not replace old recycling collection equipment.
- ORS 468.155 (1)(b)(D) These containers are used to collect recyclable material and are part of a **material recovery process** that obtains useful material from material that would otherwise be solid waste as defined in ORS 459.005.

**Timeliness of Application**

The application was submitted within the timing requirements of ORS 468.165(6).

<i>Construction Started</i>	<u>10/15/99</u>
<i>Construction Completed</i>	<u>11/30/00</u>
<i>Facility Placed into Operation</i>	<u>11/30/00</u>
<i>Application Received</i>	<u>07/17/01</u>

**Facility Cost**

Facility Cost	\$24,518
Eligible Facility Cost	<u>\$24,518</u>

The applicant provided copies of the invoices to substantiate the facility cost.

**Facility Cost Allocable to Pollution Control**

The only factor used in determining the portion of the claimed facility cost allocable to pollution control is the 100% percentage of time the facility is used for pollution control.

**Compliance and Other Tax Credits**

The facility is in compliance with Department rules and statutes and with EQC orders. There were no DEQ permits issued to this facility.

No other tax credits have been issued to the **John P. Lehl Company**.

Reviewer: William R Bree, DEQ



State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant **Ideal Door Components Inc.**  
Application No. **5600**  
Facility Cost **\$34,800**  
Percentage Allocable **100%**  
Useful Life **5 years**

# Tax Credit Review Report

EQC 0109

## Reclaimed Plastic Products

### Final Certification

ORS 468.451 -- 468.491

OAR 340-017-0010 -- 340-017-0055

### *Applicant Identification*

Organized as: **a corporation**

Business: **Manufacturing and sales of door  
components**

Taxpayer ID: **93-1069757**

The applicant's address is:

**4243 Springrock Circle  
West Linn, OR 97068**

### *Technical Information*

This 20-cavity mold is used to manufacture 10 sidelite door plugs and 10 compression keys used in shipping prehung doors. These products are manufactured from 100% reclaimed plastic.

### *Eligibility*

ORS 468.461 (1) Any person may apply to the EQC for certification of an investment made to allow the person to collect, transport or process reclaimed plastic, or to manufacture a reclaimed plastic product.

### *Facility Identification*

The certificate will identify the facility as:

**One 20-cavity mold designed to  
manufacture sidelite door plug bodies  
and compression keys.**

The applicant is the owner of the facility  
located at:

**37570 Rubin Lane, Suite B  
Sandy, OR 97055**

**Timeliness of Application**

The application was submitted within the timing requirements of ORS 468.165(6).

<i>Preliminary application received</i>	<u>03/12/2001</u>
<i>Preliminary approval granted</i>	<u>03/12/2001</u>
<i>Date of investment</i>	<u>07/11/2001</u>
<i>Final application received</i>	<u>07/19/2001</u>

**Facility Cost**

Claimed Cost	\$34,800
Eligible Cost	<u>\$34,800</u>

Invoices substantiated the cost of the facility.

**Facility Cost Allocable to Pollution Control**

The following factors were used to determine the 100% percentage of the investment allocable to the collection, transportation or processing of reclaimed plastic, or the manufacture of reclaimed plastic product.

<u>Factor</u>	<u>Applied to This Facility</u>
OAR 340-017-0030 (2)(a) Extent used to convert reclaimed plastic into a salable or usable commodity.	The equipment is used 100% of the time for processing reclaimed plastic into a salable or useable commodity.
OAR 340-017-0030 (2)(b) The alternative methods, equipment and costs for achieving the same objective;	No alternative methods were considered.
OAR 340-017-0030 (2)(c) Other relevant factors used to establish portion of the cost allocable to collection, transportation or processing of reclaimed plastic or the manufacture of reclaimed plastic products.	No other factors were considered relevant.

**Compliance and Other Tax Credits**

The facility is in compliance with Department rules and statutes and with EQC orders. There were no DEQ permits or other tax credits issued to this facility.

Reviewer: William R Bree, DEQ



State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant **New Pacific Corporation**  
Application No. **5602**  
Eligible Facility Cost **\$49,501**  
Percentage Allocable **100%**  
Useful Life **10 years**

# Tax Credit Review Report

EQC 0109

## **Pollution Control Facility: USTs**

### **Final Certification**

ORS 468.150 -- 468.190

OAR 340-016-0005 -- 340-016-0080

### ***Applicant Identification***

Organized as: **an S Corporation**

Business: **Commercial Cardlock**

Taxpayer ID: **93-0740244**

The applicant's address is:

**P O Box 23722**

**Eugene, OR 97402**

### ***Facility Identification***

The certificate will identify the facility as:

**Epoxy lining and impressed current  
cathodic protection on two underground  
storage tanks and an automatic tank  
gauge system.**

The applicant is the owner of **DEQ Facility ID  
5230** located at:

**50 Hwy 99 North**

**Eugene OR 97402**

### ***Technical Information***

The applicant installed pollution control equipment to meet EPA requirements for underground storage tanks.

### ***Eligibility***

ORS 468.155 (1)(a) The **principal purpose** of this **installation** is to prevent, control or reduce a substantial quantity of air and water pollution. The claimed facility meets EPA requirements for underground storage tanks and the requirements under OAR Chapter 340, Division 150.

OAR-016-0025 (2)(g) Installation or construction of facilities which will be used to detect, deter, or prevent spills or unauthorized releases.

***Timeliness of Application***

The application was submitted within the timing requirements of ORS 468.165 (6).

<i>Construction Started</i>	<u>11/01/98</u>
<i>Construction Completed</i>	<u>08/31/99</u>
<i>Facility Placed into Operation</i>	<u>08/31/99</u>
<i>Application Received</i>	<u>07/30/01</u>

***Facility Cost***

Claimed cost	\$49,501
Less Ineligible Costs	<u>(\$0)</u>
Eligible cost	<u>\$49,501</u>

Invoices or canceled checks substantiated the cost of the facility.

***Facility Cost Allocable to Pollution Control***

The only factor used in determining the percentage allocable to pollution control is the 100% percentage of time the facility is used for pollution control.

***Compliance and Other Tax Credits***

The facility is in compliance with Department rules and statutes and with EQC orders. The EQC issued 1 certificate to New Pacific Corporation at a different facility location.

Reviewer: Barbara J. Anderson, DEQ



State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant **Wilco Farmers**  
Application No. **5605**  
Eligible Facility Cost **\$429,808**  
Percentage Allocable **96%**  
Useful Life **10 years**

# Tax Credit Review Report

EQC 0109

## **Pollution Control Facility: USTs**

### **Final Certification**

ORS 468.150 -- 468.190

OAR 340-016-0005 -- 340-016-0080

### ***Applicant Identification***

Organized as: **a Cooperative**  
Business: **a Retail Gas Station**  
Taxpayer ID: **93-0559325**

The applicant's address is:

**P O Box 258  
Mt. Angel, OR 97362**

### ***Facility Identification***

The certificate will identify the facility as:

**Two doublewall steel/fiberglass tanks, doublewall flexible plastic piping, spill containment basins, automatic tank gauge system, line/turbine leak detectors, overfill alarm, sumps, oil/water separator, automatic shutoff valves and Stage II vapor recovery.**

The applicant is the owner of **DEQ Facility ID 12004** located at:

**19791 Hwy 213  
Oregon City, OR 97045**

### ***Technical Information***

The applicant installed pollution control equipment to meet EPA requirements for underground storage tanks.

**Eligibility**

- ORS 468.155 (1)(a) The **principal purpose** of this **installation** is to prevent, control or reduce a substantial quantity of air and water pollution. The claimed facility meets EPA requirements for underground storage tanks and the requirements under OAR Chapter 340, Division 150.
- OAR-016-0025 (2)(g) Installation or construction of facilities which will be used to detect, deter, or prevent spills or unauthorized releases.

**Timeliness of Application**

The application was submitted within the timing requirements of ORS 468.165 (6).

<i>Construction Started</i>	<u>04/10/00</u>
<i>Construction Completed</i>	<u>06/12/00</u>
<i>Facility Placed into Operation</i>	<u>06/12/00</u>
<i>Application Received</i>	<u>08/08/01</u>

**Facility Cost**

Claimed cost	\$430,836
Less Ineligible Costs – Portion of tank gauge system not used for inventory control (10%).	(\$1,028)
Eligible cost	<u>\$429,808</u>

Invoices or canceled checks were submitted to substantiate the cost of the facility.

**Facility Cost Allocable to Pollution Control**

The cost for non-corrosion protected portion of tank and/or piping system is \$16,146. This is **4%** of the eligible facility cost that is not allocable to pollution control leaving the remaining **96%** allocable.

**Compliance and Other Tax Credits**

The facility is in compliance with Department rules and statutes and with EQC orders.

Reviewer: Barbara J. Anderson, DEQ  
Maggie Vandehey, DEQ



State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant **Leathers Enterprises, Inc.**  
Application No. **5607**  
Eligible Facility Cost **\$963,950**  
Percentage Allocable **96%**  
Useful Life **10 years**

# Tax Credit Review Report

EQC 0109

## **Pollution Control Facility: USTs**

### **Final Certification**

ORS 468.150 -- 468.190

OAR 340-016-0005 -- 340-016-0080

### ***Applicant Identification***

Organized as: **a S Corporation**

Business: **Retail Gas Stn & Cardlock**

Taxpayer ID: **93-1130446**

The applicant's address is:

**22300 SE Stark Street  
Gresham, OR 97030**

### ***Facility Identification***

The certificate will identify the facility as:

**Five doublewall steel/fiberglass tanks, doublewall flexible plastic piping, spill containment basins, automatic tank gauge system, overfill alarm, sumps, monitoring wells, oil/water separator, automatic shutoff valves, Stage II vapor recovery piping.**

The applicant is the owner of **DEQ Facility ID 4272** located at:

**12334 Ehlen Road NE  
Aurora, OR 97002**

### ***Technical Information***

The applicant installed pollution control equipment to meet EPA requirements for underground storage tanks.



**Eligibility**

- ORS 468.155 (1)(a) The **principal purpose** of this **installation** is to prevent, control or reduce a substantial quantity of air and water pollution. The claimed facility meets EPA requirements for underground storage tanks and the requirements under OAR Chapter 340, Division 150.
- OAR-016-0025 (2)(g) Installation or construction of facilities which will be used to detect, deter, or prevent spills or unauthorized releases.

**Timeliness of Application**

The application was submitted within the timing requirements of ORS 468.165 (6).

<i>Construction Started</i>	<u>05/01/96</u>
<i>Construction Completed</i>	<u>09/01/99</u>
<i>Facility Placed into Operation</i>	<u>09/01/99</u>
<i>Application Received</i>	<u>08/08/01</u>

**Facility Cost**

Claimed cost	\$965,397
Less Ineligible Costs – Portion of tank gauge system not used for inventory control (10%).	(\$1,447)
Eligible cost	<u>\$963,950</u>

Invoices and canceled checks substantiate the cost of the facility.

**Facility Cost Allocable to Pollution Control**

The cost for non-corrosion protected portion of tank and/or piping system is \$43,233. This is **4%** of the eligible facility cost that is not allocable to pollution control leaving the remaining **96%** allocable.

**Compliance and Other Tax Credits**

The facility is in compliance with Department rules and statutes and with EQC orders.

Reviewer: Barbara J. Anderson, DEQ  
Maggie Vandehey, DEQ



State of Oregon  
Department of  
Environmental  
Quality

Director's  
Recommendation: **APPROVE**

Applicant **Columbia Steel Casting Co., Inc.**  
Application No. **5609**  
Facility Cost **\$31,067**  
Percent Allocable **100%**  
Useful Life **7 years**

# Tax Credit Review Report

EQC 0109

## **Pollution Control Facility: Air Final Certification**

ORS 468.150 -- 468.190  
OAR 340-016-0005 -- 340-016-0080

### ***Applicant Identification***

Organized as: **an S corporation**  
Business: **manufacture alloy steel  
castings**  
Taxpayer ID: **93-0336095**

The applicant's address is:

**PO Box 38095  
Portland, OR 97283**

### ***Facility Identification***

The applicant identified the facility as:

**Low-NO<sub>x</sub> burners for Natural Gas Fired  
Oven installed on heat treat oven #3**

The applicant is the owner of the facility  
located at:

**10425 N. Bloss Ave.  
Portland, OR 97203**

### ***Technical Information***

The claimed facility is the overhaul of the combustion system including the installation of low-NO<sub>x</sub> burners on the natural gas fired oven #3. The components are:

- 6 new burners (Eclipse Thermjet # TJ-150),
- a new combustion air blower,
- changes to gas and air piping,
- additional gas and air control valves, and
- modifications to the electrical control system.

The original combustion system on the heat treat oven was built in 1975 and was still functioning as intended. The burners were designed and manufactured before nitrogen oxides were recognized as an environmental problem. Emissions from the old system are calculated using EPA's AP-42 table 1.4-2 for small combustion boilers <10 MMBTU. The manufacturer of the new burners

estimates 37% reduction of NO<sub>x</sub>, and 40% reduction of CO. Actual amounts will depend on usage, which varies depending on product mix and production volumes.

**Eligibility**

- ORS 468.155 (1)(a)(B) The **sole purpose** of this **new combustion system** is to reduce a substantial quantity of air pollution caused by nitrogen oxides and carbon monoxides from natural gas combustion.
- ORS 468.155 (1)(b)(B) The claimed facility eliminates air contaminants with the use of an air cleaning device as defined in ORS 468A.005.
- ORS 468.150 (3)(e) **Replacement:** The claimed facility is not a replacement to any previously certified equipment. The applicant is in the process of upgrading all natural gas oven burners. The Commission issued a certificate on 9/17/98 for low-NO<sub>x</sub> burners for natural gas fired oven used for heat treating steel castings. These burners are still functioning for their intended pollution control purpose.

**Timeliness of Application**

The application was submitted within the timing requirements of ORS 468.165 (6).

<i>Construction Started</i>	<b>03/27/2001</b>
<i>Construction Completed</i>	<b>06/15/2001</b>
<i>Placed into Operation</i>	<b>06/18/2001</b>
<i>Application Received</i>	<b>08/14/2001</b>

**Facility Cost**

Claimed Facility Cost	\$31,067
Eligible Facility Cost	<b>\$31,067</b>

Staff completed a facility cost analysis according to Department requirements on behalf of the applicant.

**Facility Cost Allocable to Pollution Control**

The only factor used to determining that **100%** percent of the facility cost is allocable to pollution control is the percentage of time the facility is used for pollution control.

**Compliance and Other Tax Credits**

The applicant states the facility is in compliance with Department rules and statutes and with EQC orders. DEQ permits issued to this location:

- ACDP, #26-1869, issued 2/1/1995
- NPDES, #1200-COLS (18696), issued 12/21/1999

The EQC issued 15 certificates to **Columbia Steel Casting Co., Inc.** at this facility location.

Reviewer: Maggie Vandehey, DEQ

# *Attachment C*

## Denial

The Department recommends the Commission deny application number 5498 because the claimed facility replaces a previously certified facility.

<b>Application #</b>	<b>Applicant</b>	<b>Reason for denial</b>	<b>Statutory reference</b>
5498	Berger Brothers	Replacement facility	ORS 468.155 (3)(e)

### *Replacement:*

#### **468.155 Definitions for ORS 468.155 to 468.190.**

(3) As used in ORS 468.155 to 468.190, “pollution control facility” or “facility” does not include:

- (e) Replacement or reconstruction of all or a part of any facility for which a pollution control facility certificate has previously been issued under ORS 468.170, except:
  - (A) If the cost to replace or reconstruct the facility is greater than the like-for-like replacement cost of the original facility due to a requirement imposed by the department, the federal Environmental Protection Agency or a regional air pollution authority, then the facility may be eligible for tax credit certification up to an amount equal to the difference between the cost of the new facility and the like-for-like replacement cost of the original facility; or
  - (B) If a facility is replaced or reconstructed before the end of its useful life then the facility may be eligible for the remainder of the tax credit certified to the original facility;



State of Oregon  
Department of  
Environmental  
Quality

# Tax Credit Review Report

EQC 0109

## Pollution Control Facility: Field Burning

### Final Certification

ORS 468.150 -- 468.190

OAR 340-016-0005 -- 340-016-0080

### *Applicant Identification*

Organized as: **a Partnership**

Business: **a grass seed farm**

Taxpayer ID: **543-52-6637**

The applicant's address is:

**34125 Riverside Dr.  
Albany, OR 97321**

Director's

Recommendation: **DENY—Replaces a  
previously certified facility**

Applicant

**Berger Brothers**

Application No.

**5498**

Claimed Facility Cost

**\$32,685**

Claimed Percentage Allocable

**100%**

Useful Life

**10 years**

### *Facility Identification*

The applicant identified the facility as:

**30' Alloway Flail Chopper (S/N 24946)**

The applicant is the owner of the facility  
located at:

**29722 Hwy 34  
Albany, OR 97321**

### *Technical Information*

The applicant **currently owns and leases a total of 1250 acres**; of which 950 are under perennial grass seed production and 300 are under annual grass seed production. At one time this applicant open field burned as many acres as the weather and smoke management program permitted. The applicant now uses alternative practices including flail chopping straw loads, and baling off straw residue.

The applicant purchased the claimed 30' Alloway Flail Chopper (Serial # 24946) for flail chopping grass straw loads. The applicant has been issued previous tax credit certificates, including a certificate for a 14' Rears Flail Chopper in 1990.

The previous review reports state that **1200 acres of grass seed have been removed** from open field burning as a result of the certified facilities. The Department requested documentation proving additional acreage was acquired. The applicant failed to provide this documentation.

### *Eligibility*

ORS 468.155 (1)(a) The **principal purpose** of this **new equipment** is **not** to reduce **air pollution** by reducing the maximum acreage to be open-burned in the Willamette Valley in compliance with OAR 340-266-0060 (Acreage Limitations, Allocations). Acreage removal has been addressed by previously certified facilities.

ORS 468.155 (3)(e) **Replacement:** This facility **replaces a previously certified facility**; a replacement facility is not eligible for certification. On September 21, 1990, the EQC issued certificate number 2240 to the applicant for a 14' Rears Flail Chopper and a Baler. The applicant stated the previously certified flail chopper became worn out and unreliable.

OAR 340-016-0060 (4)(b)(A) Equipment, facilities, and land for gathering, densifying, handling, storing, transporting and incorporating grass straw or straw based products which will result in reduction of open field burning.

***Timeliness of Application***

The application was submitted within the timing requirements of ORS 468.165 (6).

<i>Construction Started</i>	<u>12/23/1999</u>
<i>Construction Completed</i>	<u>12/23/1999</u>
<i>Facility Placed into Operation</i>	<u>7/01/2000</u>
<i>Application Received</i>	<u>11/20/2000</u>

***Facility Cost***

Claimed Facility Cost	\$32,685
Ineligible Cost—Replacement Facility	<u>(\$32,685)</u>
Eligible Facility Cost	<u>\$0</u>

Paid invoices and canceled checks substantiate the cost of the facility.

***Facility Cost Allocable to Pollution Control***

The only factor used in determining the percentage allocable to pollution control is the percentage of time the facility is used for pollution control.

***Compliance and Other Tax Credits***

The facility is in compliance with Department rules and statutes and with EQC orders. There are no DEQ permits issued to the facility.

Other tax credits issued to **Berger Brothers:**

App. #	Description of Facility	Certified Cost	Cert. #	Issue Date
3155	Install Drainage Tile to Land	\$2,993	2239	08/10/1990
3156	14' Rears Flail Chopper & Baler	\$16,617	2240	09/21/1990
3261	Tractor & Loader	\$53,000	2340	12/14/1990
3688	Drainage Tile to 33 Acres	\$15,674	2820	04/23/1992
3689	14' Steiger 1600 Offset Disk	\$4,750	2821	03/12/1992
4407	Tractor & Plow	\$54,800	3484	08/18/1995

Reviewers: Jim Cramer, ODA  
John Hamblin, ODA  
Maggie Vandehey, DEQ



# UMCDF Status Report

**Presented to:**

**Oregon Environmental Quality Commission**

LTC Fred Pellissier, Commander, Umatilla Chemical Depot

Mr. Don Barclay, Site Project Manager, Umatilla Chemical Agent Disposal Facility

Mr. Loren Sharp, Project Manager, Washington Demilitarization Company



# Discussion Topics



- PMCD Commitments
- PMCSD Program Status
- UMCDF Systemization Schedule
- UMCDF Secondary Waste Processing Update
- Summary





## PMCD Commitment



- PMCD Charter:
  - ✓ Eliminate the risk from the stockpile at the Umatilla Chemical Depot while ensuring **MAXIMUM PROTECTION** to the workers, the public, and the environment.
  - ✓ Strive to provide the best value while ensuring **NO COMPROMISE** to our maximum protection charter
- PMCD Principles:
  - ✓ Safety & Environmental Stewardship
  - ✓ Cost & Schedule Performance
  - ✓ Program Acceptance
  - ✓ Contractor Success



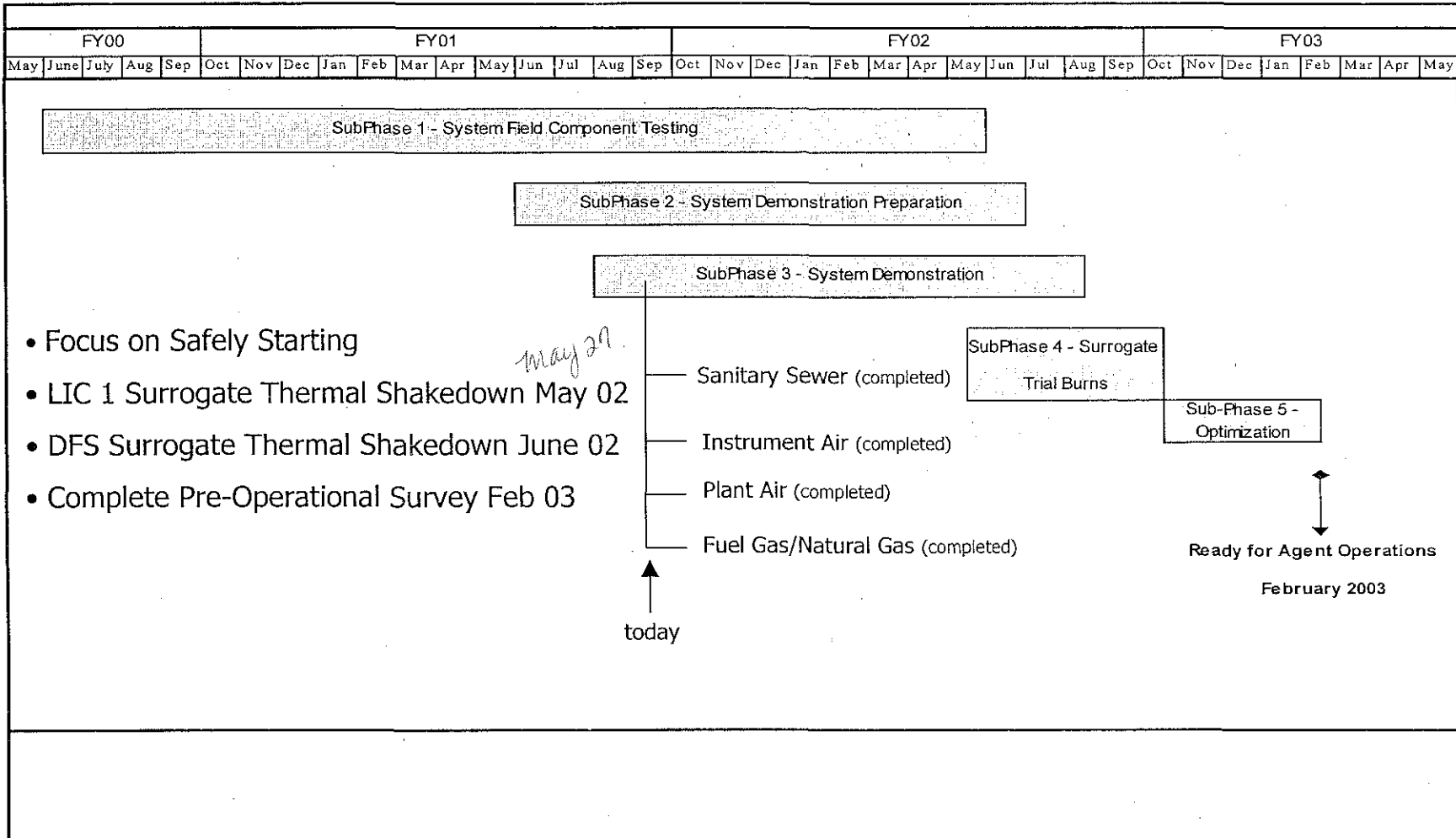
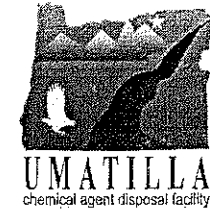
# PMCD Program Status



- JACADs completed munitions campaign in November 2000
- TOCDF finished GB rocket campaign in August 2001
- TOCDF GB campaign completion early 2002
- UMCDF and ANCDF
  - Completed construction in 2001
  - Surrogate Shakedown scheduled for 2002
- PBCDF construction 65% complete
- PUCDF & BGCDF technology decisions pending



# Systemization Schedule





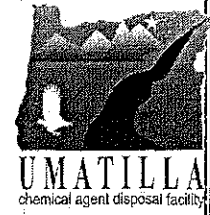
# UMCDF Systemization Schedule Challenges



- Maintain focus on risk elimination
- Effectively integrate performers into schedule
- Constant open and forthright communications
- Incorporating programmatic lessons learned



## Secondary Waste



- No Legacy Waste
- Treat all Agent Contaminated Secondary Waste



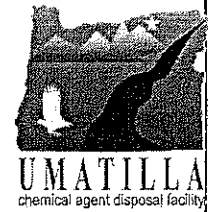
## Secondary Waste Processing at the UMCDF



- Current RCRA permit identifies incineration as the best available technology for disposing of secondary waste
- Successful testing and treatment of DPE and halogenated plastic in the MPF at JACADS
- Decision made to implement the improved incineration technology for DPE and halogenated plastic treatment in the MPF at UMCDF, September 2001
- Treatment of carbon using the Carbon Micronization System (CMS) and DFS test at JACADS, January 2002



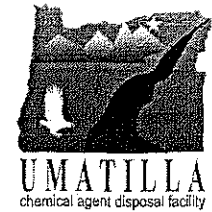
## Secondary Waste Processing at the UMCDF



- With successful testing at JACADS, the Permittees plan to issue a decision to implement carbon treatment using CMS in the DFS prior to start-up of surrogate operations at the UMCDF
- Other UMCDF waste streams to be treated in the LIC, DFS, and MPF
- DUN and PAS Design Upgrades Permit Modification Request, submitted September 2000, withdrawn July 2001
- Permittees anticipate withdrawing the DUN from the UMCDF Hazardous Waste Permit based on successful demonstration of improved incineration technology at JACADS



# Secondary Waste Processing at the UMCDF



- The Permittees submitted the Compliance Schedule Permit Modification Request, June 2000
  - Proposed schedules for implementing treatment at UMCDF for DPE, carbon, and other secondary waste streams.
  - Proposed UMCDF startup without the DUN being constructed based on waste treatment processes and schedules being identified.
- Permittees withdrew the Compliance Schedule Permit Modification Request, July 2001





# Summary



- Focus
  - Safe Startup and Operations
  - Risk Reduction

**Date:** August 31, 2001  
**To:** Environmental Quality Commission  
**From:** Stephanie Hallock, Director *S. Hallock*  
**Subject:** Agenda Item H, Action Item: Approval Process for Umatilla Chemical Agent Disposal Facility Operation

September 20-21, 2001 EQC Meeting

**Department Recommendation** The Department recommends the Commission direct the Department to prepare a proposed modification to the UMCDF HW Permit to require Department approval for the start of surrogate testing operations and Commission approval for the start of chemical agent operations (as explained in Alternative #3).

**Key Issues** 1. *The UMCDF HW Permit does not explicitly require Permittees to obtain Department or Commission approval prior to commencing hazardous waste operations. Consequently, we do not have an enforceable mechanism with which to rigorously evaluate overall UMCDF readiness before initiation of operations (facility start-up).*

HW Permit Condition II.H.4.i. requires Permittees to obtain, prior to commencing hazardous waste operations, written notification from the Department indicating the Governor has determined the Chemical Stockpile Emergency Preparedness Program (CSEPP) has achieved an adequate level of readiness. However, the Department believes there are other significant issues and activities which must also be resolved or completed prior to allowing start-up of UMCDF.

One of the most significant issues is the disposition of secondary wastes that will be generated during UMCDF operations. As discussed in a July 5, 2001 memorandum to the Commission (Attachment A), the Permittees have withdrawn the Class 3 Permit Modification Requests for the Secondary Waste Compliance Schedule and the Dunnage Incinerator Design Upgrade. Modifying the HW Permit to include requirements for a start-up approval process will provide the Commission a replacement mechanism to ensure that secondary waste issues are satisfactorily addressed prior to start-up.

Other significant issues include compliance with HW Permit requirements

and prior Permit Modification Request approval conditions, successful completion of all systemization and operational testing activities, and final modifications to the HW Permit and Permit Application to reflect the “as-built” configuration of UMCDF. The formal evaluation/approval process the Department is proposing will provide a mechanism to verify completion of these activities.

2. *Without a defined process for approving the start of surrogate and/or agent operations, the Department and Commission do not have a formal mechanism to obtain input from interested members of the public on their perception of UMCDF readiness to begin operations.*

The Commission’s decision to approve and issue the original UMCDF HW Permit was reached through very open and public processes. Approval to start UMCDF operations, especially for chemical agent operations, represents a decision of similar magnitude. The Department believes there is an expectation by both the Commission and interested members of the public that the decision to approve the start of operations at UMCDF should also be conducted in an open and public forum. The use of a defined approval process will facilitate such an approach.

3. *The approval process for UMCDF start-up must include a specific list of items to be completed, accompanied by a rigorous and defined set of criteria that will be used for the evaluation. It should also include sufficient flexibility to respond to changing circumstances, new information and emerging issues.*

The Department provided the Commission with an initial draft of a UMCDF start-up checklist as an attachment to a staff report discussed at the May 18, 2000 Commission meeting (related to the Request for Revocation). Since that time, the Department has expanded that initial effort into separate checklists for surrogate and agent operations. The Department will further refine these checklists to ensure they are comprehensive, and account for new information and circumstances.

Example checklists for a start-up approval process are provided in Attachment B (surrogate operations) and Attachment C (agent operations). Examples of the kinds of specific evaluation criteria that will be developed for each checklist item are included as Attachment D. The checklists will be used by the Department to evaluate UMCDF operational readiness and support a recommendation/decision regarding start-up.

4. *Hazardous waste operations at UMCDF will begin by testing the facility with surrogate chemicals. If UMCDF successfully demonstrates the ability to destroy the surrogate materials it will be ready to proceed with chemical agent operations. This presents two discrete start-up decision points, one for the beginning of the surrogate operations and another for the beginning of agent operations.*

UMCDF is currently targeting June 2002 for the start of surrogate operations, and late February 2003 for the start of GB nerve agent operations. Although surrogate operations are considered "hazardous waste operations" subject to the requirements of the HW Permit, their purpose within the overall function of UMCDF is to serve as the final testing phase demonstrating the facility's readiness for chemical agent operations. Successful demonstration of furnace operations during surrogate trial burns is required before UMCDF is considered ready to move into operations with chemical agent.

Chemical agent disposal operations begin with the commencement of agent "shakedown" operations, which occur prior to the agent trial burns. RCRA hazardous waste regulations allow a facility to operate with the permitted waste feeds (in this case, GB chemical agent munitions) for up to 720 hours (30 days at 24 hours/day operation) prior to conducting the actual trial burn tests. The beginning of the agent shakedown phase is then effectively the beginning of disposal operations, since UMCDF will be using chemical munitions as waste feed and operating the furnaces in accordance with permitted limits during shakedown testing.

If the Commission agrees that a start-up approval process should be developed, then the Department requires guidance on whether the Commission would like to reserve both start-up decisions for itself, or whether it wishes to defer the surrogate start-up decision to the Department while retaining the agent start-up decision for itself.

**EQC Action  
Alternatives**

1. *Take no action.*

This alternative provides the Commission no role in explicitly approving the start of either surrogate or chemical agent operations. Permittees would be allowed to begin operations when the Department determines that UMCDF has met all requirements currently in the HW Permit and completed any activities that were required as conditions for approval of previous Permit Modification Requests. Interested members of the public would have no formal opportunity to provide input to the Department's decision process, except through the normal permit modification process.

The original decision to issue the HW Permit was predicated in part on the need for expeditious destruction of the stockpile. Therefore, the Department believes that assessment of the alternatives should consider whether a formal decision process to approve start-up could result in a schedule delay for disposal operations. The “no-action” alternative represents the least risk in terms of delaying the start of UMCDF because no additional requirements for public process are being imposed.

2. *Direct the Department to prepare a proposed modification to the UMCDF HW Permit explicitly requiring Commission approval for the start of both surrogate operations and chemical agent operations.*

UMCDF has already entered the “systemization” phase, which includes component, instrument, and equipment testing using non-hazardous materials and waste feeds (such as simulated munitions filled with ethylene glycol to test conveyors, controls, and feed mechanisms). Although testing and trial burns using “surrogate” chemicals are defined as hazardous waste operations by the Department, surrogate operations are still considered part of the facility systemization process. This alternative would require Permittees to obtain Commission approval before proceeding to testing with the surrogate chemicals.

The Department would use a surrogate start-up checklist (with associated evaluation criteria), a public comment process, and field evaluations to provide a recommendation to the Commission. The Commission would make the final determination of whether the Permittees have demonstrated readiness to begin surrogate testing operations.

Permittees would also be required to obtain Commission approval prior to moving from the surrogate operations to chemical agent operations. The Department would provide the Commission a recommendation on UMCDF’s readiness to begin agent operations after reviewing the test results from the surrogate trial burns and using an agent start-up checklist to conduct the same evaluation and comment process described above for surrogate operations.

Because of the additional administrative processing time associated with formal Commission actions, this alternative has the potential to delay the start of surrogate testing operations, and consequently the start of agent disposal operations. The Department believes the risk of schedule impacts could be lessened by coordinating the decision approval processes as much as possible to parallel facility operational schedules.

3. *Direct the Department to prepare a proposed modification to the*

*UMCDF HW Permit explicitly requiring Commission approval for the start of chemical agent operations, but deferring to the Department the decision to approve the start of surrogate testing operations.*

The Department would follow the same procedure described in Alternative #2 for assessing the readiness of UMCDF to begin surrogate operations. The only difference would be that the Department would make the final readiness determination.

Permittees would not be allowed to begin actual chemical agent disposal operations without the approval of the Commission. The Department would use an agent start-up checklist (with associated evaluation criteria), a public comment process, and field evaluations to provide a recommendation to the Commission. As in Alternative #2, the Department would also review the test results from the surrogate trial burns as part of the evaluation process. The Commission would then make the final determination of whether Permittees have demonstrated readiness to begin agent operations.

This alternative also has the potential to impact the start of agent operations at UMCDF. However, there is less risk for schedule delay than with Alternative #2 because Alternative #3 eliminates the additional time required for formal Commission approval of the start of surrogate testing operations. Regardless, the Department would do everything it could to minimize the possibility of delay by coordinating the decision approval processes to parallel facility operational schedules.

**Rationale and  
Next Steps**

The Department believes it is appropriate for the Commission to delegate to the Department the authority to approve the start of surrogate operations, which are, in effect, part of the testing process for UMCDF. Success during surrogate operations will then become a significant factor in the Department's evaluation and recommendation to the Commission on whether UMCDF is prepared to go to chemical agent operations. Commission approval for the start of chemical agent operations is appropriate, since it is the chemical agent processing that presents the greatest risk to human health and the environment.

Requiring the Permittees to obtain explicit approval for starting both surrogate and agent operations provides the Department, the Commission, and the public a final opportunity to assess the facility's overall readiness through an open and defined process. Alternative # 3 gives us that opportunity while at the same time minimizing the possibility that stockpile disposal operations will be delayed by administrative processes.

The Department believes that sufficient cause and justification exists to modify the UMCDF HW Permit to include these new requirements. There have been a significant number of changes made to the original design and operating parameters of UMCDF, and public interest and concern remains high. Modification of the HW Permit provides the tool necessary for the Commission and Department to make a determination in an open public process that UMCDF has satisfied the requirements of the State of Oregon prior to the operational start-up. Regardless of the Commission's decision on a start-up approval process, the Department and Commission will retain explicit authority to shut down operations, either surrogate or agent, if there is any indication that operations are presenting a risk to public health or the environment.

If so directed, the Department will develop the draft proposed permit modification package, issue it for public comment, and then prepare the final proposed revised permit language to be presented for Commission approval at a later meeting. As part of the permit modification package that goes out for public review and comment, the Department will include examples of the start-up checklists and specific measurement criteria, and an outline of the overall start-up decision process.

Attachment E includes a proposed schedule to complete the permit modification process. Attachment F provides the regulatory basis for modifying the UMCDF HW Permit, and includes some example permit language for consideration.

**Attachments**

- A** *“Memorandum to the Environmental Quality Commission re: Secondary Waste Treatment,”* from Wayne C. Thomas, Administrator, Chemical Demilitarization Program, dated July 5, 2001 (DEQ Item No. 01-0796)
- B** UMCDF Surrogate Operations: Example Start-Up Checklist
- C** UMCDF Chemical Agent Operations: Example Start-up Checklist
- D** Examples of Measurement and Evaluation Criteria for Selected Start-up Checklist Items
- E** Proposed Schedule for Development of Start-up Approval Process and HW Permit Revisions
- F** Regulatory Basis to Modify UMCDF HW Permit and Example of Possible Revisions

**Available Upon Request**

- “Withdrawal of Class 3 Permit Modification Request UMCDF-00-021-DUN(3), *Dunnage Incinerator and Associated Pollution Abatement System Improvements*,” letter from UMCDF Permittees to Wayne C. Thomas, Administrator, DEQ Chemical Demilitarization Program, dated July 26, 2001 [DEQ Item No. 01-0925]
- “Withdrawal of Class 3 Permit Modification Request UMCDF-00-016-WAST(3), *Secondary Waste Compliance Schedule*,” letter from UMCDF Permittees to Wayne C. Thomas, Administrator, DEQ Chemical Demilitarization Program, dated July 26, 2001 [DEQ Item No 01-0926]

Approved:

Author(s): Thomas G. Beam for Thomas G. Beam & Sue Oliver

Program: Wayne C. Thomas / Wayne C. Thomas

Report Prepared By: Sue Oliver, Sr. Hazardous Waste Specialist  
Thomas G. Beam, PE, Sr. Environmental Engineer

Phone: (541) 567-8297



**Department of Environmental Quality** **Memorandum**

DEQ Item No. 01-0796 (92.93)

**DATE:** July 5, 2001

**TO:** Environmental Quality Commission  
Stephanie Hallock, Director  
Larry Edelman, DOJ  
Larry Knudsen, DOJ  
Stephen Bushong, DOJ

**FROM:** Wayne C. Thomas, Administrator  
Chemical Demilitarization Program

*(Original Signed)*

**SUBJECT:** Umatilla Chemical Agent Disposal Facility—Secondary Waste Treatment

We have recently had some new developments on the issue of “secondary waste” and the related Class 3 Secondary Waste Compliance Schedule Permit Modification Request (PMR). The Permittees intend to withdraw not only the Compliance Schedule PMR, but also the Class 3 Dunnage Incinerator (DUN) Design Upgrade PMR. We concur with the decision to withdraw the modification requests, for two reasons. First, we believe that there are other, more effective, means at our disposal to insure that there are no “legacy wastes” remaining after the munitions have been destroyed. Second, we believe that most of the reasons for initially seeking these two permit modifications no longer apply.

**Secondary Waste Compliance Schedule**

The Permittees came before the Commission in August 1999 with a proposal to keep the installation of the DUN on “hold.” The Army then invited the Department to participate in a new “Secondary Waste Integrated Project Team” to develop the plan for alternate treatment methods for wastes that were originally destined for the DUN. To address the Commission’s concerns about “legacy wastes” remaining in Oregon after the disposal of munitions, the Permittees proposed to submit a “Compliance Schedule” for incorporation into the UMCDF Hazardous Waste Permit (HW Permit). The Compliance Schedule would then become an enforceable document that would hold the Permittees to a firm schedule for treatment decisions on each secondary waste stream, especially carbon and the encapsulating suits called the “Demilitarization Protective Ensemble” (DPE).

The Compliance Schedule PMR was submitted June 27, 2000. The Department issued a Notice of Deficiency in October 2000, and received a response from the Permittees in December 2000. Review of the response to the NOD, and ongoing discussions, indicate that the Permittees are making significant progress on many of the activities listed in the proposed Compliance Schedule, but the Department remains concerned about incorporating it into the UMCDF HW Permit. The Permittees originally proposed the Compliance Schedule so they could start UMCDF without demonstrated and permitted secondary waste treatment methods. The schedule delay for start of UMCDF thermal operations (until mid-2002) means that many of the activities on the Compliance Schedule are likely to be completed prior to start-up, so the need for the Compliance Schedule is lessened. There are other options available to the Department and the Commission to insure that the Permittees continue to make progress on the development of secondary waste treatment technologies. These options are described more fully below.

Incorporating the Compliance Schedule into the Permit was originally intended to motivate the Permittees to accomplish two of the Department's goals related to secondary wastes: (1) identifying all secondary waste streams from both UMCDF and the Depot; and (2) selecting, testing, and permitting treatment technologies for each waste identified in (1). Several of these goals have been achieved, and the Permittees are making progress on others.

UMCDF has essentially completed development of the list of expected secondary waste streams, and UMCDF and the Depot are working closely together to characterize the 700+ drums of secondary wastes generated over 40 years of stockpile maintenance (stored in "J-Block" igloos). We expect that the vast majority of what is stored in J-Block will be similar, and in many cases, identical, to the wastes already permitted for furnace feeds. Most of the secondary wastes from both UMCDF and the Depot could be fed to the Metal Parts Furnace (MPF) or the Deactivation Furnace System (DFS) and the Permittees will be submitting modification requests to permit these additional waste feeds. The two "problem" waste streams are spent carbon and DPE suits.

The DPE suits are used by workers in toxic areas of the chemical demilitarization facilities and contain halogenated plastics, which can be a challenge to treat effectively because of the potential for dioxin formation. The Army just completed testing at the JACADS facility for treating DPE suits in the MPF, and by all accounts (including reports from two Department staff that observed the test) the test was successful. We should have a complete report by the end of this summer.

The proposed treatment methodology for carbon will also use an existing incinerator (DFS). The Permittees are developing a new feed mechanism to allow the injection of the carbon directly into the DFS. The "Carbon Micronization System" is being installed at JACADS to test whether waste carbon can be micronized (pulverized) and fed directly into the DFS through a burner. A full test of the carbon treatment system is expected to occur at JACADS in late 2001 or early 2002. The Department will send observers to that test also.

After we receive the Army's reports on disposal of DPE suits and spent carbon, we can pursue appropriate permit modifications to ensure that systems for disposing of all secondary wastes are at least selected before start-up of any disposal operations. We do not expect UMCDF to begin thermal operations until May or June of 2002, and actual agent operations will not begin until early 2003. That makes it very likely that most of the permit modifications related to treating secondary wastes in existing furnaces will already be in the permitting process, if not completed, before the start of agent operations.

### **Dunnage Incinerator**

At the meeting in August 1999 the Commission and Department both expressed concern about what the Army would do in the event that alternate secondary waste treatment methods did not work out. The Army assured the Commission that it would then go ahead and install the DUN, because the DUN would work with some design upgrades to solve its "throughput" problem, but it was stated that it was mostly just a cost issue. To ensure that there would be some secondary waste treatment option available, the Commission required that the Permittees submit a Modification Request to permit the necessary upgrades to the DUN design. The Class 3 Dunnage Incinerator Permit Modification Request was received in September, 2000. At this juncture, it is clear that further processing of the DUN PMR no longer makes sense.

Review of over 100 DUN-related documents (stretching back to 1989) reveal that the DUN has performed only marginally in its history at both JACADS and TOCDF (Tooele facility). Operators have had a considerable amount of difficulty controlling the combustion process (an inherent problem in the DUN's "batch" feed system). Its "dry" pollution abatement system does not provide the same level of emissions control and capture that can be achieved with the "wet" pollution systems (followed by carbon) of the other furnaces at UMCDF. The feeding mechanism has never functioned well, and the DUN at JACADS experienced a significant explosion in 1991. The DUN was abandoned at JACADS, and although some DUN upgrades were completed and tested at the Tooele facility, the DUN was eventually abandoned there, too.

The design upgrade PMR incorporates only minimal design changes and does not propose to implement some of the most significant recommendations contained in the "DUN Retrofit" report commissioned by the Army in 1994. In addition, construction of the Munitions Demilitarization Building at UMCDF is essentially complete, and no provisions were made for the eventual installation of the DUN. There is now no way to install it in the building without cutting through exterior walls, or cutting the DUN itself into small pieces and reassembling it inside. The Department does not believe that reviewing and processing the DUN PMR is an efficient use of staff resources when it has become so obvious that the Army has no intention of ever installing the DUN at UMCDF.

### **Path Forward**

The Department intends to present these new developments as an informational item at the September 20-21, 2001 Commission meeting. We intend to recommend to the Commission that language be added to the UMCDF HW Permit to give the Commission explicit authority to approve the start-up of UMCDF hazardous waste operations (the HW permit does not currently address Commission approval of start-up). We will also recommend that the Commission direct the Department to develop draft permit language and start-up decision criteria for public comment and Commission approval. The decision criteria may include, but not be limited to, the items in the "Start-up Checklist" originally presented to the Commission as Attachment X to the Revocation Request Staff Report (May 18, 2000). Ensuring that appropriate processes for disposal of all secondary wastes are in place could also be a prerequisite for approving the start-up of UMCDF hazardous waste operations.

The public comment period could be opened in mid to late October, 2001 and remain open until after the December 6-7, 2001 meeting of the Commission. This would allow the public an opportunity to give oral comment directly to the Commission during a regularly scheduled meeting. We would also hold a public hearing in Hermiston, probably the week prior to the December Commission meeting. The matter would be on the Commission agenda as an action item for a decision at the first meeting of 2002, tentatively scheduled for January 24-25.

Please note that I will be on vacation from July 2-13, but feel free to contact Sue Oliver at 541-567-8297 (ext. 26) or Tom Beam at extension 30 if you have any questions. I will be back in the office on July 16.

Cf: Sue Oliver, DEQ  
Tom Beam, DEQ

**UMCDF SURROGATE OPERATIONS  
EXAMPLE START-UP CHECKLIST**

- Umatilla Chemical Depot (UMCD) Hazardous Waste Storage Permit has been approved and implemented.\*
- UMCDF Class 3 Storage Permit Modification Request (for storage of secondary wastes in J-Block pending treatment and/or off-site disposal) has been approved and implemented.
- UMCDF HW Permit and Resource Conservation and Recovery Act (RCRA) Part B Permit Application have been updated and determined to be current (see Attachment D for example evaluation criteria).
- Surrogate trial burn plans for each furnace were submitted at least 180 days prior to the scheduled start of trial burns and have been reviewed and approved by the Department.
- UMCD and UMCDF have been determined to be in compliance with all HW Permit Conditions and other Department requirements.
- Requirements promulgated in 40 CFR 264 Subparts BB/CC (new regulations related to fugitive emissions from tanks and process equipment) have been incorporated into the UMCDF HW Permit, RCRA Part B Permit Application, and the design and operational configuration of the facility.
- Revisions to OAR 340-101 and 340-102 to address the appropriate application of the Oregon state-only chemical agent waste codes (F998/F999 and P998/P999) have been promulgated and corresponding changes properly incorporated into the HW Permit and RCRA Part B Permit Application.
- The UMCDF Perimeter Monitoring Network for the Comprehensive Monitoring Program (CMP) was activated at least one year prior to start of surrogate operations to collect baseline chemical agent air monitoring data.
- UMCDF Independent Oversight Program structure and implementation has been accepted by the Department.
- All required certifications for tank and tank systems, including primary containment sumps, have been submitted to the Department (see Attachment D for example evaluation criteria).\*
- Information demonstrating that the planned surrogate materials are "non-ignitable" was submitted at least six months prior to the start of surrogate operations and was approved by the Department.
- All required miscellaneous treatment unit certifications have been submitted to the Department.\*
- At least eight quarterly CMP soil, biota, and water sampling events have been completed and the data have been statistically analyzed and used to develop baseline threshold values for each risk-driving analyte in each sample media.
- The remote UMCDF computer monitoring station has been installed and are operational per Department request.

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\* Item is currently being evaluated to determine if it is more appropriate to include as a chemical agent operations start-up checklist item.

Attachment B

Agenda Item H, Approval Process for Umatilla Chemical Agent Disposal Facility Operations

September 20-21, 2001 EQC Meeting

Page B-2

- UMCD and UMCDF standard operating procedures related to operational limitations during adverse weather conditions were submitted at least 180 days prior to the start of surrogate operations. \*
- The Brine Reduction Area (BRA) limited stack testing plan was submitted at least 90 days prior to the scheduled test and has been approved by the Department. \*
- The Department has received a determination from the Governor that the local Chemical Stockpile Emergency Preparedness Program (CSEPP) has demonstrated an adequate level of readiness.
- Department and UMCDF emergency response procedures and plans have been developed and implemented.
- All required Facility Construction Certification (FCC) packages have been submitted and approved.
- UMCDF construction is complete, facility has been turned over to operations and maintenance, and all systemization activities have been successfully completed, including preparation of necessary operational and maintenance procedures (see Attachment D for example evaluation criteria).
- Unlined carbon steel duplex strainers have been removed from each of the Pollution Abatement Systems and replaced by the new dual simplex strainer design. This includes the submittal and approval of a Permit Modification Request to reflect the change.
- UMCDF waste/munitions tracking system and associated procedures have been developed, approved by the Department, and implemented.
- The chemical agent sampling and monitoring system has been installed and is operational on the Pollution Abatement System carbon filter systems.\*
- All necessary waste management processes and disposal contracts are in place to manage each waste stream generated during surrogate operations (see Attachment D for example evaluation criteria).
- Appropriate Department personnel have been approved for unescorted access to UMCDF.
- The Post-Trial Burn Human Health Risk Assessment Workplan has been completed and issued by the Department (see Attachment D for example evaluation criteria).\*
- UMCD and UMCDF are in compliance with current Air Contaminant Discharge Permits, including all applicable Maximum Achievable Control Technology (MACT) regulations. All outstanding air quality issues have been resolved to Department's satisfaction.
- UMCD and UMCDF are in compliance with all applicable water quality regulations and all outstanding water quality issues have been resolved to Department's satisfaction.
- The Department's public information and outreach efforts have been completed.

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\* Item is currently being evaluated to determine if it is more appropriate to include as a chemical agent operations start-up checklist item.

### UMCDF CHEMICAL AGENT OPERATIONS EXAMPLE START-UP CHECKLIST

- UMCDF HW Permit and Resource Conservation and Recovery Act (RCRA) Part B Permit Application have been updated and determined to be current (see Attachment D for example evaluation criteria).\*\*
- Agent trial burn plans for each furnace were submitted at least 180 days prior to the scheduled start of trial burns and have been reviewed and approved by the Department.
- Applicable surrogate trial burn reports have been submitted and approved by the Department.
- All required updated Facility Construction Certification (FCC) packages have been submitted and approved.\*\*
- UMCDF Independent Oversight Program structure and implementation continues to be effective and acceptable to the Department.\*\*
- UMCD and UMCDF have been determined to be in compliance with all HW Permit Conditions and other Department requirements.\*\*
- The chemical agent sampling and monitoring system has been installed and is operational on the Pollution Abatement System carbon filter systems.\*\*
- UMCDF waste/munitions tracking system and associated procedures have been developed, approved by the Department, and implemented.\*\*
- All additional systemization activities and any operational revisions (including procedural changes) subsequent to the surrogate trial burns have been completed successfully.
- Requirements promulgated in 40 CFR 264 Subparts BB/CC (new regulations related to fugitive emissions from tanks and process equipment) have been incorporated into the UMCDF HW Permit, RCRA Part B Permit Application, and the design and operational configuration of the facility.\*\*
- All required revisions to certifications for tank and tank systems, including primary containment sumps, have been submitted to the Department (see Attachment D for example evaluation criteria).
- All required revisions to miscellaneous treatment unit certifications have been submitted to the Department.
- UMCDF is in compliance with any Permit issued by the EPA under the Toxic Substance Control Act (TSCA) regulating the incineration of wastes containing polychlorinated biphenyls (PCBs).
- UMCD and UMCDF are in compliance with current Air Contaminant Discharge Permits, including all applicable Maximum Achievable Control Technology (MACT) regulations. All outstanding air quality issues have been resolved to Department's satisfaction.\*\*

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\*\* Indicates an item that is currently duplicated on the surrogate start-up checklist.

Attachment C

Agenda Item H, Approval Process for Umatilla Chemical Agent Disposal Facility Operations

September 20-21, 2001 EQC Meeting

Page C-2

- UMCD and UMCDF are in compliance with all applicable water quality regulations and all outstanding water quality issues have been resolved to Department's satisfaction.\*\*
- The Department's public information and outreach efforts have been completed.\*\*
- The Brine Reduction Area (BRA) performance test plan was submitted at least 180 days prior to the scheduled test and has been approved by the Department.

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\*\* Indicates an item that is currently duplicated on the surrogate start-up checklist.



**EXAMPLES OF MEASUREMENT AND EVALUATION CRITERIA  
FOR SELECTED START-UP CHECKLIST ITEMS**

**CHECKLIST ITEM:** *“All necessary waste management processes and disposal contracts are in place to manage each waste stream generated during operations.”*

**Measurement Criterion # 1:** UMCDF has implemented processes and contract(s) to facilitate management and off-site disposal of salts generated from operation of the BRA.

**Measurement Criterion #2:** UMCDF has implemented processes and contract(s) to facilitate management and off-site disposal or smelting of munition casings.

**Measurement Criterion #3:** UMCDF has implemented processes and contract(s) to facilitate management and off-site disposal of various furnace and treatment unit ashes and residues.

**Measurement Criterion # 4:** UMCDF has implemented processes and contract(s) to facilitate management of all remaining waste streams destined for off-site disposal or treatment. These waste streams include, but are not limited to, refractory brick, slag from the Liquid Incinerators, maintenance residues and sludges, miscellaneous parts and debris, miscellaneous liquid wastes, and non-process wastes.

**Measurement Criterion #5:** UMCDF has implemented processes to facilitate management of all generated waste streams destined for further on-site treatment. These waste streams include, but are not limited to, spent carbon, miscellaneous liquid wastes, explosives residues, agent-contaminated maintenance residues, laboratory wastes, and personal protective equipment.

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**CHECKLIST ITEM:** *“UMCDF HW Permit and RCRA Part B Permit Application have been updated and determined to be current.”*

**Measurement Criterion # 1:** All UMCDF specifications, and the RCRA Tank Assessment, in the Permit Application (Volumes IV, VI and VII) have been certified by a Professional Engineer within the last 12 months, or a review has determined no update is needed. Specifications include the following: 13201, 13202, 13215, 15120, 15160, 16641, 2210, 2511, 2512, 2556, 3100, 3200, 3250, 3300, 5500, 9850, 9900, 11510, 11522, 11524, 13185, 13186, 13187, 13188, 13210, 13211, 13212, 13213, 15161, 15828, 15829, 15830, 15831 and 15987.

**Measurement Criterion # 2:** All UMCDF drawings in the Permit Application (Volume V) have been stamped by a Professional Engineer within the last 12 months, or a review has determined no update is needed.

**Measurement Criterion # 3:** The entire UMCDF Permit Application has been updated and transitioned to the revised administrative organizational structure approved on March 4, 1999 as a part of Permit Modification Request UMCDF-98-019-MISC(1R).

**Measurement Criterion # 4:** All Attachments to the Permit Application have been updated within the last 12 months, or a review has been performed to document that an update is not needed.

**Measurement Criterion # 5:** All Attachments to the HW Permit have been updated within the last 12 months, or a review has been performed to document that an update is not needed.

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**CHECKLIST ITEM:** *“UMCDF construction is complete, facility has been turned over to operations and maintenance, and all systemization activities have been successfully completed, including preparation of necessary operational and maintenance procedures.”*

**Measurement Criterion # 1:** UMCDF has completed all required construction activities, and facility has been turned over to operations and maintenance.

**Measurement Criterion # 2:** UMCDF has completed preparation of all necessary operational and maintenance procedures.

**Measurement Criterion # 3:** UMCDF has completed all required systemization activities, and resolved any outstanding “punch list” items.

**Measurement Criterion # 4:** Operations staff from the Program Manager for Chemical Demilitarization (PMCD) Headquarters have declared UMCDF ready for surrogate operations.

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**CHECKLIST ITEM:** *“The Post-Trial Burn Human Health Risk Assessment Workplan has been completed and issued by the Department.”*

**Measurement Criterion # 1:** DEQ has issued the final scope of work and contract with Ecology and Environment to take the lead in preparation of the Post-Trial Burn Risk Assessment (RA) Workplan.

**Measurement Criterion # 2:** DEQ and the Post-Trial Burn RA Technical Workgroup have completed a draft Workplan for public review and comment.

**Measurement Criterion # 3:** DEQ has approved and issued a final Post-Trial Burn RA Workplan which is in accordance with EPA guidance, Umatilla site-specific whenever possible, and incorporates public comments to the extent possible.

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**CHECKLIST ITEM:** *“All Required certifications for tank and tank systems, including primary containment sumps, have been submitted to DEQ.”*

**Measurement Criterion # 1:** UMCDF has submitted the required construction, installation, structural integrity and suitability certifications for the Agent Collection Tank System, including associated piping, pumps and ancillary equipment (ACS TANK-101 and -102).

**Measurement Criterion # 2:** UMCDF has submitted the required construction, installation, structural integrity and suitability certifications for the Spent Decontamination Holding Tank System, including associated piping, pumps and ancillary equipment (SDS-TANK-101, -102 and -103).

**Measurement Criterion # 3:** UMCDF has submitted the required construction, installation, structural integrity and suitability certifications for the Brine Surge Tank System, including associated piping, pumps and ancillary equipment (BRA-TANK-101, -102, -201, and -202).

**Measurement Criterion # 4:** UMCDF has submitted the required construction, installation, structural integrity and suitability certifications for the Primary Containment System Sumps (MDB-SUMPS 106 thru 110, 112 thru 118, 124 thru 126, 134, 135, 145 thru 149, 153, 154, 164, 168, 169, 174, 175, 179, 184, 189, 190; and DDYR-CHPAN-101, -102, and -201).

**PROPOSED SCHEDULE FOR DEVELOPMENT  
 OF START-UP APPROVAL PROCESS AND HW PERMIT REVISIONS.**

Sept. 21, 2001	Commission directs Department to propose revisions to the UMCDF Hazardous Waste Permit requiring DEQ/EQC approval for start-up of surrogate and chemical agent operations. <i>[Regularly scheduled EQC meeting.]</i>
Sept. 24-Oct. 19, 2001	Department prepares draft revised permit conditions and supporting public information documents. Included in the public review information package will be example surrogate and chemical agent start-up checklist items, along with evaluation criteria. Also included will be an outline of the overall start-up approval process that will be used by the Department and Commission.
Oct. 22, 2001	Department issues draft HW Permit modification package for public comment. Concurrently, Department opens a minimum 45-day public comment period on the proposed changes.
Nov. 27, 2001	Department holds a public meeting/hearing to accept oral comments and testimony on the proposed changes to the HW Permit. Meeting likely to be held in the Hermiston, Oregon area.
Dec. 6-7, 2001	Commission accepts oral comments and testimony on the proposed changes. <i>[Regularly scheduled EQC meeting.]</i>
Dec. 10, 2001	Close of the public comment period.
Dec. 10-28, 2001	Department reviews public comments and prepares final staff report and proposed modifications to the HW Permit for EQC consideration.
January 24-25, 2002	Commission issues final decision on the proposed changes to the UMCDF HW Permit and directs Department to incorporate the changes. <i>[Regularly scheduled EQC meeting.]</i>
February 2002:	Department issues revised UMCDF HW Permit incorporating the approved changes requiring DEQ/EQC approval for the start of surrogate and chemical agent operations.

## **REGULATORY BASIS TO MODIFY UMCDF HW PERMIT AND EXAMPLE OF POSSIBLE REVISIONS**

### Regulatory Basis to Modify UMCDF HW Permit

In accordance with 40 CFR 270.41, the Department/Commission may not modify the UMCDF HW Permit unless sufficient cause [as defined in 40 CFR 270.41(a) and (b)] exists to warrant such action. If the Department/Commission determines that sufficient cause exists to modify the UMCDF HW Permit, a draft Permit must be prepared and processed in accordance with the applicable requirements of 40 CFR 124, Subpart A.

The Department believes that sufficient cause, based on two of the criteria listed in 40 CFR 270.41(a), does exist to warrant a modification of the UMCDF HW Permit to require Department evaluation of facility operational readiness and Department/Commission approval to initiate each of the two phases of facility hazardous waste operations (surrogate and chemical agent). These two applicable causes for modification are:

- 40 CFR 270.41(a)(1) -- *“There are material and substantial alterations or additions to the permitted facility or activity which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit.”*
- 40 CFR 270.41(a)(2) -- *“The Director has received information. Permits may be modified during their terms for this cause only if the information was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and would have justified the application of different permit conditions at the time of issuance.”*

There have been a significant number of changes to the original permitted design of UMCDF, including the decision by the Permittee to operate UMCDF without the Dunnage Incinerator, a major component of the original permitted design that was intended to treat a significant portion of secondary waste. Modification is appropriate to ensure that, at a minimum, the processing of secondary waste streams originally intended for the Dunnage Incinerator is adequately addressed. In addition, the significant compression of the UMCDF systemization and testing schedule has affected the ability of the Department to evaluate UMCDF readiness with a relatively informal process and in a sequential manner.

Example of Possible Revisions

The additional Permit Conditions to be added to the UMCDF HW Permit would be titled "Authorization to Begin Hazardous Waste Operations," and be inserted into the Permit either as a Permit Condition at the end of Module I – *Standard Permit Conditions*, or as a subsection of Permit Condition II.A. "Design and Operation of Facility" in Module II – *General Facility Conditions*. An example of Permit language that could be proposed is given below.

*The Permittee shall not commence Shakedown Period I (surrogate operations) as defined in VI.A.6.ii. for any furnace system until it has received written notification from the Department approving the commencement of surrogate operations.*

*The Permittee shall not commence Shakedown Period II (chemical agent operations) as defined in VI.A.6.iii. for any furnace system until it has received written notification from the Department that the Environmental Quality Commission has approved the commencement of agent operations.*

*Approvals to initiate each phase of hazardous waste operations will be based on a determination of overall operational readiness as verified and documented through an evaluation process performed by the Department.*

The above example HW Permit language assumes that the Department would approve the start of surrogate operations, while the Commission would approve the start of chemical agent operations. Should direction from the Commission be otherwise, the draft conditions would be revised accordingly.

27.12



REPLY TO  
ATTENTION OF:

DEPARTMENT OF THE ARMY  
PROGRAM MANAGER FOR CHEMICAL DEMILITARIZATION  
UMATILLA CHEMICAL AGENT DISPOSAL FACILITY  
78072 ORDNANCE ROAD  
HERMISTON, OREGON 97838

01-1083

SEP 10 2001

Project Manager  
for Chemical Stockpile Disposal

ENV-01-0200

SUBJECT: Umatilla Chemical Agent Disposal Facility (UMCDF) Hazardous Waste Permit  
(ORQ 000 009 431) - UMCDF Secondary Waste Progress Report No. 1

STATE OF OREGON  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
RECEIVED  
SEP 11 2001

Wayne C. Thomas, Program Administrator  
Chemical Demilitarization Program  
Oregon Department of Environmental Quality  
256 East Hurlburt Avenue, Suite 105  
Hermiston, Oregon 97838

HERMISTON OFFICE

Dear Mr. Thomas:

Reference letter, UMCDF, ENV-01-0166, July 26, 2001, subject: Withdrawal of Class 3  
Permit Modification Request UMCDF-00-016-WAST(3), Secondary Waste Compliance  
Schedule.

This submittal provides the first progress report on the status of implementing secondary  
waste treatment technologies at the UMCDF. This is the first report submitted to satisfy what  
was previously proposed by the Class 3 Compliance Schedule Permit Modification Request,  
prior to withdrawal of the request per the above reference. To continue to report progress on the  
management of secondary waste at the Umatilla Chemical Depot/UMCDF, the Permittees plan  
to submit progress reports to the Department on a quarterly basis on the following target  
submittal dates: December 15, March 15, June 15, and September 15 of each year. These  
submittal dates align the reports with this first report.

If you have any questions, please call our technical point of contact, Mr. Wendell  
Wrzesinski, (541) 564-7053.

Sincerely,

*Frederick D. Pellissier*  
Date of Signature: 10 sep 01

Frederick D. Pellissier  
Lieutenant Colonel, USA  
Commander

\*CERTIFICATION STATEMENT

*Don E. Barclay*  
Date of Signature: 6 sep 01

Don E. Barclay  
UMCDF Site  
Project Manager

\*CERTIFICATION STATEMENT

*Loren D. Sharp*  
Date of Signature: 5 Sept 01  
for LDS

Loren D. Sharp  
Washington Demilitarization Company  
Project Manager

\*CERTIFICATION STATEMENT

Enclosure

\*I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION ACCORDING TO A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

1005 01 333



# PROGRESS REPORT (#1)

## SECONDARY WASTE MANAGEMENT SCHEDULE

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**Activity No:** 1

**Title:** Quarterly Progress Report

**Proposed Secondary Waste Management Schedule Dates:** 15 January, 15 April, 15 July, 15 October of each year, after approval of the Class 3 Compliance Schedule Permit Modification Request

**Description:**

The Class 3 Compliance Schedule Permit Modification Request (PMR), which was withdrawn by the Permittees in July 2001, proposed an activity that required the submittal of progress reports to the Oregon Department of Environmental Quality (DEQ) on a quarterly basis. The purpose of the quarterly reports was to keep the Department informed of the progress being made in implementing the secondary waste treatment technologies committed to in the PMR by the Permittees. Specific items to be included in the report were:

1. An evaluation and decision to pursue completion of each action identified for alternate treatment approaches or for implementing the treatment approaches.
2. The status of each activity.
3. Identify issues that may substantially or materially impact scheduled activities
4. Provide updates on alternate treatment technologies being developed at other chemical demilitarization facilities (including testing results).

The withdrawn PMR proposed adding Permit Condition II.S.1 requiring this information. Although the PMR was withdrawn, the Permittees believe it is important to keep the Department advised of secondary waste activities and are submitting the report to demonstrate our commitment to follow through in meeting the intent of the original request.

**Current Status:**

This is the first report submitted to satisfy what was previously proposed for Permit Condition II.S.1 prior to withdrawal of the PMR. To continue to report progress on the management of Secondary Waste at the Umatilla Chemical Depot (UMCD)/UMCDF, the Permittees plan to submit progress reports to the Department on a quarterly basis on the following target submittal dates: 15 December, 15 March, 15 June, and 15 September of each year. These submittal dates align the reports with this first report.

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**Activity No:** 2

**Title:** Technical Decision on Treatment of PPE

**Proposed Secondary Waste Management Schedule Dates:** 03 September 2001

**Description:**

A technical decision will be made by the Permittees on the treatment method that will be developed for Personal Protective Equipment (PPE) and halogenated plastic waste at the UMCDF.

**Current Status:**

The UMCDF has been tracking the Johnston Atoll Chemical Agent Disposal System (JACADS) effort to treat Demilitarization Protective Ensemble (DPE) suits in the Metal Parts Furnace (MPF) system. JACADS has completed several mini-performance tests and one formal performance test with regulatory oversight of the test.

The final performance test report was completed and submitted to the EPA Region IX Office in June 2001. A copy of the performance test report was also transmitted to the DEQ in July 2001.

The test results are being reviewed by UMCDF personnel and appear favorable. The incineration of the DPE suits in the MPF will most likely be the treatment method of choice. WDC is currently finalizing a report to the Project Manager for Chemical Stockpile Disposal (PMCS) recommending the treatment of PPE and halogenated plastic wastes in the MPF at the UMCDF.

A formal technical decision will not be made until the WDC report is finalized and submitted to PMCS. It is anticipated the report will be submitted to PMCS by the first week of September 2001 with a decision made by PMCS by the end of September 2001. The DEQ will be informed of this decision shortly thereafter.

Therefore, the proposed Secondary Waste Management Schedule date for this activity has been extended to 28 September 2001. The extension in the technical decision for the treatment of PPE and other halogenated plastic wastes to 28 September 2001 is not expected to impact the associated permit modification request schedule date of 02 April 2002 (See Activity No. 6).

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**Activity No:** 3

**Title:** LIC Miscellaneous Feed Streams Permit Modification Request

**Proposed Secondary Waste Management Schedule Dates:** 02 April 2002

**Description:**

Submit to the Department a Class 2 PMR for adding UMCDF secondary waste feed streams to the Liquid Incinerators.

**Current Status:**

The UMCDF has developed a list of secondary waste streams (i.e. agent-contaminated hydraulic fluid and lubricating oil) that will be proposed for treatment in the Liquid Incinerators (LICs). A subcontractor has been identified to model the performance of the LICs in treating these wastes. A subcontract is currently being placed to complete the modeling effort and provide a formal report. The results will be used to support the Class 2 PMR currently scheduled to be submitted to the DEQ on 02 April 2002.

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**Activity No:** 4

**Title:** DFS Miscellaneous Feed Streams Permit Modification Request

**Proposed Secondary Waste Management Schedule Dates:** 02 April 2002

**Description:**

Submit to the Department a Class 2 PMR for adding UMCDF secondary waste feed streams to the Deactivation Furnace System (DFS).

**Current Status:**

The UMCDF has developed a list of secondary waste streams (i.e. explosive cleanup wastes and agent filter elements) that will be proposed for treatment in the DFS. A subcontractor has been identified to model the performance of the DFS in treating these wastes. A subcontract is currently being placed to complete the modeling effort and provide a formal report. The results will be used to support the Class 2 PMR currently scheduled to be submitted to the DEQ on 02 April 2002.

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**Activity No:** 5

**Title:** MPF Miscellaneous Feed Streams Permit Modification Request

**Proposed Secondary Waste Management Schedule Dates:** 02 April 2002

**Description:**

Submit to the Department a Class 2 PMR for adding UMCDF secondary waste feed streams to the Metal Parts Furnace.

**Current Status:**

The UMCDF has developed a list of secondary waste streams (i.e. agent-contaminated maintenance waste and ventilation filters) that will be proposed for treatment in the MPF. A subcontractor has been identified to model the performance of the MPF in treating these wastes. A subcontract is currently being placed to complete the modeling effort and provide a formal report. The results will be used to support the Class 2 PMR currently scheduled to be submitted to the DEQ on 02 April 2002.

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**Activity No:** 6

**Title:** Treatment of PPE Permit Modification Request

**Proposed Secondary Waste Management Schedule Dates:** 02 April 2002

**Description:**

Submit to the Department a PMR for the treatment of agent-contaminated Personal Protective Equipment (PPE) and other halogenated plastics.

**Current Status:**

Preparation of the PMR for treatment of PPE and other halogenated plastics, is contingent on making a technical decision (reference Activity No. 2) on the treatment technology to be utilized at the UMCDF. As discussed in the status for Activity No. 2, it is currently anticipated that the technical decision will not be formally made until the end of September 2001. If the decision to utilize the MPF for the treatment of agent-contaminated PPE and halogenated plastic wastes is made at that time, submittal of the PMR should occur in accordance with the proposed secondary waste management schedule submittal date of 02 April 2002.

---

**Activity No:** 7

**Title:** Technical Decision on Carbon Treatment Method

**Proposed Secondary Waste Management Schedule Dates:** 11 April 2002

**Description:**

A technical decision will be made by the Permittees whether the Carbon Micronization System (CMS) will be proposed for the UMCDF.

**Current Status:**

The UMCDF has been tracking the JACADS effort to treat agent-contaminated carbon in the CMS in conjunction with the DFS. Design and procurement of the CMS is complete and the system is currently being installed at JACADS. All major equipment and mechanical components are in place. JACADS personnel are completing installation of electrical conduit and instrumentation wiring. Systemization of selected minor components began during the week of 16 July 2001.

The EPA Region IX is currently reviewing the permit modification request for installing the CMS at JACADS and conducting a Performance Test on the system. Approval of the permit modification request is pending the results of a pre-Performance Test on the JACADS CMS/DFS in order for the EPA to set post-performance feed rates. The pre-Performance Test is currently scheduled to be conducted from 06 to 12 November 2001. The formal Performance Test is currently scheduled to be conducted from 07 to 13 January 2002.

Results of the JACADS CMS Performance Test are required before a technical decision can be made on whether to select the CMS as the carbon treatment technology at the UMCDF. The schedule for completing the JACADS CMS testing has been extended due to the pre-Performance Test requirement. The final Performance Test Report is scheduled to be submitted 90-days after the test is completed, approximately 12 April 2002. This will negatively impact the proposed secondary waste management schedule date of 11 April 2002.

Upon the completion of the performance test, a test report will need to be prepared, followed by an engineering evaluation, preparation of a report that recommends to PMCSD whether to pursue carbon treatment in the CMS/DFS at the UMCDF, and a final PMCSD decision. Due to the delay in conducting the JACADS CMS Performance Test, the scheduled date for this activity as been extended until 11 July 2002. Although the schedule date for the technical decision has been extended to 11 July 2002, the submittal of the permit modification request for the treatment technology of carbon is still on schedule in accordance with Activity No. 12.

---

**Activity No:** 8

**Title:** Treatment of UMCD Waste Permit Modification Request

**Proposed Secondary Waste Management Schedule Dates:** 01 July 2002

**Description:**

Submit to the Department a PMR for the treatment of secondary waste stored at the UMCD.

**Current Status:**

Preparation of the PMR for the treatment of UMCD wastes by the UMCDF is on hold until segregation of UMCD stored wastes is completed. This segregation effort is needed in order to determine what wastes (if any) need to be permitted separate from the agent contaminated wastes planned for inclusion in the PMRs to be submitted under Activity Nos. 3, 4, and 5. Modeling of the performance of the UMCDF incinerators for treating these wastes (if any) may be needed to determine the feed rates to be proposed in the PMR.

The UMCD has submitted a proposed segregation plan to the DEQ for consideration. Pending DEQ response to this plan, impact to the secondary waste management schedule submittal date of 01 July 2002 is unknown at this time. However, it is anticipated that most of the UMCD wastes will be able to be included in the PMRs scheduled for submittal under Activity Nos. 3, 4, and 5.

Until the process for segregation and characterization of the UMCD waste is more fully defined, the impact (if any) to the schedule for the submittal of the PMR cannot be realistically assessed.

---

**Activity No:** 9

**Title:** Construction and Systemization of the Approved Treatment Technology for PPE

**Proposed Secondary Waste Management Schedule Dates:** 01 July 2003

**Description:**

Completion of construction and systemization of the Department approved system for treating Personal Protective Equipment (PPE) and other halogenated plastics at the UMCDF.

**Current Status:**

This activity is dependent on Activity Nos. 2 and 6, discussed above, being completed on a timely basis. It is currently anticipated that PMCSO will make a decision to select the MPF as the treatment technology for agent-contaminated PPE and other halogenated plastics by the end of September 2001. If a favorable decision selecting the MPF as the treatment technology is made by this time, submittal of the PMR (Activity No. 6) should occur by 02 April 2001. If the PMR is approved in a timely manner, the completion of construction and systemization should occur in accordance with the proposed secondary waste management schedule date of 01 July 2003.

---

**Activity No:** 10  
**Title:** Final Dunnage Incinerator Decision  
**Proposed Secondary Waste Management Schedule Dates:** 07 July 2003

**Description:**

A decision will be made by the Permittees whether to install or replace the Dunnage Incinerator (DUN).

**Current Status:**

The final decision whether to install the DUN or replace the DUN with an alternate technology will be based on an evaluation that will occur following the completion of the human health risk assessments and quantitative risk assessments. The evaluation will consider risk impacts as well as life cycle cost and schedule impacts. The risk assessments must support replacement of the DUN regardless of cost or schedule impacts. If the decision is made to install the DUN, then procurement, installation and systemization of the DUN will proceed. If the decision is made to replace the DUN, then the permit modification request to delete the DUN and install an alternate treatment system for spent carbon will be submitted for Department approval (Activity No. 12).

The final decision date is on schedule.

---

**Activity No:** 11  
**Title:** Treatment Controls for Multiagent-Contaminated Waste Permit Modification Request  
**Proposed Secondary Waste Management Schedule Dates:** 05 August 2003

**Description:**

Submit to the Department a PMR for the controls during treatment of UMCD and UMCDF waste contaminated with more than one chemical agent.

**Current Status:**

Submittal of a PMR addressing treatment controls for the treatment of multiagent-contaminated wastes is still planned for submittal on 05 August 2003.

---

**Activity No:** 12  
**Title:** Treatment of Carbon Permit Modification Request  
**Proposed Secondary Waste Management Schedule Dates:** 05 August 2003

**Description:**

Submit to the Department a PMR for the treatment of Agent-Contaminated Carbon.

**Current Status:**

As discussed in Activity No. 7, results of the JACADS CMS Performance Test are needed before a technical decision can be made on whether to select the CMS as the carbon treatment technology at the UMCDF. The schedule for completing the JACADS CMS testing has been extended due to the pre-Performance Test requirement (See Activity No. 7). This requirement may negatively impact the decision date by several months.

Nevertheless, it is currently anticipated that PMCS D will make a technical decision to select the CMS as the treatment technology for agent-contaminated carbon sometime during the summer of 2002. If a decision selecting the CMS as the treatment technology is made by this time, submittal of the PMR for CMS/DFS treatment of carbon should be submitted by the proposed secondary waste management schedule date of 05 August 2003.

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**Activity No:** 13

**Title:** Implementation of Controls for Treatment of Multiagent-Contaminated Waste

**Proposed Secondary Waste Management Schedule Dates:** 02 December 2005

**Description:**

Complete facility upgrades for treatment of multiagent-contaminated UMCD and UMCDF waste.

**Current Status:**

This activity is dependent on approval of the PMR scheduled to be submitted as discussed in Activity No. 11. It is anticipated the PMR will be submitted as planned and approval of the request will be obtained in a timely manner. Implementation of the treatment controls for the treatment of multiagent-contaminated wastes is still planned to occur to meet the committal date proposed in the secondary waste management schedule of 02 December 2005.

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**Activity No:** 14

**Title:** Construction and Systemization of the Technology for Treating Carbon

**Proposed Secondary Waste Management Schedule Dates:** 03 March 2006

**Description:**

Completion of construction and systemization of the Department-approved system for treating agent-contaminated carbon.

**Current Status:**

This activity is dependent on Activity Nos. 7 and 12, discussed above, being completed in a timely manner. It is currently anticipated that PMCSO will make a decision to select the CMS as the treatment technology for agent-contaminated carbon by 11 July 2002. It is also anticipated the associated PMR (Activity 12) will be submitted by 05 August 2003. Provided the PMR is approved in a timely manner, the completion of construction and systemization should occur in accordance with the proposed secondary waste management schedule date of 03 March 2006.



## Department of Environmental Quality

Chemical Demilitarization Program

*Presented by:*

Wayne C. Thomas

Thomas G. Beam

*Prepared by:*

Sue Oliver

September 21, 2001

(EQC, Agenda Item H)

1



## Approval Process for Umatilla Chemical Agent Disposal Facility (UMCDF) Operation

Chemical Demilitarization Program

- **Department Recommendation**
- **Key Issues & Basis for Permit Modification**
- **Alternatives**
- **Rationale for Recommendation**
- **Implementation Schedule**

2





## Recommendation

### Chemical Demilitarization Program

The Department recommends the Commission direct the Department to prepare a proposed modification to the UMCDF Hazardous Waste (HW) Permit to require Department approval for the start of surrogate testing operations and Commission approval for the start of chemical agent operations.

3



## Key Issues

### Chemical Demilitarization Program

The UMCDF HW Permit does not require the Permittees to obtain explicit Department or Commission approval prior to commencing hazardous waste operations (with the exception of CSEPP readiness).

Consequently, there is no defined public process for approving the start of surrogate and/or agent operations.

4



## Key Issues (continued)

### Chemical Demilitarization Program

The Department believes there is a need for an enforceable mechanism to rigorously evaluate overall UMCDF readiness before initiation of operations.

5



## Key Issues (continued)

### Chemical Demilitarization Program

An operational readiness evaluation will include verification that specific activities have been completed, including:

- Resolution of secondary waste treatment issues;
- Compliance with HW Permit requirements and with approval conditions from previous Permit Modification Requests;
- Successful completion of all systemization and functional testing activities; and
- Final modifications to the HW Permit and Application to reflect the “as-built” configuration of UMCDF.

6



## Key Issues (continued)

### Chemical Demilitarization Program

The development of an approval process for UMCDF start-up must include a specific checklist of items to be completed.

The Start-up checklist should be accompanied by a rigorous and defined set of evaluation criteria.

7



## Key Issues (continued)

### Chemical Demilitarization Program

Hazardous waste operations at UMCDF will begin by testing the facility with “surrogate” chemicals.

Chemical agent operations will begin only after UMCDF has successfully demonstrated the ability to destroy the surrogate materials.

This presents two discrete start-up decision points, one for the beginning of the surrogate operations and another for the beginning of agent operations.

8



## Basis for Recommendation to Modify the UMCDF Permit

### Chemical Demilitarization Program

A significant number of changes have been made to the original design and operating parameters of UMCDF.

Public interest and concern remains high.

Sufficient cause and justification exists to modify the HW Permit to include these new requirements.

9



## Basis for Recommendation to Modify the UMCDF Permit (Continued)

### Chemical Demilitarization Program

Modification of the HW Permit provides the tool necessary for the Commission and Department to make a determination in an open public process that UMCDF has satisfied the requirements of the State of Oregon prior to operational start-up.

10



## Alternatives

### Chemical Demilitarization Program

1. Take no action.
2. Prepare a HW Permit modification that explicitly requires Commission approval for the start of both surrogate operations and chemical agent operations.
3. Prepare a HW Permit modification that explicitly requires Commission approval for the start of chemical agent operations, but defers to the Department the decision to approve the start of surrogate operations.

11



## Rationale for Recommending Alternative #3

### Chemical Demilitarization Program

Surrogate operations are, in effect, part of the overall testing process for UMCDF and are used to demonstrate readiness for chemical agent operations.

It is the chemical agent operations, not the surrogate operations, which present the greatest processing risk to human health and the environment.

12



## Next Steps

### Chemical Demilitarization Program

The Department will develop draft permit language requiring Department approval for start of surrogate operations and Commission approval for start of agent operations.

Separate Surrogate and Chemical Agent "Start-up Checklists," with associated evaluation criteria, will be developed as part of the permit modification package.

13



## Implementation Schedule

### Chemical Demilitarization Program

**Oct. 22-Dec. 10, 2001:** Draft permit modification package issued for public comment.

**Nov. 27, 2001:** Department holds a public meeting and hearing to accept oral comments and testimony (Hermiston).

**Dec. 6-7, 2001:** Commission hears oral testimony on proposed changes.

**January 24-25, 2002:** Commission issues final decision.

**February, 2002:** Department issues revised UMCDF HW Permit.

14



**For more information...**

**Chemical Demilitarization Program**

**Chemical Demilitarization Program**

**Wayne C. Thomas, Administrator**

**256 E. Hurlburt Ave.**

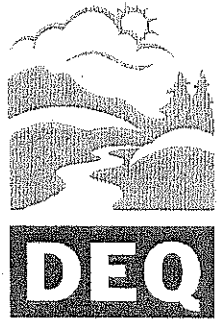
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15



# Department of Environmental Quality

## Chemical Demilitarization Program

*Presented by:*

Wayne C. Thomas

Thomas G. Beam

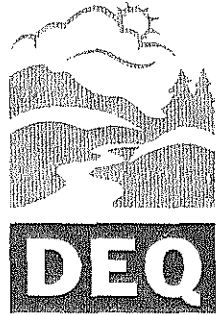
*Prepared by:*

Sue Oliver

September 21, 2001

**(EQC, Agenda Item H)**

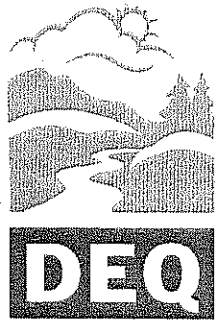




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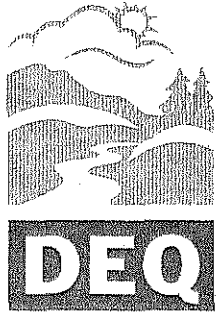
- **Department Recommendation**
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# Recommendation

## Chemical Demilitarization Program

The Department recommends the Commission direct the Department to prepare a proposed modification to the UMCDF Hazardous Waste (HW) Permit to require Department approval for the start of surrogate testing operations and Commission approval for the start of chemical agent operations.



# Key Issues

## Chemical Demilitarization Program

The UMCDF HW Permit does not require the Permittees to obtain explicit Department or Commission approval prior to commencing hazardous waste operations (with the exception of CSEPP readiness).

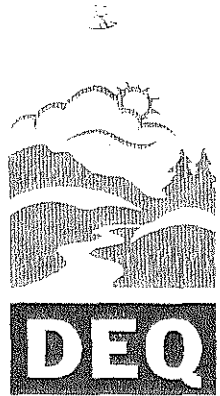
Consequently, there is no defined public process for approving the start of surrogate and/or agent operations.



# Key Issues (continued)

## Chemical Demilitarization Program

The Department believes there is a need for an enforceable mechanism to rigorously evaluate overall UMCDF readiness before initiation of operations.

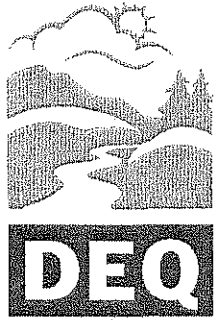


# Key Issues (continued)

## Chemical Demilitarization Program

An operational readiness evaluation will include verification that specific activities have been completed, including:

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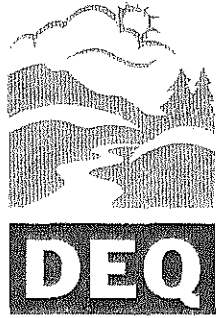


# Key Issues (continued)

## Chemical Demilitarization Program

The development of an approval process for UMCDF start-up must include a specific checklist of items to be completed.

The Start-up checklist should be accompanied by a rigorous and defined set of evaluation criteria.



# Key Issues (continued)

## Chemical Demilitarization Program

Hazardous waste operations at UMCDF will begin by testing the facility with “surrogate” chemicals.

Chemical agent operations will begin only after UMCDF has successfully demonstrated the ability to destroy the surrogate materials.

This presents two discrete start-up decision points, one for the beginning of the surrogate operations and another for the beginning of agent operations.





# Basis for Recommendation to Modify the UMCDF Permit

## Chemical Demilitarization Program

A significant number of changes have been made to the original design and operating parameters of UMCDF.

Public interest and concern remains high.

Sufficient cause and justification exists to modify the HW Permit to include these new requirements.





# Basis for Recommendation to Modify the UMCDF Permit (Continued)

## Chemical Demilitarization Program

Modification of the HW Permit provides the tool necessary for the Commission and Department to make a determination in an open public process that UMCDF has satisfied the requirements of the State of Oregon prior to operational start-up.



# Alternatives

## Chemical Demilitarization Program

1. **Take no action.**
2. **Prepare a HW Permit modification that explicitly requires Commission approval for the start of both surrogate operations and chemical agent operations.**
3. **Prepare a HW Permit modification that explicitly requires Commission approval for the start of chemical agent operations, but defers to the Department the decision to approve the start of surrogate operations.**



# Rationale for Recommending Alternative #3

## Chemical Demilitarization Program

Surrogate operations are, in effect, part of the overall testing process for UMCDF and are used to demonstrate readiness for chemical agent operations.

It is the chemical agent operations, not the surrogate operations, which present the greatest processing risk to human health and the environment.



# Next Steps

## Chemical Demilitarization Program

The Department will develop draft permit language requiring Department approval for start of surrogate operations and Commission approval for start of agent operations.

Separate Surrogate and Chemical Agent “Start-up Checklists,” with associated evaluation criteria, will be developed as part of the permit modification package.



# Implementation Schedule

## Chemical Demilitarization Program

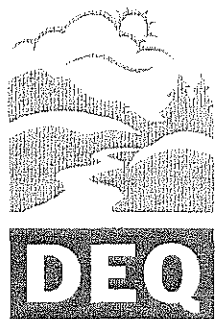
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*<http://www.deq.state.or.us>*

**To:** Environmental Quality Commission

**Date:** September 19, 2001

**From:** Stephanie Hallock, Director

**Subject:** Director's Report

### **Land Quality Division**

On September 1, I appointed Paul Slyman Administrator of DEQ's the new Land Quality Division, which incorporates the former Waste Prevention and Management Division and Environmental Cleanup Division. Land Quality will be responsible for state management of environmental cleanups, assessing cleanup sites, recycling and managing solid and hazardous wastes, overseeing the state's underground storage tank and heating oil tank programs, and responding to spills. Attachment 1 provides an organizational chart for the new division.

### **New EPA Regional Administrator**

On September 13, EPA Administrator Christine Whitman appointed John Iani Regional Administrator for the Pacific Northwest (Region 10), to replace Acting Administrator Chuck Findley. Since 1993, Iani worked as general counsel and corporate affairs vice president for UniSea, Inc., one of the nation's largest seafood companies, and is a former aide to U.S. Senator Frank Murkowski (R-Alaska). In accepting the position, Iani has said he "believes in a balance between environmental protection and economic enterprise," and "wants to make sure the agency provides timely and consistent answers to the industries it regulates." Iani is scheduled to start October 8 and I will be providing him a summary of key issues for Oregon.

### **EPA Enforcement on Underground Injection**

On September 6, EPA issued civil penalties against two Bend diesel repair shops for violations of Underground Injection Control (UIC) regulations. Inspections were conducted in 2000. Based on enforcement policies, it is unlikely that DEQ would have issued penalties in these cases because of the low visibility of the UIC program over the past ten years. DEQ has very limited resources to implement the UIC program and has planned outreach activities for the highest risk systems, followed by compliance inspections. Recently adopted UIC rules require registration of up to 60,000 UICs and much of our available resources will address this high priority activity.

### **Klamath Basin Drought**

Drought conditions continue in the Klamath Basin. The well-known "A" canal that diverts water from Upper Klamath Lake to the Lost River for agricultural use remains closed. Lost River and lower Klamath Wildlife Refuges are being supplemented with water from Clear Lake, Gerber and some newly-installed wells. The impact groundwater pumping will have on water supply in subsequent years is unknown, particularly if the drought extends into next year. DEQ efforts regarding the drought are long term and centered on completion of the Upper Klamath Lake TMDL this year.

### **Groundwater Contamination in Bonanza**

Some of the individual domestic water wells that provide water to citizens of Bonanza have become



contaminated. Due to complex hydro-geological conditions in the area, polluted ground and surface water has moved into the aquifer that feeds the wells. Various activities contribute to this flow problem, including the dam operations of Horsefly Irrigation District and the Bureau of Reclamation, and new agricultural pumps permitted by the Oregon Water Resources Department. DEQ has authority to regulate activities that affect water quality, including flow, but the degree to which each of these activities affect the situation is not known. We are investigating the ability of the Oregon Health Division to require installation of a public water system to provide a safe drinking water source. Bonanza residents, however, have resisted this option in the past. Eastern Region staff are working with state and federal officials to acquire funds for a dam to help regulate Lost River flows affecting the aquifer. There are, however, no clear solutions to this problem. DEQ will continue to work with the local, state and federal partners on options.

### **Portland Meadows**

Several agencies have been working with past and present owners of the Portland Meadows horse racing facility to bring them into compliance with wastewater discharge requirements. The Oregon Department of Agriculture (ODA) has focused on needed changes in manure handling facilities, which last year triggered an EPA enforcement action for violation of Clean Water Act requirements. EPA is now negotiating with new owners how the facility might operate in compliance under EPA's Confined Animal Feeding Operations (CAFO) program. EPA requires an agreement on facility operation before authorizing horse racing to begin this year (ordinarily scheduled to start in October, with preparation in September). DEQ is helping ODA evaluate potential wastewater management options being suggested by the owners. DEQ would not get directly involved in this situation unless the owners decide to run a short race season next Spring in place of a normal season. A spring season of less than 45 days would not be covered by EPA and would require DEQ to issue a Columbia Slough NPDES stormwater permit that meets TMDLs.

### **Pollution Control Facilities Tax Credit Task Force**

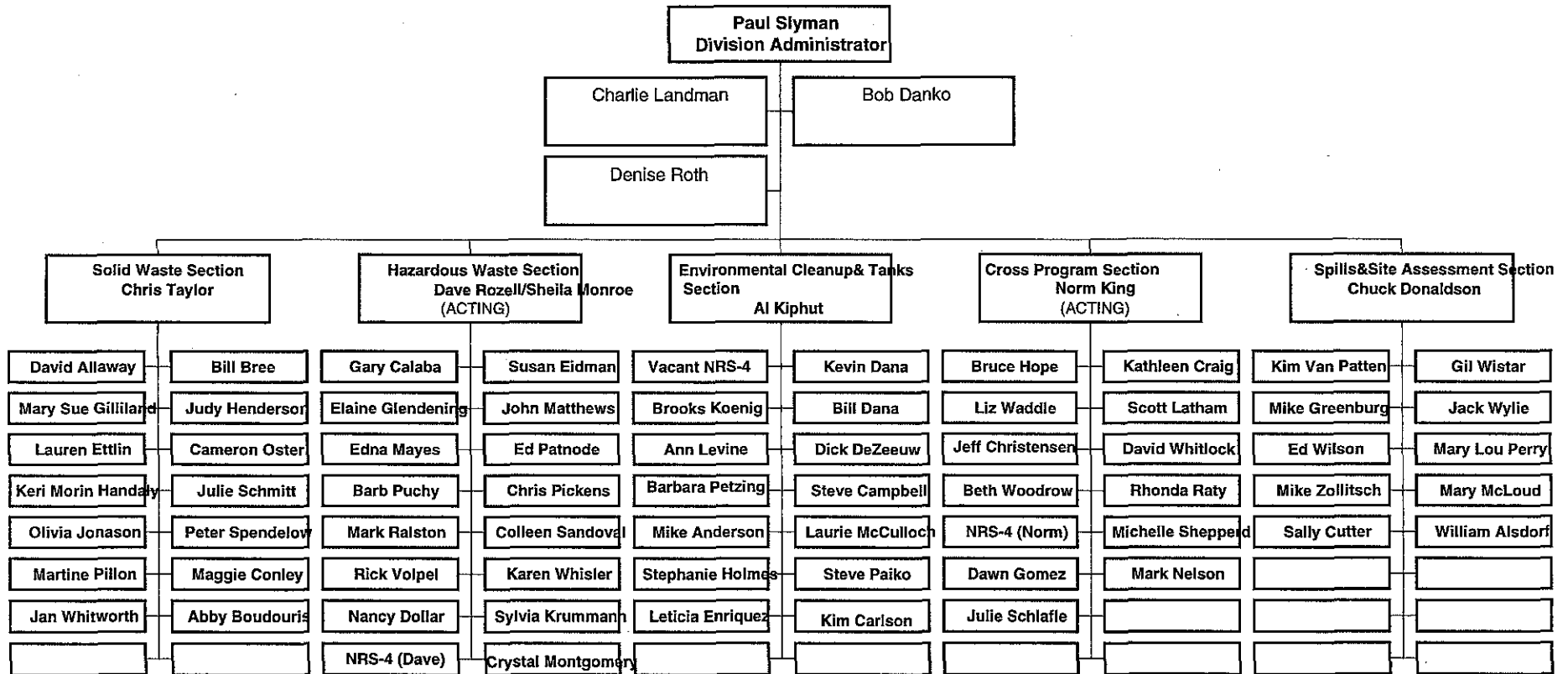
DEQ is preparing for a permanent rulemaking to implement the new pollution control facilities tax credits law passed by the 2001 Legislature. In addition, both DEQ and EQC will participate in a Governor-appointed task force to evaluate the program and compare it to other incentives to determine the most effective way to reward those who go above and beyond environmental laws. Commissioner Van Vliet will be the EQC representative on the task force with Commissioner Reeve as an alternate. Marianne Fitzgerald will be DEQ's representative with Helen Lottridge as an alternate. The task force will be staffed by the Legislative Revenue office and coordinated by Olivia Clark in the Governor's Office. Other members will include an appointed state senator and representative, and representatives agriculture, business, environmental advocacy, the public and the Economic and Community Development Department.

### **Umatilla Presentation for Portland City Club**

On October 5, I will speak to the Portland City Club about the status of the Umatilla Chemical Agent Disposal Project. My remarks will cover the magnitude of the project, treatment of chemical agents stored at Umatilla, and select steps in the storage and disposal process. The presentation begins at noon in the ballroom of the Multnomah Athletic Club on 18<sup>th</sup> and Salmon in downtown Portland. We expect an audience of over one hundred, with live broadcasting on cable television channels 30 and 11 and taping for Oregon Public Broadcasting radio the following week.



# Land Quality Division



September 2001

State of Oregon  
Department of Environmental Quality

Memorandum

**Date:** August 31, 2001  
**To:** Environmental Quality Commission  
**From:** Stephanie Hallock, Director *S. Hallock*  
**Subject:** Agenda Item J, Rule Adoption: On-Site Vehicle Testing for Auto Dealers  
September 21, 2001 EQC Meeting

**Department Recommendation** The Department recommends the Commission adopt proposed rule revisions as presented in Attachment A to establish an On-Site Vehicle Testing for auto dealers in Portland and Medford areas.

**Need for Rulemaking** This program was developed at the request of the Oregon Auto Dealers Association to provide their members some relief from the cost of having to ferry large numbers of vehicles to centralized testing stations. Dealer participation will be voluntary. Dealers may continue to take vehicles to the DEQ test centers as an alternative to the program.

If adopted by the EQC, this proposal will establish an on-site testing operation for used vehicles sold by manufacturer franchised auto dealers in the Portland and Medford areas. Vehicle testing will be done by DEQ inspectors with equipment housed in a portable van. Testing will include an initial clean screen using road-side remote sensing test equipment. A follow-up on-board-diagnostic (OBD) test will be provided for 1996 and newer model year vehicles that fail the screen test. Vehicles older than 1996 that fail the clean screen test cannot be OBD tested, and will require a follow-up test at a DEQ centralized Clean Air Station.

The EQC has authority to take this action under ORS468A.380(1)(c), allowing the Commission to "establish criteria and examinations for the testing of motor vehicles" by rule.

**Stakeholder Involvement** Beginning in February 2001, DEQ worked with the Regulatory Affairs Director of the Oregon Automobile Dealers Association on a continual basis in developing the proposed testing procedure. DEQ also talked individually with many Association members to develop details about capacity and procedures. In April 2001, DEQ met with Association members in Medford to discuss their concerns.

## Agenda Item J, Rule Adoption: On-Site Vehicle Testing for Auto Dealers

Page 2 of 3

**Public Comment** A public comment period extended from July 13, 2001 to August 17, 2001 and included public hearings in Portland and Medford. Results of public input are provided in Attachment C.

**Key Issues** Key issues were:

- DEQ is proposing a \$26 per test certificate fee for this new service in both the Medford and Portland areas. In Medford, the current centralized fee is \$10 per test certificate for only a basic test. In Portland, the centralized test certificate fee is \$21 for a mixture of enhanced and other tests. DEQ and the Oregon Auto Dealers Association agreed that Portland and Medford dealers should pay the same fee (\$26) for this new service, which will be the same in each area.
- DEQ proposes to limit the on-site testing to franchised auto dealers at this time because in order to introduce this service gradually. DEQ may consider opening the on-site vehicle testing program to non-franchised dealers at a later date if testing franchised dealer vehicles is successful. Franchised dealers are expected to test about 25,000 vehicles per year. The participation from non-franchised dealers is expected to be as much as a factor of 5 times larger. Also, non-franchised dealers typically use off-site repair facilities, and do not deal directly with the DEQ test. Finally, non-franchised dealers typically work with older vehicles that cannot be tested with the OBD equipment (the OBD test can only be used on 1996 and newer vehicles).
- The procedure used for on-site testing will be a pass screen operation using remote sensing, followed by an OBD test for vehicles that fail the remote sensing test. The OBD test is proposed as the backup test because of its portability and because of the large amount of emissions reduction benefit it offers (its stringency is equivalent to DEQ's enhance BAR31 test). The OBD test, however, is only available for 1996 and newer vehicles. Older vehicles will need to have a backup test done at the centralized test station.

**Next Steps** If approved, DEQ will purchase and equip two vans with remote sensing and OBD testing equipment. Equipment assembly, final testing procedures and selection of inspectors will be completed by December 1, 2001. Inspectors will be trained and testing schedules will be established by January 2, 2002. Actual on-site testing is scheduled to begin on January 2, 2002.

Agenda Item J, Rule Adoption: On-Site Vehicle Testing for Auto Dealers  
Page 3 of 3

- Attachments**
- A. Proposed Rule Revisions
    - 1. Proposed Rule Revisions
    - 2. Proposed SIP Revisions
    - 3. Proposed On-Site Test Policies and Procedures
  - B.
    - 1. Public Input and Department's Response
    - 2. Written Public Comment
  - C. Presiding Officer's Report on Public Hearings
  - D. Relationship to Federal Requirements
  - E. Fiscal and Economic Impact Statement
  - F. Land Use Evaluation Statement

- Available Upon Request**
- 1. Legal Notice of Hearing
  - 2. Cover Memorandum from Public Notice
  - 3. Written Comment Received
  - 4. Rule Implementation Plan

Approved:

Section:

*Mickie Hunt for Ted Kotzeb*

Division:

*Patricia Verno*  
*for ANDY GINSBURG*

Report Prepared By: Jerry Coffey

Phone: 503-731-3050 E229

**The Oregon Administrative Rules contain OARs filed through March 15,  
2001**

**DEPARTMENT OF ENVIRONMENTAL QUALITY**

**DIVISION 256  
MOTOR VEHICLES**

**340-256-0010**

**Definitions**

The definitions in OAR 340-200-0020, 340-204-0010 and this rule apply to this division. If the same term is defined in this rule and OAR 340-200-0020 or 340-204-0010, the definition in this rule applies to this division.

- (1) "Basic test" means an inspection and maintenance program designed to measure exhaust emission levels during an unloaded idle or an unloaded raised idle mode as described in OAR 340-256-0340.
- (2) "Carbon dioxide" means a compound consisting of the chemical formula (CO<sub>2</sub>).
- (3) "Carbon monoxide" means a compound consisting of the chemical formula (CO).
- (4) "Certificate of Compliance" means a certification issued by a Private Business Fleet or a Public Agency Fleet Vehicle Emission Inspector or a Vehicle Emissions Inspector employed by the Department of Environmental Quality or an Independent Contractor that the vehicle identified on the certificate is equipped with the required functioning motor vehicle pollution control systems and otherwise complies with the emission control criteria, standards, and rules of the Commission.
- (5) "Certified Repair Facility" means an automotive repair facility, possessing a current and valid certificate issued by the Department, that employs automotive technicians certified by the Department's Automotive Technician Emission Training Program (ATETP).
- (6) "Commission" means the Environmental Quality Commission.
- (7) "Crankcase emissions" means substances emitted directly to the atmosphere from any opening leading to the crankcase of a motor vehicle engine.
- (8) "Dealer" means any person who is engaged wholly or in part in the business of buying, selling, or exchanging, either outright or on conditional sale, bailment lease, chattel mortgage, or otherwise, motor vehicles.
- (9) "Dealership" means a business involved in the sale of vehicles that is franchised with an automobile manufacturer as defined in ORS 650.120(1).
- (109) "Department" means the Department of Environmental Quality.
- (1140) "Diesel motor vehicle" means a motor vehicle powered by a compression-ignition internal combustion engine.
- (1244) "Director" means the director of the Department.
- (1342) "Electric vehicle" means a motor vehicle which uses a propulsive unit powered exclusively by electricity.
- (143) "Emissions Inspection Station" means an inspection facility, operated by the Department of Environmental Quality or an Independent Contractor, for the purpose of conducting emissions inspections of all vehicles required to be inspected pursuant to this Division.

- (154) "Enhanced test" means an inspection and maintenance program designed to measure exhaust and fuel evaporative system emissions levels using a loaded transient driving cycle and other measurement techniques as described in OAR 340-256-0350.
- (165) "Exhaust emissions" means substances emitted into the atmosphere from any opening downstream from the exhaust ports of a motor vehicle engine.
- (176) "Factory-installed motor vehicle pollution control system" means a motor vehicle pollution control system installed by the vehicle or engine manufacturer to comply with United States motor vehicle emission control laws and regulations.
- (187) "Gas analytical system" means a device which measures the amount of contaminants in the exhaust emissions of a motor vehicle, and which has been issued a license by the Department pursuant to OAR 340-256-0450 and ORS 468A.380.
- (198) "Gaseous fuel" means, but is not limited to, liquefied petroleum gases and natural gases in liquefied or gaseous forms.
- (2019) "Gasoline motor vehicle" means a motor vehicle powered by a spark-ignition internal combustion engine.
- (210) "GPM" means Grams Per Mile.
- (224) "Gross vehicle weight rating" or "GVWR" means the value specified by the manufacturer as the maximum design loaded weight of a single vehicle.
- (232) "Heavy duty motor vehicle" means any motor vehicle rated at more than 8500 pounds GVWR or that has an actual vehicle curb weight as delivered to the ultimate purchaser of 6000 pounds or over.
- (243) "Hydrocarbon gases" means a class of chemical compounds consisting of hydrogen and carbon.
- (254) "Idle speed" means the unloaded engine speed when accelerator pedal is fully released.
- (265) "Independent Contractor" means any person, business firm, partnership or corporation with whom the Department enters into an agreement providing for the construction, equipment, maintenance, personnel, management or operation of emissions inspection stations or activities pursuant to ORS 468A.370.
- (276) "Inspection and Maintenance Program (I/M) means a program of conducting regular inspections of motor vehicles, including measurement of air contaminants in the vehicle exhaust and an inspection of emission control systems, to identify vehicles that do not meet the standards of this Division or which have malfunctioning, maladjusted or missing emission control systems, and, when necessary, of requiring the repair or adjustment of vehicles to make the emission control systems function as intended and to reduce tailpipe emissions of air contaminants.
- (287) "In-use motor vehicle" means any motor vehicle which is not a new motor vehicle.
- (298) "Light duty motor vehicle" means any motor vehicle rated at 8500 pounds GVWR or less and has an actual vehicle curb weight as delivered to the ultimate purchaser of under 6000 pounds.
- (3029) "Medford-Ashland Air Quality Maintenance Area (AQMA)" has the meaning given in OAR 340-204-0010.
- (310) "Model year" means the annual production period of new motor vehicles or new motor vehicle engines designated by the calendar year in which such period ends. If the manufacturer does not designate a production period, the model year with respect to such vehicles or engines shall mean the 12-month period beginning January of the year in which production thereof begins.

- (324) "Motorcycle" means any motor vehicle, including mopeds, having a seat or saddle for the use of the rider and designed to travel on not more than three wheels in contact with the ground and having a mass of 680 kilograms (1500 pounds) or less with manufacturer recommended fluids and nominal fuel capacity included.
- (332) "Motor vehicle" means any self-propelled vehicle used for transporting persons or commodities on public roads.
- (343) "Motor vehicle pollution control system" means equipment designed for installation on a motor vehicle for the purpose of reducing the pollutants emitted from the vehicle, or a system or engine adjustment or modification which causes a reduction of pollutants emitted from the vehicle, or a system or device which inhibits the introduction of fuels which can adversely affect the overall motor vehicle pollution control system.
- (354) "Motor Vehicle Fleet Operation" means ownership, control, or management or any combination thereof by any person of five or more motor vehicles.
- (365) "New motor vehicle" means a motor vehicle whose equitable or legal title has never been transferred to a person who in good faith purchases the motor vehicle for purposes other than resale.
- (376) "Noise level" means the sound pressure level measured by use of metering equipment with an "A" frequency weighting network and reported as dBA.
- (387) "OBD" means the On Board Diagnostic system in a vehicle that tracks the effectiveness of the vehicle's emissions control systems. These OBDII (or higher systems) have typically been placed on 1996 and newer motor vehicles.
- (398) "OBD Test" means an emissions related test in which the vehicle's On Board Diagnostic computer is downloaded, supplying diagnostic information to evaluate the effectiveness of the vehicle emissions control systems.
- (40) "On-Site Vehicle Test" means an emissions related test that is conducted at the vehicle owner's location. Such test will be performed by DEQ using DEQ test equipment and is only available as a service for automobile dealerships.
- (4139) "Owner" means the person having all the incidents of ownership in a vehicle or where the incidents of ownership are in different persons, the person, other than a security interest holder or lessor, entitled to the possession of a vehicle under a security agreement, or a lease for a term of ten or more successive days.
- (4240) "Opacity" means the degree to which transmitted light is obscured, expressed in percent.
- (434) "Oxides of Nitrogen" or NO<sub>x</sub> means oxides of nitrogen except nitrous oxides.
- (442) "Person" means any individual, public or private corporation, political subdivision, agency, board, department, or bureau of the state, municipality, partnership, association, firm, trust, estate, or any other legal entity whatsoever which is recognized by law as the subject of rights and duties.
- (453) "Portland Vehicle Inspection Area" has the meaning given in OAR 340-204-0010.
- (464) "PPM" means parts per million by volume.
- (475) "Private Business Fleet" means ownership by any person of 100 or more Oregon-registered, in-use, motor vehicles, excluding those vehicles held primarily for the purpose of resale.
- (486) "Private Business Fleet Vehicle Emissions Inspector" means any person employed on a full-time basis by a Private Business Fleet that possesses a current and valid license issued by the Department pursuant to OAR 340-256-0440 and ORS 468A.380.

(497) "Propulsion exhaust noise" means that noise created in the propulsion system of a motor vehicle that is emitted into the atmosphere from any opening downstream from the exhaust ports. This definition does not include exhaust noise from vehicle auxiliary equipment such as refrigeration units powered by a secondary motor.

(5048) "Public Agency Fleet" means ownership of 50 or more government-owned vehicles registered pursuant to ORS 805.040.

(5149) "Public Agency Fleet Vehicle Emissions Inspector" means any person employed on a full-time basis by a Public Agency Fleet that possesses a current and valid license issued by the Department pursuant to OAR 340-256-0440 and ORS 468A.380.

(5250) "Public roads" means any street, alley, road, highway, freeway, thoroughfare, or section thereof used by the public or dedicated or appropriated to public use.

(5354) "Regional Authority" means a regional air quality control authority established under the provisions of ORS 468A.005 to 468A.035, 468A.075, 468A.100 to 468A.130, and 468A.140 to 468A.175.

(5452) "Ringlemann Smoke Chart" means the **Ringlemann Smoke Chart** with instructions for use as published in May, 1967, by the U.S. Department of Interior, Bureau of Mines.

(5553) "RPM" means engine crankshaft revolutions per minute.

(5654) "Two-stroke cycle engine" means an engine in which combustion occurs, within any given cylinder, once each crankshaft revolution.

(5755) "Vehicle Emission Inspector" means any person employed by the Department or an Independent Contractor that possesses a current and valid license issued by the Department pursuant to OAR 340-256-0440 and ORS 468A.380.

(5856) "Visible Emissions" means those gases or particulates, excluding uncombined water, which separately or in combination are visible upon release to the outdoor atmosphere.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

Stat. Auth.: ORS 467.030 & ORS 468A.360

Stats. Implemented: ORS 467.030 & ORS 468A.350 – ORS 468A.400

Hist.: [DEQ 8, f. 4-7-70, ef. 5-11-70; DEQ 4-1993, f. & cert. ef. 3-10-93]; [DEQ 89, f. 4-22-75, ef. 5-25-75; DEQ 139, f. 6-30-77, ef. 7-1-77; DEQ 9-1978, f. & ef. 7-7-78; DEQ 22-1979, f. & ef. 7-5-79; DEQ 18-1980, f. & ef. 6-25-80; DEQ 12-1982, f. & ef. 7-21-82; DEQ 23-1984, f. 11-19-84, ef. 4-1-85; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 15-1994, f. 6-8-94, cert. ef. 7-1-94; DEQ 25-1996, f. & cert. ef. 11-26-96]; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-024-0005 & 340-024-0305; DEQ 17-2000, f. & cert. ef. 10-25-00

### **340-256-0320**

#### **Motor Vehicle Inspection Program Fee Schedule**

This rule sets out the fee schedule for Certificates of Compliance, and licenses issued by the Department of Environmental Quality, Vehicle Inspection Program:

(1) The cost of each Certificate of Compliance issued at an Emissions Inspection Station:

(a) In the Portland Vehicle Inspection Area will be a maximum of \$21; or

(b) In the Medford-Ashland Air Quality Maintenance Area will be a maximum of \$10.

(2) The cost of each Certificate of Compliance issued by a Private Business Fleet or Public Agency Fleet:

(a) In the Portland Vehicle Inspection Area will be a maximum of \$10; or

(b) In the Medford-Ashland Air Quality Maintenance Area will be a maximum of \$5.



- (3) The cost of each License issued to a Private Business Fleet or Public Agency Fleet is as follows:
- (a) Initial \$5;
  - (b) Annual renewal \$1.
- (4) The cost of each License issued to a Private Business Fleet or Public Agency Fleet Vehicle Emission Inspector is as follows:
- (a) Initial \$5;
  - (b) Annual renewal \$1.
- (5) The cost of each License issued for a Gas Analytical System is as follows:
- (a) Initial \$5;
  - (b) Annual renewal \$1.
- (6) The cost of each Certificate of Compliance issued on-site to an automobile dealership will be a maximum of \$26.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.]

Stat. Auth.: ORS 468A.400

Stats. Implemented: ORS 468A.400

Hist.: DEQ 20-1981, f. 7-28-81, ef. 8-1-81; DEQ 3-1992, f. & cert. ef. 2-4-92; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 25-1996, f. & cert. ef. 11-26-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-024-0307

### **340-256-0356**

#### **Emissions Control Test Method for On-Site Vehicle Testing for Automobile Dealerships**

The on-site vehicle test will be performed in accordance with the Vehicle Inspection Program Inspection and Maintenance Policies and Procedure Number 226.00. The test will be performed by DEQ using DEQ testing equipment and conducted at the dealership location. The test program applies to manufacturer franchise automobile dealerships only, as defined in ORS 650.120(1). Dealerships may use either on-site testing or the centralized DEQ test stations.

## SIP REVISION

### 5.4.7 Test Procedures and Standards

The authority to establish test procedures and standards is contained in Oregon statutes ORS 468A.360 through 468A.460 in Section 2.2.11 of the Oregon SIP. The test procedures and test standards are specified in the regulation in Section 2.2.7 of the Oregon SIP.

In the Portland area:

The first two model years are exempt.

Next three model year vehicles - basic test

1981 - to 6 year old vehicles - enhanced test

1975 -1980 model year vehicles - basic test

The restructuring of the vehicle test schedule above, by adding the OBD test for 1996 to three year old vehicles, will begin on or before January 1, 2001. OBD testing for light duty passenger vehicles and light duty trucks (GVWR less than or equal to 8500 lbs) will begin January 1, 2001, as these vehicles are currently equipped with advanced OBD systems (OBDDII or higher). OBD testing of gasoline powered heavy duty vehicles (greater than 8500 lbs GVWR) will begin when advanced OBD systems are available on these vehicles.

In the Medford area:

The first two model years are exempt

Next 19 model year vehicles – basic test

The restructuring of the vehicle test schedule above, by adding the OBD test for 1996 to three year old vehicles, will begin on the date that is mandated by EPA for the OBD testing in Medford. Before the mandatory implementation, OBD testing will be used as a pass only screen; vehicles that fail the OBD test will receive a basic emissions test. The following is the estimated implementation schedule for OBD based on vehicle types:

- OBD testing for light duty passenger vehicles and light duty trucks (GVWR less than or equal to 8500 lbs) will begin when mandated by EPA, as these vehicles are currently equipped with advanced OBD systems (OBDII).
- OBD testing of gasoline powered heavy duty vehicles (greater than 8500 lbs GVWR) will begin when advanced OBD systems are available on these vehicles and EPA mandates OBD testing of these vehicles.

In both the Portland and Medford test areas, vehicles will be rejected for unsafe conditions, including overheating, fluid leaks, or other conditions determined to be unsafe to the inspection program operations.

For the basic test, vehicles 1981 and newer must pass both an idle and 2500 rpm emissions standards for carbon monoxide and hydrocarbons. Subject vehicles with model years older than 1981 are not judged at the 2500 rpm test point. All basic tested vehicles are given a second chance idle test.

In the Portland area, a gas cap test will be performed for all basic tests. Also, a cap test and an evaporative system purge test will be done as part of all Portland area tailpipe enhanced tests. In the Medford area, neither the cap nor the purge test will be performed in conjunction with their basic test. Finally, the purge tests will not be done as an add-on to the OBD test in either the Medford or Portland area and the cap test may be done on OBD tested vehicles in Portland and Medford.

The enhanced test is a 31 second loaded transient cycle as outlined in the test procedures.

Detailed testing procedures for the basic test are shown in Appendix H Section 710.00 and Appendix K. Detailed testing procedures for the enhanced test are shown in OAR 340-256-0350 and OAR 340-256-0410. The OBD test procedure is outlined in OAR 340-256-0355.

Both the Portland and Medford inspection areas will continue using self-testing fleet operations, including requiring that these fleets perform OBD tests on 1996 and newer vehicles where OBD testing is required as a part of the centralized testing operations.

DEQ will initiate on-site vehicle testing of manufacture franchised dealership vehicles beginning January 2, 2002. In this program, dealerships' approximately 25,000 vehicles per year will be tested at the dealer's locations. DEQ will perform the testing operations. The program will be operated using test methods and

standards that will provide essentially no emissions reduction loss from the process where vehicles are tested in DEQ's centralized test lanes.



State of Oregon  
Department of  
Environmental  
Quality

**PROCEDURE: 226.00**

**ON-SITE VEHICLE  
TESTING PROGRAM FOR  
AUTO DEALERS**

<b>SUBJECT: On-Site Vehicle Testing Procedures</b>	
<b>POLICY/PROCEDURE NUMBER: 226.00</b>	<b>EFFECTIVE DATE: 10/1/01</b>
<b>SUPERSEDES: NONE</b>	<b>DATE SIGNED:</b>
<b>APPROVED BY: TED KOTSAKIS</b>	
<b>ORIGINATING SECTION: ENGINEERING</b>	

**PURPOSE: TO ESTABLISH THE ON-SITE VEHICLE TESTING PROCEDURES**

**REFERENCE:**

Under this testing program DEQ will test dealership vehicles at the dealership's location using a traveling van equipped with remote-testing equipment and OBD-testing equipment. The remote-testing equipment will be used as a pass screen, and the OBD test will be used as the final test for 1996 and newer model year vehicles that fail the remote-sensing screen test. For 1995 and older model-year vehicles that fail the remote-sensing test, the vehicle owner must have the vehicle tested at the DEQ Clean Air Stations.

DEQ will typically schedule testing visits for any particular dealership at no more than every other week. Exceptions to this limit will be allowed for dealerships with very large test volumes. Dealerships must contact DEQ to set-up a routine schedule or call for appointments as needed.

**Remote-Sensing Clean-Screen Testing.**

Typically, all vehicles that the dealership requests to have tested during DEQ's visit will first be clean-screened using the remote-sensing test procedure. DEQ may opt to perform only the OBD test if the number of vehicles present does not justify using the remote testing clean screen procedure.

- The DEQ inspectors will set-up the clean-screen operation using manufacturer's procedures, either on the dealership's lot or on a nearby low-traffic street. The setup will include the license-plate-photo-capability, speed and acceleration measurement capability, and emissions measurement of CO, HC and NOx.
- Dealership drivers will drive the vehicles through the remote sensing beam at speeds of between 15 and 25 MPH gradually accelerating through the beam.
- A picture will be automatically taken of the Oregon-plated vehicles to identify the vehicle. For non-plated (or other state plate) vehicles, the rear plate area will be affixed with a DEQ supplied temporary plate. The dealership will submit a paper record of the corresponding vehicle VIN, make, model and year associated with each of the temporary plates when the DEQ inspectors arrive at the dealership's location.
- The plates of the vehicles with known Oregon plates will be submitted by the dealership to DEQ for review before DEQ's visits to the dealership's site. The DEQ vehicle ID database will be searched by the inspector at the DEQ Tech Center computer to get full vehicle description information. The inspector will confirm this information at the dealership's site by directly observing the vehicle.
- All Canadian import vehicles of 1996 and newer model-years will receive both a clean-screen remote-sensing test and an OBD test to insure that the vehicle computer is flashed to meet EPA's OBD requirements.
- After remote-sensing test, each vehicle's remote-sensing test record will be identified by a photo of either the temporary ID number plate or an Oregon plate. During the testing process an inspector must insure that all plates and temporary ID number photos are readable. If they are not, the vehicle must be run through the test a second time to get a good plate picture.
- The pass/fail criteria for clean-screening is as follows:
  - CO 0.25 %
  - HC 75 ppm
  - Nox 1000 ppm
- Vehicles that fail the clean-screen test will receive a backup OBD test for 1996 and newer model years.
- Vehicles that pass the clean-screen test receive a certificate of compliance and will be registered on site if the dealer wishes.
- The dealership must pay for all the testing and DMV registration costs before DEQ leaves the site. Check or cash is acceptable. The vehicle test cost is collected only when the vehicle passes the test.

- If a vehicle fails a DEQ on-site test, that vehicle will not be re-tested on the current DEQ visit. (This process will avoid the possibility of DEQ inspector's waiting for vehicle repairs.) The failed vehicle may, however, be re-tested on the next DEQ visit.

### **OBD Testing**

The OBD test will be given to those vehicles (MY 1996 +) that failed the clean screen test. DEQ may also give the OBD test as a first test if there is a small number of vehicles, and the remote-sensing clean-screen test is impractical.

The OBD-test procedure will be identical to the test procedure used in the centralized test lanes described in VIP Policies and Procedures # 225 except as follows:

- No backup basic or enhanced test will be given for vehicles that can not be OBD tested, including EPA exempted vehicles (Subaru 1996 and Mitsubishi 1996-98), and vehicles for which we are unable to locate the DLC. These vehicles will must be tested in the centralized test station
- In most cases DEQ will already have identified the vehicle in the previous remote-sensing test. The vehicle ID will be pulled from that previous data entry.
- If a vehicle passes the OBD test, the dealer will receive a certificate of compliance for that vehicle. The owner may pay for and receive a DMV registration at the same time.
- If a vehicle fails the OBD test, the vehicle must be repaired before being re-tested. DEQ will not re-tested it on the current visit.

State of Oregon  
Department of Environmental Quality

Rulemaking Proposal  
On-Site Vehicle Testing Program for Auto Dealers

**Department Response to Public Comment**

As outlined in the Presiding Officer's Report, written comment was received from the Northwest Automotive Trades Association (NATA) at the On-Site Vehicle Testing Program public hearing held in the Portland on August 16, 2001. This document indicates that after receiving the public hearing rulemaking announcement package about on-site dealer vehicle testing, NATA members expressed certain concerns. DEQ meet with members of NATA on August 7, 2001 prior to the public hearings. The written public testimony submitted by NATA at the public hearing discusses the August 7, 2001 meeting and the concerns of NATA. The following issues were raised by NATA.

1) **NATA Members at Unfair Disadvantage**

**Comment:** The NATA letter indicates that they originally felt NATA members "would be placed at an unfair disadvantage" compared to the franchised auto dealers because of the proposed on-site testing of franchise auto dealer vehicles. NATA represents independent auto repair facilities who are in competition with the franchised auto dealers for repair work.

**Response:** In the on-site testing program, DEQ will test only the vehicles owned by the franchised dealers. We will not test vehicles that are being serviced by franchised auto dealers and owned by their customers. Therefore DEQ is not providing direct aid to the dealers in their repair business. DEQ continues to provide reservation lanes at our test stations to facilitate independent repair industry testing.

2) **Suspect DEQ May Test Franchised Dealer Repair Customer Vehicles**

**Comment:** NATA is concerned that on-site dealer vehicle testing may "open the door to future testing of customer vehicles in service departments that may not include the same opportunity for independent repair facilities."

**Response:** The proposed rules only allow for the testing of franchised owned vehicles, not for testing of customer vehicles being repaired by dealers.

3) **NATA Use as Consultants**

**Comment:** NATA requested that "in the future when new policies or rules will be considered NATA will be contacted and included in the conversation."

**Response:** DEQ usually involves the independent auto repair groups as participants in our rulemaking process. With regard to on-site vehicle testing, DEQ did not anticipate NATA's concerns about the on-site dealer testing for franchised auto dealers, and as such we dealt primarily with the Oregon Auto Dealers Association in establishing rules and procedures. This





is because the rules dealt exclusively with the members of the OADA members. DEQ will make sure that NATA is brought into discussions early for any future VIP rule changes.

**4) NATA Summary of DEQ Presentation**

**Comment:** In their written testimony, NATA summarized DEQ discussion at the August 7, 2001 meeting of DEQ and NATA. They wanted these comments to be a part of the public hearing record.

**Response:** DEQ agrees with the essence of the comments submitted by NATA.



1710 NE 82<sup>nd</sup> Ave. Portland, OR 97220  
503-253-9898 1-800-730-7282  
Fax: 503-253-9890

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Department of Environmental Quality  
Vehicle Inspection Program  
Jerry Coffey  
1240 SE 12<sup>th</sup> Ave.  
Portland, OR. 97204

August 15<sup>th</sup>, 2001

Dear Jerry,

As you know the Northwest Automotive Trades Association had some concerns with the proposed rule to allow on site emission testing for franchised dealerships. We heard from many member businesses expressing concerns that they would be placed at an unfair disadvantage if such a rule were approved. Even greater was our concern that such a rule would open the door to future testing of customer vehicles in service departments that may not include the same opportunity for independent repair facilities.

After gathering input from members, discussing the proposed rule with Darrell Fuller, Government Affairs Director for the Oregon Auto Dealers Association, I contacted Ted Koskakis, DEQ's Vehicle Inspection Manager. Ted readily volunteered to meet with NATA members and answer their questions as well as explain how the rule was developed and would be implemented.

First let me say what a thorough job Ted did in his presentation to the members who attended a special meeting held at our office. As a result NATA will not oppose the rule change, however we would like to put into the record a few of the basic understandings that NATA heard on Tuesday August 9<sup>th</sup>, 2001.

- 1) Only used cars in the dealership's inventory will be tested. Basically '96 and new vehicles.
- 2) Customer vehicles from the Service Departments will not be tested on site.
- 3) Dealers must schedule with DEQ in advance and will pay a higher fee to help offset the costs to perform the on site testing.
- 4) Dealers must submit Vehicle Identification Numbers of the cars they intend to have tested in advance of DEQ's visit.
- 5) DEQ will verify that vehicles submitted have not been licensed in Oregon.

Before I close I would like to reiterate the request from the NATA membership. Implement a new policy that would open one lane for technicians to retest customer vehicles at all stations. Like the dealers, the costs associated with sending a technician to a testing station are quite high.

Consistently technicians must wait in line to retest a customer's vehicle and when repeated the costs do escalate. Ted expressed his openness to the idea; however, we would prefer to see the new policy begin tomorrow as opposed to sometime in the next 14 to 16 months.

We appreciate this opportunity to submit our comments and ask that in the future when new policies or rules will be considered NATA will be contacted and included in the conversation. With almost 900 members from all segments of the automotive industry we believe our membership has the expertise and knowledge to assist the Vehicle Inspection Program in reaching many of their long-range goals.

In the meantime if I can answer any questions please do not hesitate to contact me at (503) 253-9898.

Sincerely,

Debra Elkins  
Executive Director

Attachment B-2, page 2

State of Oregon  
Department of Environmental Quality

Memorandum

**Date:** August 3, 2000

**To:** Environmental Quality Commission

**From:** Russ Schell (Portland) and Ted Wackier (Medford)  
Vehicle Inspection Program/Air Quality Division

**Subject:** Presiding Officers' Report for On-Site Vehicle Testing Program for Auto Dealers  
Rulemaking Hearings of August 16, 2001 in Portland and Medford.

Portland, Oregon Hearing August 16, 2001

The rulemaking hearing in Portland for the above proposal was convened at 8:15 AM and ended at 8:20 AM. People were asked to sign witness registration forms if they wished to present testimony. People were also advised that the hearing was being recorded and of the procedures to be followed.

The only person from the public attending the hearing was Debra Elkins, Executive Director of the Northwest Automotive Trades Association. Ms. Elkins submitted written testimony, but did not wish to testify orally.

Medford, Oregon Hearing August 16, 2001

The OBD rulemaking hearing in Medford was held beginning at 3:00 PM. However no one from the public attended. DEQ employees waited until 3:30 PM and closed the meeting without participation from the public.

Memo To: Environmental Quality Commission  
August 3, 2000  
Presiding Officer's Report on  
July 25 and July 28, 2000 Rulemaking Hearings  
Page 2

Written Testimony Not Offered at Public Hearings Received before the 5:00 PM August 2, 2000  
Deadline

The Alliance of Automobile Manufacturers and the Association of International Automobile Manufacturers sent a letter supporting the adoption of OBD for clean air and consumer convenience during emission testing. The letter made the following suggested changes to the proposed DEQ test procedure:

- 1) Light duty diesel vehicles OBD tested starting with model year 1997 rather than 1996
- 2) California vehicles OBD tested to 14,000 lbs GVWR rather than limited to 8,500 lbs and under.
- 3) Failing for two or more "not-ready" status for 2001+ model year vehicles rather than Oregon's proposal of failing for three or more "not-ready".
- 4) For vehicles where the manufacturer resets readiness status whenever the engine is turned off, AAM recommends dropping the readiness requirement and proceeding with the OBD test. Oregon is currently proposing that these vehicles receive an enhanced test.
- 5) When a vehicle returns to the DEQ test station for a retest after repairs, AAM suggests that the vehicle not be failed for "not ready" if a receipt for repairs is submitted by the customer.

**Questions to be Answered to Reveal  
Potential Justification for Differing from Federal Requirements.**

**1. Are there federal requirements that are applicable to this situation? If so, exactly what are they?**

No. There are no federal requirements that states provide on-site testing for vehicle emissions. DEQ is proposing this service as a response to a request for relief from the Oregon Automobile Dealers Association. The dealers currently shuttle large numbers of vehicles to DEQ's centralized test stations, experiencing a high labor cost. DEQ proposes to charge the dealers \$26 for a DEQ performed test conducted at the dealer's lot. On average this is expected to save the dealer about \$5 per test. The \$26 fee was set to allow a break-even operation for the DEQ. The program is voluntary for the dealers. They can always have their vehicles tested in one of DEQ's centralized test station if they wish. A survey of the Oregon Automobile Dealers Association members showed that 93 percent would participate in the new on-site testing.

**2. Are the applicable federal requirements performance based, technology based, or both with the most stringent controlling?**

There are no applicable federal requirements for on-site emissions testing.

**3. Do the applicable federal requirements specifically address the issues that are of concern in Oregon? Was data or information that would reasonably reflect Oregon's concern and situation considered in the federal process that established the federal requirements?**

There are no applicable federal requirements for on-site emissions testing.

**4. Will the proposed requirement improve the ability of the regulated community to comply in a more cost effective way by clarifying confusing or potentially conflicting requirements (within or cross-media), increasing certainty, or preventing or reducing the need for costly retrofit to meet more stringent requirements later?**

As discussed in item 1 above, DEQ's new on-site testing program will save the dealers an estimated average of \$5 per vehicle tested. It is expected that 25,000 vehicles per year will be on-site tested. This would be an estimated overall savings to the dealers of \$125,000 per year.

**5. Is there a timing issue which might justify changing the time frame for implementation of federal requirements?**

There are no applicable federal requirements for on-site emissions testing.

**6. Will the proposed requirement assist in establishing and maintaining a reasonable margin for accommodation of uncertainty and future growth?**

Yes. If the number of vehicles requested by the dealers to be on-site tested grows, the income to the DEQ grows proportionally. DEQ will add equipment and labor to fill the need.

**7. Does the proposed requirement establish or maintain reasonable equity in the requirements for various sources? (level the playing field)**

The proposed on-site testing as proposed is limited to manufacturer-franchised dealers. This is because these are the high volume vehicle dealers and it is not cost effective to include the smaller dealers. Also, these dealers sell only newer model, used vehicles (typically 1990 model year and newer). The high-volume testing method DEQ uses (remote sensing) is cost effective on only these newer model year vehicles.

**8. Would others face increased costs if a more stringent rule is not enacted?**

The proposed test method is equivalent in stringency to the existing DEQ centralized testing.

**9. Does the proposed requirement include procedural requirements, reporting or monitoring requirements that are different from applicable federal requirements? If so, Why? What is the "compelling reason" for different procedural, reporting or monitoring requirements?**

There are no applicable federal requirements for on-site emissions testing.

**10. Is demonstrated technology available to comply with the proposed requirement?**

Yes. DEQ will be supplying the test equipment and will be performing the tests. The remote sensing and OBD test methods are well established and available.

**11. Will the proposed requirement contribute to the prevention of pollution or address a potential problem and represent a more cost effective environmental gain?**

The proposed on-site testing of dealerships is expected to be environmentally neutral.

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal  
for  
On Site Vehicle Testing Program for Auto Dealers

Fiscal and Economic Impact Statement

**Introduction**

The rulemaking proposes to adopt an on-site vehicle testing program for automobile dealers for both the Medford and Portland vehicle inspection and maintenance (IM) areas. Only the manufacturer-franchised dealers will be eligible to participate in the testing program. The proposed testing program is voluntary. Dealers will still be able to take their vehicles to the centralized Clean Air Stations for testing if they want. There will be a minor increase in cost to the Portland area dealers above the current fee for the centralized test (\$26 versus \$21 per certificate). The cost for the new test in the Medford area will increase more, from the current \$10 to \$26 per certificate. However, in most cases these cost increases should be offset by the savings in labor costs associated with trips to the centralized testing operations.

Approximately 50 dealers have indicated they want to participate in the new on-site testing program. We expect about 25,000 vehicles to be tested per year. All vehicles will receive a clean screen remote sensing test. All 1996 and newer model year vehicles that fail the clean screen test will receive a follow-up on-board-diagnostic (OBD) test. Vehicles older than 1996 model year that fail the clean screen test must be tested in the Vehicle Inspection Program's centralized test lanes. Almost all of the vehicles to be tested will be 1990 model year and newer. About 70 percent will be 1996 and newer. The remote sensing test will take about 30 seconds, and the OBD test will take about 2 minutes.

**General Public**

None of the general public vehicles will be tested directly in this new program. We do not expect any financial impact on the general public.



### **Small Business**

The number of employees at the average-sized, manufacturer-franchised Oregon auto dealer is 28, which means that most of the dealers are likely considered to be small businesses. The dealers in the Portland area should experience a significant cost reduction by participating in this Program. We estimate that the Portland area dealers will save approximately \$5 per vehicle. This assumes an estimated time for ferrying the vehicle to the centralized test station of 1 hour and a labor rate of \$10 per hour for the driver. The savings in the Medford area are harder to define. In Medford there may be an actual loss in direct costs in using the service when compared to the current \$10 centralized test cost. A loss of \$6 per certificate is estimated, but there may be an internal savings due to reduced disruptions at the dealer's facility when employees remain on the dealer site.

A survey conducted by the Oregon Automobile Dealers Association in both the Portland and Medford areas found that no dealerships objected to the on-site testing program design because of test cost. We expect ninety percent of the participants to be Portland area dealers. We estimate the total savings per year for these dealers to be \$112,500 (25,000 vehicles/yearx0.9x\$5), with the average participating Portland dealer experiencing a \$2,500 savings per year (\$112,500/0.9x50).

### **Large Business**

There are only a few large dealers in the Portland and Medford areas. As above for small businesses, the dealers in the Portland area will likely experience some savings due to the elimination of the travel time for testing.

### **Local Governments**

The proposed on-site vehicle testing program will not impact local governments.

### **State Agencies**

#### ***DEQ***

DEQ has budgeted \$1.6 million for the first biennium to pay for equipment, training and operating personnel, and \$1.1 million for the second biennium primarily for labor and ongoing maintenance and supply costs. We expect the projected income from the testing operations to be \$1.3 million for each of the first two biennia. The initial purchase of equipment will be paid from the DEQ Vehicle Inspection Program's fund balance. We expect full payback of program start-up costs from on-site test fees in the 2005-7 biennium. No increase in Vehicle Inspection Program FTE is scheduled for on-site testing. The reduced test volume in the centralized test lanes resulting from on-site testing will allow us to draw the required five FTE of on-site testing personnel from the centralized test lanes.

### *Other Agencies*

Other state agencies should not be impacted. The Motor Vehicle Division will be involved because DEQ will be registering many of the vehicles after they pass the on-site testing. However, DEQ will collect the DMV monies and transfer them to DMV just as we are currently doing at our centralized testing operations. The change should be invisible to DMV.

### **Assumptions**

We assumed there are no significant labor costs to the dealers during the DEQ on-site testing process.

### **Housing Cost Impact Statement**

The Department has determined that this proposed rulemaking will have no effect on the cost of development of a 6,000 square foot parcel and the construction of a 1,200 square foot detached single family dwelling on that parcel.

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal  
for  
On-Site Vehicle Testing Program for Auto Dealers

Land Use Evaluation Statement

**1. Explain the purpose of the proposed rules.**

Establish the on-site vehicle test method for automobile dealers in the Portland and Medford IM test areas.

**2. Do the proposed rules affect existing rules, programs or activities that are considered land use programs in the DEQ State Agency Coordination (SAC) Program?**  Yes  No

**a. If yes, identify existing program/rule/activity:** N/A

**b. If yes, do the existing statewide goal compliance and local plan compatibility procedures adequately cover the proposed rules?**  Yes  No (if no, explain):  
N/A

**c. If no, apply the following criteria to the proposed rules.**

Staff should refer to Section III, subsection 2 of the SAC document in completing the evaluation form. Statewide Goal 6 - Air, Water and Land Resources is the primary goal that relates to DEQ authorities. However, other goals may apply such as Goal 5 - Open Spaces, Scenic and Historic Areas, and Natural Resources; Goal 11 - Public Facilities and Services; Goal 16 - Estuarine Resources; and Goal 19 - Ocean Resources. DEQ programs and rules that relate to statewide land use goals are considered land use programs if they are:

1. Specifically referenced in the statewide planning goals; or
2. Reasonably expected to have significant effects on
  - a. resources, objectives or areas identified in the statewide planning goals, or
  - b. present or future land uses identified in acknowledged comprehensive plans.

In applying criterion 2 above, two guidelines should be applied to assess land use significance:


- The land use responsibilities of a program/rule/action that involved more than one agency, are considered the responsibilities of the agency with primary authority.
- A determination of land use significance must consider the Department's mandate to protect public health and safety and the environment.

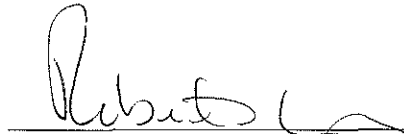
**In the space below, state if the proposed rules are considered programs affecting land use. State the criteria and reasons for the determination.**

It has previously been determined through the DEQ SAC program that the Vehicle Inspection Program is not a program that significantly affects land use. These proposed rules, which address only a switch in the testing procedure for newer model vehicle, do not contain program changes that significantly affect land use.

3. If the proposed rules have been determined a land use program under 2. above, but are not subject to existing land use compliance and compatibility procedures, explain the new procedures the Department will use to ensure compliance and compatibility.

N/A

  
Division *for Andy Gussler*

  
Intergovernmental Coordinator

6-01-01  
Date

State of Oregon  
Department of Environmental Quality

Memorandum

**Date:** August 31, 2001  
**To:** Environmental Quality Commission  
**From:** Stephanie Hallock, Director *S. Hallock*  
**Subject:** Agenda Item K, Rule Adoption:  
Water Quality General Permit Program Rule Amendments  
September 21, 2001 EQC Meeting

**Department Recommendation** The Department recommends the Commission adopt proposed rule revisions to the following as presented in Attachment A, p. 5:

- OAR 340-045-0030 *Application for NPDES or WPCF Permit*
- OAR 340-045-0033 *General Permits*
- OAR 340-045-0040 *Renewal of NPDES or WPCF Permits*

**Need for Rulemaking** The proposed revisions are necessary to:

- Maintain consistency with federal regulations, and
- Provide for a more formal and broader public participation process for general permit issuance by requiring adoption of the permits into rule.

**Effect of Rule** The rule revisions would:

1. Update the water quality general permit program to conform to federal regulations for issuance of National Pollutant Discharge Elimination System (NPDES) general permits. Note: In addition to NPDES general permits, the Department also issues Water Pollution Control Facilities (WPCF) general permits pursuant to state regulations. The WPCF general permit program is administered in alignment with federal requirements and this will continue under the proposed revisions.
2. Clarify application and fee requirements for general permits to reflect existing procedures.
3. Revise the general permit issuance procedure to require adoption of water quality general permits in rule by reference.
4. Adopt by reference into rule 20 current NPDES and WPCF general permits by citing the permit number, title and date of issuance (see specific list in Attachment G, p. 20).

**Commission Authority** The Commission has authority to take this action under ORS 468.020, 468B.020 and 468B.035.

**Stakeholder Involvement** An advisory committee was not involved in developing the rule revisions because no substantive discretionary decisions were needed. The proposed updates were directed by federal regulation and adopting general permits into

rule assures full compliance with Oregon's Administrative Procedures Act (ORS Chapter 183).

**Public Comment** A public comment period from June 15, 2001, to July 20, 2001, was provided and included public hearings in Portland, Medford and Bend. A total of seven people attended the hearings; no one provided oral or written comments at the hearings.

Leslie Fish, a representative of the U.S. Postal Service, submitted written comment urging adoption of a "no exposure" exclusion for storm water permittees. This is a provision adopted by EPA in late 1999 that allows storm water permittees to be exempt from the permit requirement if they have no exposure of storm water to industrial activities. The Water Quality Division will address this issue during the renewal of the storm water general permits scheduled for mid-2002.

Results of public input and the Department's responses are provided in Attachment B, p. 11.

#### **Key Issues**

Key issues were:

- **Change in Permit Appeal Process**

Adopting general permits into rule by reference as proposed in this rulemaking will alter the permit appeal process. While opportunity for appeal will still exist, the forum for appeal will differ. After permit adoption into rule, challenges to the conditions or limitations of a general permit will be subject to review by the Oregon Court of Appeals. This is consistent with the process utilized for all rulemaking actions (ORS 183.400 *Judicial determination of validity of rule*). However, it differs from the previous appeal process for general permits which provided for contested case hearings before the Commission or its authorized representative because issuance of a general permit was not a rulemaking action [see the proposed deletion of OAR 340-045-0033(4), p. 8].

Contested case hearings will still be available for challenges related to the Department's implementation of a general permit. For example, one could challenge the Department's interpretation of the description of activities covered by a particular general permit, but would not be able to challenge the actual language in that permit. Another example of a potential challenge for a contested case hearing would be whether the Department followed the correct procedures for revoking coverage under a general permit.

- **Overview of General Permits and Adoption Plan**

There are 26 NPDES and WPCF general permits currently in effect,

however, only 20 are being proposed for adoption in this rulemaking effort. These 20 general permits expire after 2001 and do not need to go through an extensive renewal process. They will be adopted in the same form as they were originally issued. The remaining six will be handled as follows:

- ✓ Three permits expired on July 31, 2001, and the conditions and limitations of these permits must be reevaluated as part of the renewal process (*NPDES #100 Non-Contact Cooling Water, NPDES #300 Fish Hatcheries, and NPDES #400 Log Ponds*). The Department determined that postponing renewal until the general permit program rule revisions were final was the best approach to assure more formal and broader public participation in the renewal process. As a result, these permits were administratively extended and are still in force. They will be scheduled for adoption in early 2002.
- ✓ Three permits will not be renewed because the Department has determined that these activities are better managed with individual permits (*WPCF #1800 Kennels, WPCF #4400 Waste Disposal Well, and WPCF #5600 On-Site Sewage Systems <5,000 gallons/day*). Persons currently covered by these permits are being notified of this decision.

- **WPCF General Permit #800 for Confined Animal Feeding Operation**  
House Bill 2156 adopted by the 2001 Legislature gave the Oregon Department of Agriculture (ODA) authority to issue water quality permits for confined animal feeding operations (CAFOs). ODA currently administers the Department's general permit WPCF #800 for CAFOs. However, ODA will likely develop its own permit in the near future. To recognize that ODA may issue a CAFO permit, the proposed language in OAR 340-045-0033(10)(e) has been modified to indicate that WPCF #800 is effective until superseded by a permit issued by ODA.

#### **Next Steps**

The rule revisions would become effective upon filing with the Secretary of State. The Rule Implementation Plan is available upon request.

#### Regulated Community Implementing and Assistance Actions

No additional assistance above what is currently provided is planned for the regulated community since the proposed rule revisions will not require implementing actions by permittees. The water quality general permits are currently in effect and the general permit program is actively being administered.

#### Staff Implementing and Training Actions

Training of staff on the general permit program is not required since the general permits are currently in effect and staff has already been trained. Staff responsible for issuing general permits will be trained on rulemaking procedures as needed. While rulemaking does require additional steps, it is not expected to

significantly increase workload since general permit development and renewal have always been major undertakings for the Department.

Transition to Adopting all General Permits into Rule

This rulemaking action by the Commission will adopt 20 current general permits. As explained earlier, the three general permits that expired in July 2001 and were administratively extended by the Department will go through a renewal process and be scheduled for adoption in early 2002. This allows for timely adoption of all 23 general permits into rule.

Permit Renewal Schedule Requiring Future Action by the Commission

Future Commission action will be required to renew the 23 general permits (for detail see Attachment G, p. 20). The following schedule is based on the expiration dates of the permits and anticipated renewal dates:

- Mid-2002 .....8 general permit renewals
- 2003 .....2 general permit renewals
- 2004 .....3 general permit renewals
- 2005 .....6 general permit renewals
- 2006 .....3 general permit renewals
- Does not expire.....1 general permit WPCF #800 CAFO
- Total .....23

- Attachments**
- A. Proposed Rule Revisions
    - 1. Summary of Rule Revisions
    - 2. Proposed Rule Revisions
  - B. Public Input and Department's Response
  - C. Presiding Officers' Report on Public Hearings
  - D. Relationship to Federal Requirements
  - E. Fiscal and Economic Impact Statement
  - F. Land Use Evaluation Statement
  - G. List of Water Quality General Permits

- Available Upon Request**
- 1. Legal Notice of Hearing
  - 2. Cover Memorandum from Public Notice
  - 3. Written Comment Received
  - 4. Rule Implementation Plan
  - 5. Copies of General Permits

Approved:

Section:

Division:



Report Prepared by: Ranei Nomura  
Phone: (503) 229-5657



**Attachment A**  
**Summary of Rule Revisions**

The proposed rule revisions will:

**1. Revise rules to update the Water Quality general permit program in accordance with federal regulations for issuance of National Pollutant Discharge Elimination System (NPDES) general permits**

These include:

- Modifying language to reflect terminology used in the federal regulations.
- Allowing applications to be submitted on a schedule determined by the Director.
- Allowing third parties to petition the Director to terminate permittee coverage under a general permit and require a permittee to obtain an individual permit.
- Requiring that general permits issued after the effective date of the rule specify the requirements to obtain coverage under a general permit. The permits must also specify the process the Department will use to notify a person that coverage has been obtained and the discharge or activity is authorized.

**2. Clarify application requirements for general permits**

The current rule does not specify that a person must submit an application and fees in order to be covered by a general permit. The Water Quality Division is proposing to clarify that application and fees are required for general permits unless otherwise specified in a particular permit. This clarification will reflect procedures that are currently in place.

**3. Revise general permit issuance procedure to require adoption of Water Quality general permits by rule**

In order to ensure that the general permit program fully complies with Oregon's Administrative Procedures Act, the Water Quality Division is proposing to amend rules to revise the general permit issuance procedure. This would require that the Environmental Quality Commission adopt general permits through rulemaking before they are issued by the Director.

**4. Adopt by reference 20 current NPDES and WPCF general permits listed in Attachment G.**

There are currently 13 NPDES and seven WPCF general permits proposed for adoption into rule. These permits were issued in accordance with public notice and participation procedures in OAR Chapter 340, Division 045. An opportunity for the public to provide written and oral comment was made available for each permit.

**Attachment A**  
continued  
**Proposed Rule Revisions**

**AMENDMENTS TO DIVISION 045**  
**REGULATIONS PERTAINING TO NPDES AND WPCF PERMITS**

**340-045-0030**

**Application for NPDES or WPCF Permit**

(1) Any person wishing to obtain a new or renewal NPDES or WPCF permit from the Department must submit a written application at least 180 days before an NPDES permit is needed or at least 60 days before a WPCF permit is needed on a form provided by the Department. ~~The Department must receive applications at least 180 days before an NPDES permit is needed or at least 60 days before a WPCF permit is needed.~~ The Director may grant permission in writing for a later date to submit a new or renewal application. The Director will not grant permission for a renewal application to be submitted later than the expiration date of the existing permit.

(2) Any person wishing to modify their NPDES or WPCF permit must submit a written application on a form provided by the Department. Applications must be submitted well in advance of the needed modification in order to process the request as required by OAR 340-045-0055.

(3) All application forms must be completed in full and signed by the applicant or the applicant's legally authorized representative. The name of the applicant must be the legal name of the owner of the facility or the owner's agent or the lessee responsible for the operation and maintenance of the facility. Applications that are correctly signed and appear administratively complete will be considered timely upon receipt. A request for further information under section (5) of this rule will not effect the timeliness of an application.

(4) Applications that are obviously incomplete, unsigned, improperly signed, or that 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.

(5) Within 45 days of receipt of an application, the Department will preliminarily review an application to determine the adequacy of the information submitted. Failure to complete this review within 45 days does not preclude the Department from later requesting further information from the applicant as provided in this section.

(a) If the Department determines that additional information is needed, it will promptly request in writing the needed information from the applicant. The application will be considered withdrawn if the applicant fails to submit the requested information within 90 days of the request or such other time as the Department establishes in writing.

(b) If the Department determines that additional measures are necessary to gather facts regarding the application, it shall notify the applicant in writing that such measures will be instituted and provide the timetable and procedures to be followed. The application will be considered withdrawn if the applicant fails to comply with the additional measures.

(5) 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.

(6) An application that has been filed with the U.S. Army Corps of Engineers in accordance with Section 13 of the Federal Refuse Act, or an NPDES application that has been filed with the U.S. Environmental Protection Agency will be accepted as an application filed under this section provided the application is complete and the information on the application is still current.

Stat. Auth.: ~~ORS 468~~ORS 468.020, 468B.020 and 468B.035

Stats. Implemented: ORS 468.065, 468B.015, 468B.035 and ~~& ORS 468B.050~~

Hist.: DEQ 53(Temp), f. & ef. 6-21-73 thru 10-18-73; DEQ 58, f. 9-21-73, ef. 10-25-73;

DEQ 113, f. & ef. 5-10-76; DEQ 22-1981, f. & ef. 9-2-81; DEQ 15-2000, f. & cert. ef. 10-11-2000

### 340-045-0033

#### General Permits

(1) The Director may issue general permits for certain categories of minor discharge sources or minor activities where individual NPDES or WPCF permits are not necessary ~~in order to~~ adequately protect the environment. Before the Director can issue a general permit, the following conditions must be met:

(a) There must be several minor sources or activities that involve the same or substantially similar types of operations.;

(b) ~~They~~ The sources or activities must have the potential to discharge or dispose of the same or similar types of wastes.;

(c) They general permit must require the same or similar monitoring requirements, effluent limitations and operating conditions for the categories.; and

(d) They category of sources or activities would be more appropriately controlled under a general permit than an individual permit.

(e) The Commission has adopted the general permit into rule by reference.

(2) General permits issued after the effective date of this rule will specify the following:

(a) The requirements to obtain coverage under a general permit, including application requirements and application submittal deadlines. The Department may determine that submittal of an application is not necessary after evaluating the type of discharge, potential for toxic and conventional pollutants in the discharge, expected discharge volume, availability of other means to identify dischargers, and estimated number of dischargers to be covered by the permit. The Department's evaluation must be provided in the public notice for the general permit.

(b) The process used by the Department to notify a person that coverage under a general permit has been obtained and the discharge or activity is authorized.

(23) Although general permits may include activities throughout the state, they may also be restricted to more limited geographical areas.

(34) Prior to issuing a general permit, the Department will follow the public notice and participation procedures outlined in OAR 340-045-0027, ~~and~~ 340-045-0035(3), and ORS 183.325 to 183.410. In addition the Department will make a reasonable effort to mail notices of pending actions to those persons known by the Department who are likely to be covered by the general permit.

~~(4) If a person covered by a general permit is dissatisfied with the conditions or limitations of the permit issued by the Director, that person may request a hearing. The Department must receive a written request for a hearing within 20 days following the date of issuance of the general permit. The hearing will be conducted as a contested case hearing in accordance with ORS 183.413 through 183.470 and OAR Chapter 340, Division 011.~~

~~(5) All~~ Any persons operating a discharge source or conducting an activity described in a general permit must apply for coverage under the general permit ~~become permittees, unless the general permit does not require submission of an application pursuant to subsection (2)(a) of this rule or the source or activity is specifically covered by an individual NPDES or WPCF permit.~~

(a) Any person seeking coverage under a general permit must submit an application as required under the terms of the applicable NPDES or WPCF general permit. If application requirements are not specified in the general permit, procedures in OAR 340-045-0030 or OAR 340-071-0162, whichever is applicable, must be followed.

(b) A person who fails to submit an application in accordance with the terms of the general permit, OAR 340-045-0030 or OAR 340-071-0162, whichever is applicable, is not authorized to conduct the activity described in the permit.

(6) Any person required to have coverage under a general permit must pay permit fees as required in OAR 340-045-0070 to 340-045-0075 or OAR 340-071-0140 to obtain and maintain coverage under that permit.

~~(67) Any permittee covered by an individual NPDES or WPCF permit may request that the individual permit be canceled or allowed to expire, and that it be covered by a general permit if the its permitted source or activity discharge or activity is also~~ may be covered by an existing general permit. As long as the source or activity permittee is covered by an individual NPDES or WPCF permit, as well as a general permit, the conditions and limitations of the individual permit govern, until such time as it is canceled or expires.

~~(78) Any permittee person not wishing to be covered by a general permit may make application for an individual permit in accordance with OAR 340-045-0030 or OAR 340-071-0162, whichever is applicable.~~

~~(89) The Director may revoke coverage and authorization under a general permit pursuant to OAR 340-045-0060 as it applies to any person and require such person to apply for and obtain an individual NPDES or WPCF permit if:~~ Any interested person may petition the Director to take action under this section. Cases where an individual permit may be required include the following:

(a) The covered source discharge or activity is a significant contributor of pollution or creates other environmental problems;

(b) The permittee is not in compliance with the terms and conditions of a the general permit, submitted false information, or is in violation of any applicable law; or

(c) Conditions or standards have changed so that the source or activity no longer qualifies for a general permit. A change occurs in the availability of demonstrated technology or practices for the control or abatement of pollutants being discharged;

(d) For NPDES general permits, effluent limitation guidelines are promulgated for point sources covered by a general permit and the guidelines are not already in the general permit; or

(e) Circumstances have changed so that the discharge or activity is no longer appropriately controlled under a general permit, or either a temporary or permanent reduction or elimination of the authorized discharge is necessary.

~~(9) In order to maintain a list of general permittees, the Department may require general permittees to register with the Department.~~

(10) The following general permits are adopted by reference in this rule and available for review at the Department:

(a) NPDES 200-J, Filter backwash (issued August 29, 1997)

(b) NPDES 500-J, Boiler blowdown (issued August 29, 1997)

(c) WPCF 600, Offstream placer mining (issued April 9, 1997)

(d) NPDES 700-J, Suction dredges (issued May 3, 1999)

(e) WPCF 800, Confined animal feeding operations (issued August 8, 1990), until superseded by a permit issued by the Oregon Department of Agriculture

(f) NPDES 900-J, Seafood processing (issued June 7, 1999)

(g) WPCF 1000, Gravel mining (issued August 6, 1997)

(h) NPDES 1200-A, Storm water runoff from sand, gravel & non-metallic quarrying & mining in Standard Industrial Classification (SIC) 14, asphalt mix batch plants, and concrete batch plants (issued August 6, 1997)

(i) NPDES 1200-C, Storm water runoff from construction activities, including clearing, grading, and excavation, and stockpiling that disturbs five or more acres, including activities that will disturb five or more acres over time as part of a larger common plan of development; effective December 1, 2002, construction activities that disturb one or more acre are covered (issued February 20, 2001)

(j) NPDES 1200-CA, Government agencies responsible for storm water runoff from construction activities that disturbs five or more acres; effective December 1, 2002, construction activities that disturb one or more acres are covered (issued February 20, 2001)

(k) NPDES 1200-COLS, Storm water runoff in the Columbia Slough watershed from industrial activities listed in subsection 10(l) of this rule (issued December 22, 1999)

(l) NPDES 1200-Z, Storm water runoff from: Warehousing in SIC 4221-4225; Food processing in SIC 20; Landfills, land app. sites; Heavy industrial in SIC 28, 29, 30, 31, 32, 33 & steam electric power generating (includes coal/hogged fuel handling); Light mfg. in SIC 34, 35, 36, 37, 38 & 39 includes ship & boat building/repair; Printing in SIC 27; Textile & apparel mfg. in SIC 22 & 23; Transportation in SIC 40, 41, 42, 43, 44, 45 & 5171; Wood products mfg. in SIC 24 & 25; Metal scrap yards, battery reclaimers & auto salvage yards in SIC 5015 & 5093; Hazardous waste treatment, storage, & disposal facilities (issued July 22, 1997)

(m) NPDES 1300-J, Oily storm water runoff and oil/water separators (issued January 11, 2000)

(n) WPCF 1400-A, Seasonal food processing & wineries, less than 25,000 gallons/day (issued August 22, 2000)

(o) WPCF 1400-B, Other food processing, less than 25,000 gallons/day (issued August 22, 2000)

(p) NPDES 1500-A, Petroleum hydrocarbon cleanups discharged to surface waters (issued August 22, 2000)

(q) WPCF 1500-B, Petroleum hydrocarbon cleanups (issued August 22, 2000)

(r) NPDES 1700-A, Vehicle and equipment wash water discharged to surface waters (issued March 5, 1998)

(s) WPCF 1700-B, Vehicle and equipment wash water (issued March 5, 1998)

(t) NPDES 1900-J, Non-contact geothermal heat exchange (issued September 11, 1997)

Stat. Auth.: ~~ORS 468~~ORS 468.020, 468B.020 and 468B.035

Stats. Implemented: ORS 468.065, 468B.015, 468B.035, ~~&and~~ ~~ORS~~ 468B.050

Hist.: DEQ 28-1980, f. & ef. 10-27-80; DEQ 15-2000, f. & cert. ef. 10-11-2000

### **340-045-0040**

#### **Renewal of NPDES or WPCF Permits**

(1) The procedures for issuance of NPDES and WPCF permits apply to renewal of these permits.

(2) If a completed application for renewal of a permit is filed with the Department ~~180 days prior to the expiration date of an NPDES permit or 60 days prior to the expiration date of a WPCF permit~~ pursuant to OAR 340-045-0030, the permit will not expire until final action has been taken on the renewal application.

Stat. Auth.: ORS 468.020, 468B.020 and 468B.035

Stats. Implemented: ORS 468.065, 468B.015, 468B.035 and ~~&~~ ~~ORS~~ 468B.050

Hist.: DEQ 53(Temp), f. 6-21-73 thru 10-18-73; DEQ 58, f. 9-21-73, ef. 10-25-73; DEQ 113, f. & ef. 5-10-76; DEQ 21-1990, f. & cert. ef. 7-6-90; DEQ 15-2000, f. & cert. ef. 10-11-2000

**Attachment B**  
**Public Input and Department's Response**

**State of Oregon**

**Department of Environmental Quality**

**Memorandum**

To: Mike Llewelyn  
Water Quality Division Administrator

Date: August 9, 2001

From: Ranei Nomura through Mike Kortenhof  
Surface Water Management, Water Quality Division

Subject: Summary of comments and response to comments received for Water Quality  
General Permit Program Rule Amendments

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**Overview of comment period** A public comment period from June 15, 2001, to July 20, 2001, was provided for the proposed Water Quality General Permit Program Rule Amendments. Public hearings were held on July 17 in Portland, Bend and Medford. A total of seven people attended the hearings; no one provided oral or written comment at the hearings. One person submitted written comment.

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**Comment received** Leslie Fish, a representative of the U.S. Postal Service, submitted written comment urging adoption of a "no exposure" exclusion for storm water permittees. This is a provision adopted by EPA in late 1999 that allows storm water permittees out of the permit program if they have no exposure of storm water to industrial activities. Mr. Fish also provided supporting information on the federal no-exposure provision and suggested additional clarifications that could be made to the EPA provision.

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**Response to comment** The Water Quality Division will address the no-exposure issue during the renewal of the storm water general permits scheduled for mid-2002. It is likely that many permittees and other groups reserved their comment on this issue expecting it to be addressed during the renewal process. By addressing EPA's no-exposure provision during permit renewal, interested persons will have a better opportunity to review and comment on such a proposal. No change to the rule was made in response to this comment.

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**Attachment C**  
**Presiding Officers' Report on Public Hearings**

**State of Oregon**

**Department of Environmental Quality**

**Memorandum**

To: Environmental Quality Commission  
From: James Cowan, Water Quality Division  
Tom Hall, Eastern Region – Bend  
Andy Ullrich, Western Region – Medford

Date: July 18, 2001

Subject: Presiding Officers' Report for Rulemaking Hearings on July 17, 2001  
Title of Proposal: Water Quality General Permit Program Rule Amendments

**Overview of Public Hearing Locations, Times and Presiding Officers**

<b>Presiding Officer</b>	James Cowan	Tom Hall	Andy Ullrich
<b>Date and Time</b>	July 17 at 4 p.m.	July 17 at 10 a.m.	July 17 at 10 a.m.
<b>Place</b>	DEQ HQ, Rm 3A 811 SW 6 <sup>th</sup> Ave. Portland, OR	DEQ Bend Office Main Conference Rm 2146 NE 4 <sup>th</sup> , #104 Bend, OR	Santo Center, Rm 2021 701 N Columbus Medford, OR

**Portland Hearing**

The rulemaking hearing was convened at 4:04 p.m. and closed at 4:45 p.m. A brief explanation of the rulemaking proposal and hearing procedures was provided. Five people were in attendance: Norman Hagestedt; Sean Darcy, Storm Water Management; Heather Bartlett, Secor; Gordon McGhee, Clackamas River Water; and John Linn, Pacific Surimi. No one provided oral or written comment.

**Bend Hearing**

The rulemaking hearing was convened at 10:00 a.m. and closed at 10:30 a.m. There was no one in attendance.

**Medford Hearing**

The rulemaking hearing was convened at 10:00 a.m. and closed at 10:30 a.m. A brief explanation of the rulemaking proposal and hearing procedures was provided. Two people were in attendance: Mike Osterman, Medford Regional Water Reclamation Facility, and Curtis Crichton, LTM Inc. No one provided oral or written comment.



**Attachment D**  
**Relationship to Federal Requirements**

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal  
for  
Water Quality General Permit Program Rule Amendments

**Questions to be Answered to Reveal  
Potential Justification for Differing from Federal Requirements.**

- 1. Are there federal requirements that are applicable to this situation? If so, exactly what are they?**

40 CFR §122.28 *General permits* establish the conditions for developing National Pollutant Discharge Elimination System (NPDES) general permits and procedures for implementing a general permit program. Along with 40 CFR §122.21 *Application for a permit*, these requirements also specify how persons obtain coverage under these permits and when coverage under an individual permit may be required instead of a general permit.

- 2. Are the applicable federal requirements performance based, technology based, or both with the most stringent controlling?**

The federal requirements cited above relate to administrative procedures not performance or technology based standards.

- 3. Do the applicable federal requirements specifically address the issues that are of concern in Oregon? Was data or information that would reasonably reflect Oregon's concern and situation considered in the federal process that established the federal requirements?**

The applicable federal requirements do not specifically address issues that are of concern in Oregon, nor was information from Oregon considered in the federal process that established the requirements. However, these requirements set forth an administrative process to utilize NPDES "general" permits to regulate categories of similar discharges to waters of the United States. Administration of this permit program is of state interest because DEQ has been delegated authority from the U.S. Environmental Protection Agency (EPA) to administer the NPDES general permit program and wishes to maintain this delegation.

- 4. Will the proposed requirement improve the ability of the regulated community to comply in a more cost effective way by clarifying confusing or potentially conflicting requirements (within or cross-media), increasing certainty, or preventing or reducing the need for costly retrofit to meet more stringent requirements later?**

DEQ is proposing to clarify application and fee requirements for its general permit program. This clarification should provide clearer direction to the regulated community on general permit application requirements. This could result in a more cost-effective process for the regulated community by reducing the time they spend on determining or debating the necessary application requirements.

**5. Is there a timing issue which might justify changing the time frame for implementation of federal requirements?**

The federal requirements (40 CFR §122) affecting the general permit program are currently in effect. Therefore, DEQ must proceed in a timely manner to adopt these proposed revisions.

**6. Will the proposed requirement assist in establishing and maintaining a reasonable margin for accommodation of uncertainty and future growth?**

The proposed requirement clarifies administrative procedures pertaining to DEQ's water quality general permit program and does not affect the issue of accommodation of uncertainty and future growth.

**7. Does the proposed requirement establish or maintain reasonable equity in the requirements for various sources? (level the playing field)**

The proposed requirement clarifies administrative procedures pertaining to DEQ's water quality general permit program and does not affect the issue of establishing or maintaining reasonable equity.

**8. Would others face increased costs if a more stringent rule is not enacted?**

No.

**9. Does the proposed requirement include procedural requirements, reporting or monitoring requirements that are different from applicable federal requirements? If so, Why? What is the "compelling reason" for different procedural, reporting or monitoring requirements?**

The proposed requirement includes a procedural requirement that is different from federal requirements. The proposed rule revision would require that EQC adopt general permits into rule by reference before DEQ issues general permits. EPA does not issue NPDES general permits through adoption into the Code of Federal Regulation. However, EPA does follow extensive public notice and participation procedures through publication of proposed general permits in the Federal Register. DEQ's proposal will make the state process procedurally consistent with and, therefore, equivalent to the federal process. This consistency is required in order to maintain federal delegation of the NPDES general permit program.

Adoption of the general permits into Oregon Administrative Rule (OAR) by reference ensures that the general permit program fully complies with Oregon's Administrative Procedures Act (APA). The APA, implemented through ORS Chapter 183, defines any agency regulation implementing law or policy that is "generally applicable" as a rule and requires that

rulemaking follow specific public notification and participation procedures. General permits are "generally applicable" to a group of similar activities or operations rather than a specific site and adoption of these permits through rulemaking is appropriate.

**10. Is demonstrated technology available to comply with the proposed requirement?**

Not applicable.

**11. Will the proposed requirement contribute to the prevention of pollution or address a potential problem and represent a more cost effective environmental gain?**

Not applicable.

**Attachment E**  
**Fiscal and Economic Impact Statement**

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal  
for  
Water Quality General Permit Program Rule Amendments  
**Fiscal and Economic Impact Statement**

**Introduction**

The proposed rule amendments do the following:

- Update the water quality general permit program to comply with federal regulations for issuance of National Pollutant Discharge Elimination System (NPDES) general permits,
- Clarify application and fee requirements for general permits,
- Revise the general permit issuance procedure to require adoption of water quality general permits in rule by reference, and
- Adopt by reference into rule 20 existing general permits.

These amendments do not fiscally impact the regulated community because no changes are being proposed to the existing general permits or permit fee structure. The process to obtain and comply with a water quality general permit remains the same for the regulated community, which may include the general public and small or large businesses. The proposed amendments do affect DEQ's internal process requiring that general permits be adopted through rulemaking by the Environmental Quality Commission.

**General Public:** No expected impact.

**Small Business:** No expected impact.

**Large Business:** No expected impact.

**Local Governments:** No expected impact.

**State Agencies**

DEQ: The proposed rulemaking will require additional actions on the part of DEQ to issue general permits. However, DEQ will not be adding additional FTE, receiving additional revenue or increasing expenditures to implement the proposed rule. The additional workload will be accomplished through reallocation and reprioritization of existing staff time.

Other Agencies: No expected impact.

**Assumptions**

DEQ is assuming that the increase in workload is manageable through reallocation and reprioritization of existing staff time.

**Housing Cost Impact Statement**

The Department has determined that this proposed rulemaking will have no effect on the cost of development of a 6,000 square foot parcel and the construction of a 1,200 square foot detached single family dwelling on that parcel.

**Attachment F**  
**Land Use Evaluation Statement**

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal  
for  
Water Quality General Permit Program Rule Amendments  
**Land Use Evaluation Statement**

**1. Explain the purpose of the proposed rules.**

The proposed rules amend Oregon Administrative Rule (OAR), Chapter 340, Division 045 to do the following:

- Update the water quality general permit program to comply with federal regulations for issuance of National Pollutant Discharge Elimination System (NPDES) general permits. Note: Water Pollution Control Facilities (WPCF) general permits are issued pursuant to state regulations and administered in alignment with federal requirements. This will continue under the proposed revisions.
- Clarify application and fee requirements for general permits.
- Revise general permit issuance procedure to require adoption of water quality general permits in rule by reference.
- Adopt by reference into rule 20 existing general permits.

**2. Do the proposed rules affect existing rules, programs or activities that are considered land use programs in the DEQ State Agency Coordination (SAC) Program?**

Yes  No

**a. If yes, identify existing program/rule/activity:**

The following water quality permit programs are affected: National Pollutant Discharge Elimination System (NPDES) permits issued pursuant to federal and state regulations and Water Pollution Control Facilities (WPCF) permits issued pursuant to state regulations.

**b. If yes, do the existing statewide goal compliance and local plan compatibility procedures adequately cover the proposed rules?**

Yes  No  (if no, explain):

A land use compatibility statement signed by the local land use authority is required from the applicant prior to authorizing discharges under a NPDES or WPCF general permit.

**c. If no, apply the following criteria to the proposed rules.**

Staff should refer to Section III, subsection 2 of the SAC document in completing the evaluation form. Statewide Goal 6 - Air, Water and Land Resources is the primary goal that relates to DEQ authorities. However, other goals may apply such as Goal 5 - Open Spaces, Scenic and Historic Areas, and Natural Resources; Goal 11 - Public Facilities and Services; Goal 16 - Estuarine Resources; and Goal 19 - Ocean Resources. DEQ programs and rules that relate to statewide land use goals are considered land use programs if they are:

1. Specifically referenced in the statewide planning goals; or
2. Reasonably expected to have significant effects on
  - a. resources, objectives or areas identified in the statewide planning goals, or
  - b. present or future land uses identified in acknowledged comprehensive plans.

In applying criterion 2 above, two guidelines should be applied to assess land use significance:

- The land use responsibilities of a program/rule/action that involved more than one agency, are considered the responsibilities of the agency with primary authority.
- A determination of land use significance must consider the Department's mandate to protect public health and safety and the environment.

**In the space below, state if the proposed rules are considered programs affecting land use. State the criteria and reasons for the determination.**

not applicable

3. **If the proposed rules have been determined a land use program under 2. above, but are not subject to existing land use compliance and compatibility procedures, explain the new procedures the Department will use to ensure compliance and compatibility.**

Water Quality Division  
Division

[signed by Roberta Young]  
Intergovernmental Coordinator

[6-12-01]  
Date

**Attachment G**  
**List of Water Quality General Permits**

<b>General Permits to be Adopted September 2001</b>				
<b>Type</b>	<b>Number</b>	<b>Sources Covered</b>	<b>Issued</b>	<b>Renewal Schedule</b>
NPDES	200	Filter backwash	August 29, 1997	Mid-2002
NPDES	500	Boiler blowdown	August 29, 1997	Mid-2002
WPCF	600	Offstream placer mining	April 9, 1997	Mid-2002
NPDES	700	Suction dredges	May 3, 1999	2002
WPCF	800	Confined animal feeding operations	August 8, 1990	Does not expire; will be superceded by ODA permit
NPDES	900	Seafood processing	June 7, 1999	2005
WPCF	1000	Gravel mining	August 6, 1997	Mid-2002
NPDES	1200-A	Storm water runoff from sand, gravel & non-metallic quarrying & mining, SIC 14	August 6, 1997	Mid-2002
NPDES	1200-C	Storm water runoff from construction that disturbs 5 or more acres	Feb. 20, 2001	2005
NPDES	1200-CA	Government agencies responsible for storm water runoff from construction that disturbs 5 or more acres	Feb. 20, 2001	2005
NPDES	1200-COLS	For storm water runoff from industrial activities listed for 1200-Z in the Columbia Slough watershed	Dec. 22, 1999	2004
NPDES	1200-Z	Storm water runoff from: Warehousing in SIC 4221-4225; Food processing in SIC 20; Landfills, land app. sites; Heavy industrial in SIC 28, 29, 30, 31, 32, 33 & steam electric power generating (includes coal/hogged fuel handling); Light mfg. in SIC 34, 35, 36, 37, 38 & 39 includes ship & boat building/repair; Printing in SIC 27; Textile & apparel mfg. in SIC 22 & 23; Transportation in SIC 40, 41, 42, 43, 44, 45 & 5171; Wood products mfg. in SIC 24 & 25; Metal scrap yards, battery reclaimers & auto salvage yards in SIC 5015 & 5093; Hazardous waste treatment, storage, & disposal facilities	July 22, 1997	Mid-2002
NPDES	1300	Oily storm water runoff, oil/water separators	Jan. 11, 2000	2004
WPCF	1400-A	Seasonal food processing & wineries, less than 25,000 gallons/day	August 22, 2000	2005
WPCF	1400-B	Other food processing, less than 25,000 gallons/day	August 22, 2000	2005
NPDES	1500-A	Petroleum hydrocarbon cleanups discharged to surface waters	August 22, 2000	2005
WPCF	1500-B	Petroleum hydrocarbon cleanups	August 22, 2000	2005
NPDES	1700-A	Vehicle & equipment wash water discharged to surface waters	March 5, 1998	2003
WPCF	1700-B	Vehicle & equipment wash water	March 5, 1998	2003
NPDES	1900	Non-contact geothermal heat exchange	Sept. 11, 1997	Mid-2002
<b>Other General Permits to be Adopted in Rule</b>				
<b>Type</b>	<b>Number</b>	<b>Sources Covered</b>	<b>Issued</b>	<b>Renewal Schedule</b>
NPDES	100-J	Non-contact cooling water	Sept. 28, 1996	Early 2002
NPDES	300-J	Fish Hatcheries	August 29, 1997	Early 2002
NPDES	400-J	Log ponds	August 28, 1996	Early 2002
<b>General Permits Not Scheduled to be Renewed</b>				
<b>Type</b>	<b>Number</b>	<b>Sources Covered</b>	<b>Issued</b>	<b>Renewal Schedule</b>
WPCF	1800	Kennels	July 22, 1996	Will not be renewed
WPCF	4400	Waste disposal well	Feb. 19, 1997	Will not be renewed
WPCF	5600	On-site sewage system <5,000 gallons/day	Feb. 19, 1997	Will not be renewed

Copies of the general permits may be obtained by contacting Ranei Nomura at (503) 229-5657 or from the Department's website: <http://waterquality.deq.state.or.us/wq/wqpermit/permitdocs.htm>.



BEFORE THE ENVIRONMENTAL QUALITY COMMISSION  
OF THE STATE OF OREGON

In The Matter of a Petition )  
by CLEAN, an Unincorporated Association, )  
for Rulemaking Relating to Methane )

DENIAL OF PETITION  
FOR RULEMAKING

1. On August 21, 2001, CLEAN, an unincorporated citizens association, filed a petition for rulemaking pursuant to ORS 183.390 and OAR 137-001-0070. The petition proposed both temporary and permanent rule amendments relating to the regulation of methane at unpermitted landfills.
2. The Commission considered the petition at its regularly scheduled meeting on September 21, 2001. After review of the petition, the Department of Environmental Quality staff report, and related materials, the Commission determined that neither temporary nor permanent rulemaking is appropriate at the present time.
3. The Commission also determined that there should be opportunity for further review of this issue by an advisory committee and the public. Accordingly, the Commission directed the Department to appoint an advisory committee to assist in consideration of landfill methane regulations.
4. The Commission further directed that the Department report back to the Commission on the status of its deliberations at the Commission's December 2001 meeting.

The Petition for Rulemaking is DENIED.

Stephanie Hallock 10/1/01  
Stephanie Hallock, Director of the  
Department of Environmental Quality  
for the Environmental Quality Commission

State of Oregon  
Department of Environmental Quality

Memorandum

**Date:** August 31, 2001  
**To:** Environmental Quality Commission  
**From:** Stephanie Hallock, Director  
**Subject:** Agenda Item L, Action Item: Petition for Temporary and Permanent Rulemaking to Amend OAR 340-122-0115, Regarding Hazardous Substances  
September 21, 2001 EQC Meeting

**Department Recommendation** The Department recommends that the Commission:  
1) deny the petition for temporary rulemaking to add methane, under certain conditions, to the list of hazardous substances subject to the state's environmental cleanup rules. No imminent threat exists to warrant temporary rulemaking.  
2) direct DEQ to consult with stakeholders, initiate permanent rulemaking to address methane issues, and present a status report to the Commission at its meeting in December, 2001.

**Need for EQC Action** On August 21, 2001, CLEAN petitioned the Commission for temporary and permanent rulemaking to add methane, under certain conditions, to the list of hazardous substances subject to the state's environmental cleanup rules (Attachment A). CLEAN is an association of citizens concerned about environmental and safety issues associated with development of the former Cobb's Quarry Landfill in Beaverton, Oregon.

**Key Issues**

- DEQ has informed the City of Beaverton about the presence of elevated levels of methane associated with portions of the former Cobb's Quarry unpermitted landfill and has recommended that the City address potential hazards in reviewing and approving land use proposals. The City of Beaverton has responsibility for local government land use approvals affecting Cobb's Quarry (aka Sexton Mountain Landfill).
- A No Further Action letter being issued to the developer specifically states that that the NFA "does not extend to methane". The authority for petitions to the EQC is limited to temporary and/or permanent rule making and not the issuance of No Further Action letters.
- DEQ is currently evaluating a range of potential tools for managing or regulating methane generated at unpermitted and previously permitted solid waste landfills. Options being evaluated include: a) a permanent rule identifying methane under certain conditions as a hazardous substance subject to the state's environmental cleanup rules; b)

Agenda Item L, Petition for Temporary and Permanent Rulemaking to Amend OAR 340-122-0115, Regarding Hazardous Substances

Page 2 of 3

modification of the existing solid waste rules to address generation of methane from unpermitted and previously permitted landfills; and c) use of the existing environmental hazards notice process (OAR 340-130).

- DEQ agrees with the petitioners that the methane management issue has broad (statewide) implications with regard to public health and safety. In addition, DEQ agrees with the petitioners that this issue should be given priority for resolving as quickly as possible.
- DEQ intends to use our advisory committees to assist the Department in identification of the best alternative for managing methane problems.
- The EQC previously adopted a temporary rule concerning methane (cited by the petitioners as a model for the petitioner's proposed action). The rule was necessary to address an imminent threat to adjacent residences associated with a specific orphan site (no responsible party), known as Killingsworth Fast Disposal and, more specifically, to allow access to the State's Solid Waste Orphan Site Account to address these threats.
- Cobb's Quarry is not an "orphan site". In addition, existing information does not indicate an "imminent threat" is present primarily because the pending development proposal involves only one of the three parcels comprising the former Cobb's Quarry Landfill site. At the subject parcel, observed methane levels are less concentrated compared to the other undeveloped parcels, and additional sampling of the site is being conducted by the developer to ensure that observed levels are below the lower explosive limit for methane.
- The developer is participating in DEQ's Voluntary Cleanup Program. In addition, the developer and the City appear to be addressing potential methane problems in a manner consistent with DEQ recommendations provided under oversight of the Voluntary Cleanup Program. City actions have included retention of the services of an independent expert to advise the city about engineering and monitoring measures appropriate for development of Cobb's Quarry Landfill.

**EQC Action Alternatives**

EQC could grant the full petition and adopt the temporary rule as proposed by the petitioner. The Department of Justice, however, has formally advised agencies against readoption of temporary rule.

**Attachments**

- A. Petition for Temporary and Permanent Rulemaking to Amend OAR 340-122-0115, Regarding Hazardous Substances
- B. December 14, 2000 DEQ letter to City of Beaverton

Agenda Item L, Petition for Temporary and Permanent Rulemaking to Amend OAR 340-122-0115, Regarding Hazardous Substances

Page 3 of 2

Approved:

Section:

*Ann Linn for Al Kippen*

Division:

*Jeff Christensen*

Report Prepared By: Jeff Christensen

Phone: (503) 229-6391

# RYCEWICZ & CHENOWETH, LLP

ATTORNEYS AT LAW

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CHRISTOPHER A. RYCEWICZ  
BRIAN D. CHENOWETH\*  
CHRISTOPHER W. RICH  
CHRISTOPHER E. MARTIN\*  
STEVEN C. BURKE\*

\*ADMITTED IN OR AND WA  
†ADMITTED IN OR AND CO

August 31, 2001

*Via Fax (503) 229-6954 and Regular Mail*  
Alan Kiphut  
Oregon Department of Environmental Quality  
811 SW 6<sup>th</sup> Avenue  
Portland, OR 97204

RE: *Temporary & Permanent Rulemaking Petition*

Dear Mr. Kiphut:

As you are aware, I submitted a petition on behalf of "CLEAN" on August 21, 2001 requesting that the Environmental Quality Commission ("EQC") direct DEQ to initiate Temporary and Permanent Rulemaking designating methane as a "hazardous substance."

I wish to clarify that the August 21, 2001 rulemaking petition, in fact, constitutes two separate petitions, one for Temporary rulemaking, and one for Permanent rulemaking. CLEAN asks the EQC and the DEQ to consider each petition on its own merit, pursuant to the facts and information presented therein and the applicable statutes and administrative rules. CLEAN thanks the EQC and the Department for its consideration of these petitions.

Very truly yours,

RYCEWICZ & CHENOWETH, LLP



Christopher W. Rich

# RYCEWICZ & CHENOWETH, LLP

ATTORNEYS AT LAW

1001 SW FIFTH AVENUE, SUITE 1300 ~ PORTLAND, OR 97204-1151

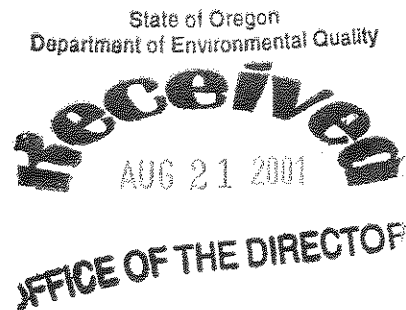
TELEPHONE: 503-221-7958  
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STEVEN C. BURKE\*

\*ADMITTED IN OR AND WA  
†ADMITTED IN OR AND CO

August 21, 2001

*Via Hand Delivery*  
Environmental Quality Commission  
c/o Stephanie Hallock, Director  
Oregon Department of Environmental Quality  
811 SW 6<sup>th</sup> Avenue, 10<sup>th</sup> Floor  
Portland, OR 97204



RE: *Cobb's Quarry Landfill*

Dear Environmental Quality Commission:

Please be advised that I represent "CLEAN," an association of citizens concerned about environmental conditions and safety issues associated with the development of the former Cobb's Quarry Landfill in Beaverton, Oregon.

Enclosed is a Petition for Temporary and Permanent Rulemaking submitted by CLEAN related to providing DEQ adequate authority to regulate potentially dangerous methane gas as a "hazardous substance" under OAR 340-122-115. CLEAN appreciates your consideration of this petition, as development of this former landfill is imminent, and my CLEAN wishes to ensure that DEQ has ongoing authority to address methane concerns before such development occurs in order to protect persons living and working on or near the site. Please feel free to contact me if you wish to discuss this matter further.

Very truly yours,

RYCEWICZ & CHENOWETH, LLP

Christopher W. Rich

ENCLOSURES: Petition for Temporary and Permanent Rulemaking w/ attachments

1                                   BEFORE THE DEPARTMENT OF ENVIRONMENTAL QUALITY

2   STATE OF OREGON

3		)	
4	IN THE MATTER OF THE	)	PETITION FOR TEMPORARY &
	AMENDMENT OF OAR 340-122-115	)	PERMANENT RULEMAKING TO
5	DEFINING METHANE AS A	)	AMEND OAR 340-122-115
	HAZARDOUS SUBSTANCE	)	(HAZARDOUS SUBSTANCES)
6		)	

7 TO: ENVIRONMENTAL QUALITY COMMISSION  
 8 c/o Stephanie Hallock, Director  
 9 Oregon Department of Environmental Quality  
 811 SW 6<sup>th</sup> Avenue  
 Portland, Oregon 97204

10 1. Petitioner is "CLEAN" an unincorporated association. CLEAN may be contacted  
 11 via its attorney, Christopher W. Rich, at 1001 SW 5<sup>th</sup> Avenue, Suite 1300, Portland, Oregon,  
 12 97204.

13 2. Petitioner CLEAN is an association of citizens and owners of property in the  
 14 vicinity of the former Cobb's Quarry Landfill, located between Murray Boulevard and Beard  
 15 Road in Beaverton, Oregon. The site was operated as a as a rock quarry between the 1940's and  
 16 the 1970's. Sometime between the 1970's and the 1990's, the large excavation created by the  
 17 quarrying activities was filled with soil, rock, vegetative matter, and other solid waste materials.  
 18 Because the site was operated as an unpermitted landfill, the exact nature of the materials  
 19 disposed of at the site are unknown. Numerous residents now live directly adjacent to the former  
 20 Cobb's Quarry Landfill.

21 3. The former Cobb's Quarry Landfill site has been broken into three parcels for  
 22 proposed development: Sexton Place, Sexton Crest, and a Haagen Grocery facility. Polygon  
 23 Northwest Company and Briar Development Company are actively pursuing residential and  
 24 commercial development of these three parcels. Initial zoning and land use approvals for the  
 25 three developments have already been granted by the City of Beaverton, and land grading has  
 26 begun at the Sexton Place parcel.

1           4.       The Oregon Department of Environmental Quality (“Department” or “DEQ”) first  
2 became aware of potential environmental concerns at the Cobb’s Quarry Landfill in May of 2000  
3 when residents, including members of CLEAN, raised questions about the environmental  
4 conditions at the site and questioned whether development could proceed safely. These residents  
5 had, through their own diligent investigations, identified numerous reports documenting the  
6 presence of hazardous substances and methane gas at explosive levels at the Cobb’s Quarry  
7 Landfill.

8           5.       On January 2, 2001, DEQ prepared a “Preliminary Assessment” of the Cobb’s  
9 Quarry Landfill site which identified numerous hazardous substances documented in soils,  
10 including asphalt, TPH, aromatic volatiles, gasoline, diesel fuel, oil, barium, cadmium, and lead.  
11 The Preliminary Assessment also identified groundwater contamination, including BTEX,  
12 PAHs, arsenic, barium, and groundwater seeps of an unknown nature onto adjacent residential  
13 properties. Perhaps most significantly, the Preliminary Assessment also confirmed that methane  
14 gas has been documented at the site at concentrations of up to 67% in air, where methane is  
15 explosive at concentrations of 5% to 15%. DEQ noted that the methane gas concentrations  
16 would be of particular concern to field workers who could be exposed to potential explosive or  
17 toxic site conditions. A summary of DEQ’s assessment of the Cobb’s Quarry Landfill site from  
18 the Environmental Cleanup Site Information Database is attached hereto as Attachment “A.”

19           6.       The developers consultant, GeoDesign, conducted limited additional methane  
20 sampling at the former landfill between May of 2000 and the present. These further methane  
21 investigations have confirmed numerous locations where methane gas has been documented  
22 above explosive levels, and recent methane readings show positive pressure indicating active  
23 venting of methane gas. *See, e.g.*, Attachment “B.”

24           7.       DEQ has recently informed Petitioner that, based upon consultation with the  
25 Oregon Attorney General’s Office, DEQ has concluded that it lacks specific administrative rule  
26 authority to regulate methane as a “hazardous substance” under OAR 340-122-115, and further



1 lacks statutory authority to regulate methane gas under the solid waste provisions of ORS  
2 Chapter 459 in circumstances, exactly such as the present case, concerning an illegal (i.e., non-  
3 permitted), closed landfill. This is an unintended statutory loophole, as DEQ has also concluded  
4 that, had this site been a permitted landfill, it would possess clear authority to require  
5 monitoring, control, and abatement of methane gas. The proposed Temporary and Permanent  
6 Rulemaking will allow DEQ 1) access to necessary funding to initiate immediate action to abate  
7 and address methane concerns at closed or abandoned landfills where responsible persons have  
8 not taken such remedial actions, and 2) provide adequate authority to DEQ to order remedial  
9 actions to abate methane concerns. Without such express regulatory authority, DEQ currently  
10 lacks any enforceable way to regulate potentially dangerous and explosive methane gas at closed  
11 or abandoned landfills.

12 8. Pursuant to ORS 183.390, CLEAN petitions the Environmental Quality  
13 Commission to direct the Department to initiate both Temporary and Permanent Rulemaking to  
14 amend OAR 340-122-115 to include methane as a “hazardous substance” under certain  
15 circumstances.

16 9. Pursuant to the criteria outlined in ORS 183.335, Temporary Rulemaking is  
17 needed and justified in order to ensure that the any continued development (which has already  
18 begun via grading at Sexton Place) fully addresses the investigation, monitoring, and mitigation  
19 of methane at the former Cobb’s Quarry Landfill. Without a Temporary Rule, DEQ lacks the  
20 authority to order property owners or developers in this, and similar, circumstances to take any  
21 steps whatsoever to control methane. This lack of DEQ authority and oversight places the public  
22 at potential risk. In the event that DEQ accepts as adequate GeoDesign’s recent investigation of  
23 “hazardous substances” (which Petitioner contends is not adequate) at the Sexton Place parcel,  
24 DEQ will be in the untenable position of potentially issuing a “no further action” letter stating  
25 the parcel does not contain any “hazardous substances,” and yet leaving the methane  
26 investigation, monitoring, and mitigation issues unresolved and at the discretion of the

1 developers to address. This same concern applies to the other parcels in the Cobb's Quarry  
2 Landfill site. Methane concerns should properly be factored into any decision to issue a "no  
3 further action" letter at a former landfill as such a letter signals termination of DEQ oversight  
4 and is relied upon by the public as an indication that environmental threats no longer exist.

5 10. Failing to act promptly in initiating Temporary Rulemaking will result in serious  
6 prejudice to the public interest, or the interests of individuals working and living near this  
7 landfill and other similar landfills, by potentially exposing the public to dangers associated with  
8 venting methane gas without adequate state regulatory oversight.

9 11. The Environmental Quality Commission and DEQ have previously identified and  
10 consented to the need for the rule proposed by Petitioner. In June of 1999, the Environmental  
11 Quality Commission adopted a Temporary Rule that designated methane gas, in cases of closed  
12 or abandoned landfills, as a "hazardous substance." *See* Attachment "C." The rationale for this  
13 earlier rulemaking was "to insure that the department will have the authority and resources to  
14 take immediate action to prevent risks to human health posed by the potential movement of  
15 methane gas out of [a] landfill and into confined spaces such as neighboring residences and  
16 businesses." This specific rationale is just as valid today. Temporary rule, DEQ 11-1999  
17 (Temp), f. & cert. ef. 7-6-99 thru 1-2-2000, should not have been allowed to expire without  
18 initiation of Permanent Rulemaking by DEQ. Petitioner asks DEQ to re-adopt a substantially  
19 identical version of this former Temporary Rule immediately in order to give the Department  
20 necessary authority to address the current methane concerns at the Cobb's Quarry Landfill, and  
21 to ensure that the Department has the immediate resources to protect human health and the  
22 environment at this, and other, closed or abandoned landfills with methane concerns. The text of  
23 the proposed Temporary, and Permanent, Rule is attached hereto as Attachment "D."

24 12. Pursuant to ORS 183.390 CLEAN petitions the Environmental Quality  
25 Commission to amend OAR 340-122-115 as a Temporary Rule, and to simultaneously initiate  
26 Permanent Rulemaking in order to ensure that the Department has adequate authority in the

1 future to regulate methane as a "hazardous substance" under the conditions outlined in the  
2 proposed rule.

3 13. Petitioner contends that any "voluntary" measures by owners of former landfills  
4 with methane concerns are insufficient to adequately protect human health and the environment,  
5 in light of the risks to persons working or living near such former landfills, and that DEQ  
6 regulation and oversight is in the public interest and benefit.

7 14. Petitioner contends that because methane is not listed in OAR 340-122-115 as a  
8 "hazardous substance," DEQ lacks the authority to utilize "Orphan Fund Site Account" funds in  
9 order to immediately address threats to public health and safety from methane gas at former  
10 landfills in the event that an owner or responsible party cannot be located, or becomes unable or  
11 unwilling to take steps necessary to mitigate risks associated with methane.

12 15. ORS 465.400 authorizes the Environmental Quality Commission to designate  
13 additional substances as "hazardous substances" for purposes of ORS Chapter 465.

14 16. In consideration of the above, the proposed Temporary and Permanent Rule is  
15 necessary and in the public interest. CLEAN further petitions DEQ to stay issuance of any "no  
16 further action" letters related to the Cobb's Quarry Landfill, or any other closed or abandoned  
17 landfills with current methane concerns, until the Commission and the Department have acted on  
18 this petition and any subsequent rulemaking.

19 17. Persons known to be interested in this rule are attached hereto as Attachment "E."  
20

21 DATED: August 21, 2001  
22

23 

24 \_\_\_\_\_  
25 Christopher W. Rich, OSB# 99095  
26 Of Attorneys for CLEAN



# Environmental Cleanup


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## Environmental Cleanup Site Information Database

### Results of ECSI Query

shows data entered as of August 21, 2001 at 9:11:26 AM

#### Your search criteria

Site ID: 2766	Site Name:		
Street Number:	Quadrant: None	Street Name:	Street Type: None
County: All	City:	Zip Code:	
Latitude Min:	Latitude Max:	Longitude Min:	Longitude Max:
Township:	Range:	Section:	
Site Action or Milestone:	All Action Codes		
Contaminant: None		Contaminant Alias: None	

The following 1 sites match your search criteria. See the Definition of Actions list for brief descriptions of the terms used in the Status column. To obtain detailed site information, click on the Site ID link in the left column.

Site ID	Site Name	Site Location	City	Zip Code	County	Status
<a href="#">2766</a>	Cobb's Quarry Landfill	SW Murray BLVD	Beaverton	97008	Washington	SITE INVESTIGATION

There are 1 records in the table.

For more information about this page please contact Gil Wistar at (503) 229-5512 or via email at [wistar.gil@deq.state.or.us](mailto:wistar.gil@deq.state.or.us).

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# Environmental Cleanup

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## Environmental Cleanup Site Information Database Site Summary Report - Details for Site ID 2766

This report shows data entered as of August 21, 2001 at 9:11:48 AM

See the bottom of this page for a key to certain acronyms and terms used in the report below

### Site Information

Site ID: 2766	Site Name: Cobb's Quarry Landfill	CERCLIS No:
	Address: SW Murray BLVD Beaverton 97008	
	County: Washington	Region: Northwest
	Investigation Status: Suspect site requiring further investigation	NPL Site: N
		Orphan Site: N Study Area: N
Property:	Twnshp/Range/Sect: 1S , 1W , 29	Tax Lots: 200,301(S29A); 100,200(S29D)
	Latitude: 45 deg. 27 ' 20.6"	Longitude: 122 deg. 49 ' 33.4"
		Site Size: 37.85 acres
Other Site Names:	Sexton Mountain Landfill Beacon Hill Landfill	
Operations:	Name: Cobb Rock Quarry Comments: Closed Rock Quarry; Quarry Pit backfilled through about 1990 . Years of Operation: 1947-1982 SIC Code: 1442	
		Operating Status: Inactive

### Contamination Information

<p>Hazardous Substances/Waste Types:</p>	<p>Asphalt and "organics" have been documented in the site subsurface. Laboratory analyses indicate the presence of petroleum (TPH, aromatic volatiles, gasoline, diesel fuel, oil) and metals (barium, cadmium, lead, and possibly selenium) in subsurface soils. Although not considered hazardous substances by the State of Oregon, site soils also contained elevated concentrations of methane, carbon dioxide, and carbon monoxide which could be a potential concern for field workers at the site (the explosive range for methane is 5 to 15 percent in air; the IDLH for carbon monoxide is 1,200 ppm; methane has been detected at the site at concentrations of up to 67 percent in air; carbon monoxide has been detected at concentrations of up to 412 ppm in air). Low concentrations of BTEX and PAHs have been detected in site groundwater. Groundwater also contained metals (arsenic and barium) at concentrations that were at or slightly above the Drinking Water Maximum Contaminant Level threshold values. An elevated concentration of volatile organic vapors and petroleum-like odor were detected at 4 to 5 feet bgs northeast of the center of the site, although this apparent contamination was not further characterized. The highest contaminant concentrations have been detected in subsurface soils, with lower concentrations in groundwater. Apparent petroleum-stained soils were encountered on the surface at the northeast corner of the</p>
--	--

site, although the full nature and extent of this apparent contamination does not appear to have been determined.

Manner and Time of Release:

Historic quarry pit backfilling and known illegal dumping.

Contamination Information:

(1/24/01 SMF/SAS) Subsurface soils contain apparent elevated concentrations of several metals (cadmium, lead, and possibly selenium), TPH, and PAHs. Although not regulated as hazardous substances in the State of Oregon, subsurface soils also contained elevated concentrations of methane and carbon dioxide, and carbon monoxide. The gas concentrations would be of particular concern to field workers who could be exposed to potential explosive or toxic site conditions (the explosive range for methane is 5 to 15 volume percent in air; carbon monoxide was detected at concentrations of up to 412 ppm; the IDLH for carbon monoxide in air is 1,200 ppm). Apparent leachate seeps west of the site have elevated concentrations of iron. Apparent petroleum-stained soils have been observed near the northeast corner of the site. Soil gas northeast of the center of the site has elevated concentrations of VOCs, according to PID readings at 4 feet bgs, and apparent petroleum-like odors at 5 feet bgs. Site groundwater contains low concentrations of PAHs and BTEX, and concentrations of metals (arsenic and barium) that are at, or slightly higher than, the Drinking Water Maximum Contaminant threshold values.

Pathways:

Any future residents at the site could be exposed to site contaminants through direct contact, incidental ingestion of contaminated soil, or inhalation of contaminant vapors. Utility trench workers could be similarly exposed. Contaminated leachate could represent a threat to adjoining residents, or to surface waters or wetlands located at the downstream end of the site. Site groundwater contamination could represent a threat to both nearby domestic drinking water wells and two City of Beaverton Supplemental Municipal Supply wells located 0.6 miles northeast of the site (the site lies over fractured basalt). Although the Cleanup Program does not regulate methane, carbon dioxide, or carbon monoxide, the elevated concentrations of these gases that were detected in the site's subsurface could represent a significant explosion threat or health impacts to site workers or future site residents unless the gas is properly controlled and/or vented.

Environmental/Health Threats:

Methane (and possibly carbon monoxide) could represent a direct physical injury (or toxicity) threat to on-site workers or future site residents, although DEQ does not regulate either gas. Surface or shallow subsurface contaminants could represent a threat to future residents or utility trench workers. Seeps of apparent contaminated leachate could represent a potential health threat to nearby residents or a possible ecological threat to nearby surface waters and wetlands. Groundwater contamination could represent a potential health threat to nearby domestic well water users, or to the City of Beaverton's supplemental Municipal Supply wells.

Status of Investigative or Remedial Action:

(1/24/01 SMF/SAS) Additional site investigation is needed to define: 1) the full vertical/horizontal extent of site contamination; 2) flow directions for shallow and deep groundwater; 3) the full character of leachate that seeps to adjoining residential properties west of the site, if leachate seeps may be present at other locations surrounding the site (particularly along an unnamed tributary to Summer Creek and wetlands area south of the site); and 4) whether nearby older residences may be using groundwater as a drinking water supply. Further site investigation has been recommended as a medium priority. The site has been recommended for proposed addition to the Confirmed Release List and Inventory. (6/12/01 TER/VCP) Briar Development signed a Letter Agreement with VCP for oversight of additional investigation.

Data Sources:

At least 25 site assessment, subsurface investigation, and summary reports are believed to have been issued for this site between 1988 and 2000. DEQ has copies of 16 of the reports. As many as 77 soil borings and 121 exploratory test pits have been constructed to examine the site's subsurface. Very little laboratory data has been generated for the site, considering the number of subsurface explorations. All existing data is believed to be contained in these reports.

**Substance Contamination Information**

Substance	Media	Concentration Level	Date	Lab Agency	Owner Operator
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ATTACHMENT A

pg. 3 of 5

	Contaminated		Recorded	Data	Observation	Admission
ANTHRACENE	Soil		06/03/1992	Y		
ARSENIC	Groundwater		06/03/1992	Y		
BARIUM	Groundwater		06/04/1992	Y		
BARIUM	Soil		06/04/1992	Y		
BENZENE	Groundwater		06/03/1992	Y		
BENZO(a) ANTHRACENE	Soil		06/03/1992	Y		
BENZO(a)PYRENE	Soil		06/03/1992	Y		
BENZO(b) FLUORANTHENE	Groundwater		11/06/2000	Y		
BENZO(b) FLUORANTHENE	Soil		06/03/1992	Y		
BENZO(ghi) PERYLENE	Soil		06/03/1992	Y		
BENZO(k) FLUORANTHENE	Soil		06/03/1992	Y		
CADMIUM	Soil		11/04/2000	Y		
CHRYSENE	Groundwater		11/06/2000	Y		
CHRYSENE	Soil		06/03/1992	Y		
DIESEL - FUEL OIL	Soil	May have included heavier oil	10/06/1995	Y		
ETHYLBENZENE	Soil		06/01/1992	Y		
FLUORANTHENE	Soil		06/03/1992	Y		
FLUORENE	Groundwater		11/06/2000	Y		
FLUORENE	Soil		06/03/1992	Y		
GASOLINE	Soil		06/03/1992	Y		
INDENO(1,2,3-cd) PYRENE	Soil		06/03/1992	Y		
LEAD	Soil		06/04/1992	Y		
NAPHTHALENE	Groundwater		11/06/2000	Y		
OIL - LUBRICATING	Soil		10/10/1995	Y		
PHENANTHRENE	Groundwater		11/06/2000	Y		
PHENANTHRENE	Soil		06/03/1992	Y		
PYRENE	Groundwater		11/06/2000	Y		
PYRENE	Soil		06/03/1992	Y		
SELENIUM	Groundwater		10/09/1995	Y		
SELENIUM	Soil		06/03/1992	Y		
TOLUENE	Groundwater		06/03/1992	Y		
TOLUENE	Soil		06/01/1992	Y		
TOTAL PETROLEUM HYDROCARBONS (TPH)	Soil		06/01/1992	Y		
VOLATILE ORGANIC COMPOUNDS (VOC)	Air	Soil gas by PID. Reading was one foot shallower than observed "petroleum-like"	10/26/2000	Y		

**Investigative, Remedial and Administrative Actions**

Action	Start Date	Compl. Date	Resp. Staff	Agency Code	Region	Lead Pgm
Site added to database	11/29/2000	11/29/2000		DEQ		
Site Screening recommended (EV)	12/11/2000	12/11/2000	Gil Wistar	DEQ	HQ	SAS
SITE EVALUATION	01/02/2001	01/24/2001	Steve Fortuna	DEQ	NW	SAS

ATTACHMENT A

PRELIMINARY ASSESSMENT EQUIVALENT	01/02/2001 01/24/2001	Steve Fortuna	DEQ	NW	SAS
Proposal for Confirmed Release List recommended	01/24/2001 01/24/2001	Steve Fortuna	DEQ	NW	SAS
Other remedial or investigative action recommended	01/24/2001 01/24/2001	Steve Fortuna	DEQ	NW	SAS
Proposal for Inventory recommended	02/05/2001 02/05/2001	Steve Fortuna	DEQ	NW	SAS
VCS Waiting List	03/08/2001 03/08/2001	Jim Anderson	DEQ	NW	VCS
NEGOTIATIONS	03/08/2001 03/22/2001	Tom Roick	DEQ	NW	VCS
SITE INVESTIGATION	03/22/2001	Tom Roick	DEQ	NW	VCS
Letter Agreement	03/22/2001 03/22/2001	Tom Roick	DEQ	NW	VCS

Key to certain acronyms and terms in this report:

**CERCLIS No.:** The U.S. EPA's Hazardous Waste Site identification number, shown only if EPA has been involved at the site.

**Region:** DEQ divides the state into three regions (E, NW, and W); the regional office shown is responsible for site investigation/cleanup.

**NPL Site:** Is the site on EPA's Superfund List? (Y/N).

**Orphan Site:** Has DEQ's Orphan Program been active at this site? (Y/N). The Orphan Program cleans up high-priority sites where owners and operators responsible for the contamination are absent, or are unwilling or unable to use their own resources for cleanup.

**Study Area:** Is this site a Study Area? (Y/N). ECSI assigns unique Site ID numbers to both individual sites and to Study Areas, which are groupings of individual ECSI sites that may be contributing to a larger, area-wide problem.

**SIC Code:** The Standard Industrial Classification code assigned to the operation described in this part of the report.

**Pathways:** A description of human or environmental resources that site contamination could affect.

**Lead Pgm:** This column refers to the Cleanup Program affiliation of the DEQ employee responsible for the action shown. SAS = Site Assessment; VCS = Voluntary Cleanup; SRS = Site Response (enforcement cleanup).

For more information about this page please contact Gil Wistar at (503) 229-5512 or via email at [wistar.gil@deq.state.or.us](mailto:wistar.gil@deq.state.or.us).

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**TABLE 1**  
**Summary of Soil Gas Testing Results**  
**Proposed Sexton Crest Development**  
**Beaverton, Oregon**

Location	Date	% CH <sub>4</sub>		% O <sub>2</sub>		% CO <sub>2</sub>		Pressure (inches w.C.)
		T <sub>0</sub>	T <sub>1</sub>	T <sub>0</sub>	T <sub>1</sub>	T <sub>0</sub>	T <sub>1</sub>	
GP-5 cont.	01/17/01	--	--	--	--	--	--	--
	02/23/01	--	--	--	--	--	--	--
GP-6	10/27/00	45.8	--	--	--	--	--	--
	10/30/00	26.0	--	7.1	--	6.1	--	--
	11/04/00	15.5	--	16.5	--	3.2	--	--
	11/06/00	12.5	--	9.9	--	8.0	--	--
	11/08/00	41.4	--	0.4	--	34.0	--	--
	12/22/00	22.4	--	13.1	--	3.7	--	--
	1/5/2001*	0.3	--	20.3	--	7.0	--	--
	01/17/01	11.9	31.7	4.2	0	8.5	26.1	0
	02/23/01	5.8	53.0	6.0	0.1	5.1	32.9	0
	GP-7	10/27/00	58.3	--	--	--	--	--
10/30/00		59.4	--	0.0	--	29.5	--	--
11/02/00		67.0	--	1.3	--	27.8	--	--
11/04/00		52.5	--	1.3	--	25.3	--	--
11/06/00		53.6	--	0.4	--	24.3	--	--
11/08/00		57.6	--	0.3	--	27.1	--	--
12/22/00		--	--	--	--	--	--	--
1/5/2001*		0.0	--	20.4	--	0.0	--	--
01/17/01		--	--	--	--	--	--	--
02/23/01		--	--	--	--	--	--	--
GP-8	10/27/00	8.8	--	--	--	--	--	--
	10/30/00	9.2	--	0.3	--	13.2	--	--
	11/02/00	7.2	--	0.5	--	131.0	--	--
	11/04/00	7.0	--	6.7	--	11.1	--	--
	11/06/00	3.8	--	4.5	--	11.5	--	--
	11/08/00	10.6	--	1.1	--	16.2	--	--
	12/22/00	--	--	--	--	--	--	--
	01/05/01	0.0	--	20.0	--	0.0	--	--
	01/17/01	--	--	--	--	--	--	--
	02/23/01	0.2	0.0	17.3	14.4	0.6	1.9	0
GP-9	10/27/00	41.2	--	--	--	--	--	--
	10/30/00	20.0	--	4.1	--	16.6	--	--
	11/02/00	56.0	--	1.3	--	26.0	--	--
	11/04/00	21.4	--	4.2	--	17.6	--	--
	11/06/00	24.4	--	1.7	--	23.7	--	--
	11/08/00	40.4	--	0.7	--	24.6	--	--
	12/22/00	27.4	--	16.2	--	5.3	--	--
	1/5/2001*	5.0	--	7.4	--	4.8	--	--
	01/17/01	6.6	1.4	0.2	3.9	6.2	5.6	0
	02/23/01	--	--	--	--	--	--	--
GP-10	10/27/00	55.8	--	--	--	--	--	--
	10/30/00	7.0	--	16.9	--	2.8	--	--
	11/02/00	20.9	--	6.8	--	10.3	--	--
	11/04/00	13.6	--	16.8	--	4.3	--	--
	11/06/00	3.1	--	17.4	--	2.7	--	--

**TABLE 1**  
**Summary of Soil Gas Testing Results**  
**Proposed Sexton Crest Development**  
**Beaverton, Oregon**

Location	Date	% CH <sub>4</sub>		% O <sub>2</sub>		% CO <sub>2</sub>		Pressure (inches w.c.)
		T <sub>0</sub>	T <sub>1</sub>	T <sub>0</sub>	T <sub>1</sub>	T <sub>0</sub>	T <sub>1</sub>	
GP-1	10/27/00	0.0	--	--	--	--	--	--
	10/30/00	0.0	--	9.1	--	6.2	--	--
	11/04/00	0.0	--	18.5	--	1.9	--	--
	11/06/00	0.0	--	17.7	--	2.1	--	--
	11/08/00	0.0	--	6.0	--	7.6	--	--
	12/22/00	0.0	--	9.9	--	4.1	--	--
	01/05/01	0.0	--	20.8	--	0.0	--	--
	01/17/01	--	--	--	--	--	--	--
GP-2	02/23/01	0.0	0.0	9.3	17.5	1.6	0.9	0.0
	10/27/00	0.0	--	--	--	--	--	--
	10/30/00	0.0	--	14.1	--	5.0	--	--
	11/04/00	0.0	--	17.3	--	2.4	--	--
	11/06/00	0.0	--	15.2	--	5.7	--	--
	11/08/00	0.0	--	14.6	--	6.9	--	--
	12/22/00	0.0	--	12.4	--	1.1	--	--
	1/5/2001*	0.0	--	19.8	--	0.1	--	--
GP-3	01/17/01	--	--	--	--	--	--	--
	02/23/01	--	--	--	--	--	--	--
	10/27/00	1.1	--	--	--	--	--	--
	10/30/00	--	--	--	--	--	--	--
	11/04/00	4.8	--	18.5	--	0.5	--	--
	11/06/00	3.5	--	7.6	--	4.8	--	--
	11/8/00*	3.8	--	7.9	--	5.2	--	--
	12/22/00	--	--	--	--	--	--	--
GP-4	1/5/2001*	0.0	--	20.0	--	0.0	--	--
	01/17/01	--	--	--	--	--	--	--
	02/23/01	--	--	--	--	--	--	--
	10/27/00	28.0	--	--	--	--	--	--
	10/30/00	7.6	--	15.8	--	4.6	--	--
	11/02/00	31.2	--	3.5	--	13.6	--	--
	11/04/00	22.4	--	8.2	--	12.6	--	--
	11/06/00	26.3	--	12.1	--	4.3	--	--
GP-5	11/08/00	34.9	--	2.7	--	13.7	--	--
	12/22/00	--	--	--	--	--	--	--
	1/5/2001*	1.2	--	20.3	--	0.3	--	--
	01/17/01	57.0	58.3	0.1	1.4	11.5	11.6	0
	02/23/01	52.0	67.3	20.0	0.2	0.4	13.1	0
	10/27/00	0.5	--	--	--	--	--	--
	10/30/00	7.4	--	12.5	--	11.2	--	--
	11/02/00	2.0	--	19.6	--	1.3	--	--
GP-5	11/04/00	20.4	--	0.4	--	20.8	--	--
	11/06/00	28.2	--	0.0	--	23.1	--	--
	11/8/2000*	33.8	--	0.0	--	25.8	--	--
	12/22/00	--	--	--	--	--	--	--
	1/5/2001*	0.0	--	20.4	--	0.0	--	--

**TABLE 1**  
**Summary of Soil Gas Testing Results**  
**Proposed Sexton Crest Development**  
**Beaverton, Oregon**

Location	Date	% CH <sub>4</sub>		% O <sub>2</sub>		% CO <sub>2</sub>		Pressure (inches w.c.)
		T <sub>0</sub>	T <sub>1</sub>	T <sub>0</sub>	T <sub>1</sub>	T <sub>0</sub>	T <sub>1</sub>	
GP-19	12/22/00	0.0	--	19.8	--	0.0	--	--
	01/05/01	0.0	--	19.1	--	0.8	--	--
	01/17/01	0.0	0.0	16.2	16.1	2.2	2.3	0
	02/23/01	0.0	0.0	20.2	14.1	0.1	2.6	0
GP-20	12/22/00	0.0	--	18.0	--	0.1	--	--
	01/05/01	0.0	--	19.2	--	0.0	--	--
	01/17/01	0.0	0.0	18.3	0.0	0.0	0.0	0
	02/23/01	0.0	0.0	19.3	19.1	0.0	0.0	0
GP-21	12/22/00	0.0	--	18.0	--	0.4	--	--
	01/05/01	0.0	--	12.4	--	1136.0	--	--
	01/17/01	0.0	0.0	14.7	8.6	2.3	15.2	0
	02/23/01	0.0	0.0	17.3	13.0	0.5	12.3	0
GP-22	12/22/00	--	--	--	--	--	--	--
	01/05/01	0.0	--	18.6	--	0.2	--	--
	01/17/01	0.0	0.0	15.2	2.1	1.1	9.2	0
	02/23/01	3.2	7.4	4.3	0.0	6.2	16.6	0
GP-23	12/22/00	--	--	--	--	--	--	--
	01/05/01	2.8	--	18.4	--	2.8	--	--
	01/17/01	0.0	2.2	14.1	0.0	4.4	23.7	0
	02/23/01	0.4	10.6	19.1	0.3	0.6	22.7	0

Notes:  
 CH<sub>4</sub> = Methane  
 O<sub>2</sub> = Oxygen  
 CO<sub>2</sub> = Carbon Dioxide  
 T<sub>0</sub> = Initial reading  
 T<sub>1</sub> = Secondary reading  
 %LEL = Percent of lower explosive limit  
 inches/w.c. = Inches in water column  
 -- = no data/not applicable  
 \* = Water present in soil vapor probes therefore the tubing was lifted above the water to collect soil gas reading.  
 A Landtec GA-90 instrument was used for sampling through 1/5/01 and a Landtec GEM 500 was used on 1/17/01.

**TABLE I**  
**Summary of Soil Gas Testing Results**  
**Proposed Sexton Crest Development**  
**Beaverton, Oregon**

Location	Date	% CH <sub>4</sub>		% O <sub>2</sub>		% CO <sub>2</sub>		Pressure (inches w.c.)
		T <sub>0</sub>	T <sub>1</sub>	T <sub>0</sub>	T <sub>1</sub>	T <sub>0</sub>	T <sub>1</sub>	
GP-10 cont.	11/08/00	41.5	--	0.0	--	22.9	--	--
	12/22/00	8.7	--	17.9	--	3.3	--	--
	01/05/01	2.4	--	15.4	--	3.4	--	--
	01/17/01	--	--	--	--	--	--	--
GP-12	02/23/01	0.3	34.6	18.2	0.1	0.4	17.3	0
	10/27/00	8.9	--	--	--	--	--	--
	10/30/00	0.0	--	18.3	--	3.0	--	--
	11/02/00	0.0	--	19.5	--	1.1	--	--
	11/04/00	0.0	--	20.3	--	0.6	--	--
	11/06/00	0.0	--	20.2	--	1.0	--	--
	11/08/00	0.0	--	19.5	--	1.6	--	--
	12/22/00	--	--	--	--	--	--	--
	01/05/01	0.0	--	20.4	--	0.0	--	--
	01/17/01	--	--	--	--	--	--	--
	02/23/01	--	--	--	--	--	--	--
GP-13	11/07/00	0.0	--	20.8	--	0.1	--	--
	11/08/00	0.0	--	20.6	--	0.2	--	--
	12/22/00	0.0	--	18.7	--	0.7	--	--
	01/05/01	0.0	--	19.7	--	0.3	--	--
	01/17/01	0.0	0.0	20.3	18.5	0.1	1.9	0
GP-14	02/23/01	0.0	0.0	20.3	16.7	0.3	2.3	0
	11/07/00	0.0	--	20.9	--	0.2	--	--
	11/08/00	0.0	--	20.6	--	0.3	--	--
	12/22/00	0.0	--	18.7	--	0.7	--	--
	01/05/01	0.0	--	20.3	--	0.1	--	--
	01/17/01	0.0	0.0	20.4	20.4	0.1	0.1	0
GP-15	02/23/01	0.0	0.0	20.3	17.9	0.5	1.8	0
	11/07/00	0.0	--	20.8	--	0.2	--	--
	11/08/00	0.0	--	20.8	--	0.1	--	--
	12/22/00	0.0	--	18.0	--	0.8	--	--
	01/05/01	0.0	--	19.7	--	0.2	--	--
	01/17/01	0.0	0.0	20.2	19.6	0.2	1.3	--
GP-16	02/23/01	0.0	0.0	19.2	11.5	0.4	4.5	0
	12/22/00	--	--	--	--	--	--	--
	01/05/01	--	--	--	--	--	--	--
	01/17/01	--	--	--	--	--	--	--
GP-17	02/23/01	--	--	--	--	--	--	--
	12/22/00	0.0	--	17.9	--	0.9	--	--
	01/05/01	0.0	--	18.9	--	2.2	--	--
	01/17/01	0.0	0.0	19.6	16.3	0.3	4.7	0
GP-18	02/23/01	0.0	0.0	17.6	14.1	0.4	6.3	0
	12/22/00	0.0	--	18.7	--	1.3	--	--
	01/05/01	0.0	--	19.2	--	2.9	--	--
	01/17/01	0.0	0.0	18.0	16.3	2.0	7.3	0
02/23/01	0.0	0.0	17.2	15.8	0.6	6.2	0	

TABLE 3 Summary Of Methane Monitoring Data Former Cobb Quarry Sexton Place Development Site Beaverton, Oregon					
Sample ID	Date	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Static Pressure (inches water column)
MW-SP1	06/13/01	9.6	15.8	0.8	0.0
	06/19/01	6.4	16.2	0.8	0.0
	08/03/01	1.0	9.1	10.2	0.0
MW-SP-2	06/13/01	2.2	12.8	6.1	0.0
	06/19/01	0.5	8.4	9.9	0.0
	08/03/01	0.0	10.2	10.7	0.1
MW-SP3	06/13/01	0.0	12.1	3.7	0.0
	06/19/01	0.0	12.4	3.5	0.0
	08/03/01	0.0	8.2	11.7	0.0

Notes:  
% - Percent by volume

<p style="text-align: center;"><b>TABLE 2</b>  <b>Summary Of Methane Monitoring Data</b>  <b>Former Cobb Quarry</b>  <b>Haggen Site</b>  <b>Beaverton, Oregon</b></p>						
Sample ID	Screened Interval (fbg)	Date	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Static Pressure (inches water column)
MW-H1	30 - 70	07/26/01	65.2	28.2	0.2	0.0
		07/31/01	65.5	27.5	0.0	0.0
MW-H1s	5 - 15	07/26/01	17.6	13.3	0.7	0.0
		07/31/01	22.4	13.9	2.9	0.0
MW-H1i	20 - 38	07/26/01	0.1	0.2	19.6	0.0
		07/31/01	0.0	0.4	19.0	0.0
MW-H2	40 - 80	07/26/01	0.0	4.6	17.7	0.0
		07/31/01	0.0	4.2	18.6	0.0
MW-H2s	5 - 40	07/26/01	0.0	0.6	18.3	0.0
		07/31/01	0.0	0.8	17.7	0.0
MW-H3	25 - 40	07/26/01	0.2	0.5	14.7	0.0
		07/31/01	0.2	1.0	14.1	0.0
MW-H3s	5 - 30	07/26/01	0.0	5.7	15.6	0.0
		07/31/01	0.0	1.6	18.1	0.0
<p>Notes:                      fbg - feet below grade                      % - Percent by volume</p>						

**TABLE I**  
**Summary of Soil Gas Monitoring Results**  
**Proposed Sexton Crest Development**  
**Beaverton, Oregon**

Location	Date	% CH <sub>4</sub>		% O <sub>2</sub>		% CO <sub>2</sub>		Pressure (inches)
		T <sub>0</sub>	T <sub>1</sub>	T <sub>0</sub>	T <sub>1</sub>	T <sub>0</sub>	T <sub>1</sub>	
GP-23 cont.	05/31/01	0.0	26.2	19.8	2.3	0.0	24.2	0.0
	08/07/01		36.5		1.7		28.7	0.0
MW-SC1s (5-35)	08/07/01	--	11.3	--	15.9	--	2.7	0.0
MW-SC1i (40-60)	08/07/01	--	0.0	--	19.4	--	0.0	0.0
MW-SC1 (55-85)	08/07/01	--	62.5	--	1.7	--	11.0	0.3
MW-SC2s (5-25)	08/07/01	--	0.0	--	13.0	--	4.4	0.0
MW-SC2i (30-60)	08/07/01	--	0.0	--	19.0	--	0.1	0.0
MW-SC2 (65-90)	08/07/01	--	0.0	--	19.4	--	0.0	0.0
MW-SC3s (5-20)	08/07/01	--	0.0	--	13.8	--	5.4	0.0
MW-SC3i (25-40)	08/07/01	--	0.0	--	16.2	--	2.8	0.0
MW-SC3 (40-60)	08/07/01	--	--	--	--	--	--	--
MW-SC4s (5-25)	08/07/01	--	0.0	--	19.7	--	0.0	0.0
MW-SC4i (30-50)	08/07/01	--	0.0	--	19.5	--	0.0	0.0

Notes:

CH<sub>4</sub>: Methane

O<sub>2</sub>: Oxygen

CO<sub>2</sub>: Carbon Dioxide

T<sub>0</sub>: Initial reading

T<sub>1</sub>: Secondary reading

-- : no data/not applicable

\*\* : Screen interval saturated. No gas measurements could be recorded.

GP-6 was removed during soil excavation activities in March 2001.

A Landtec GA-90 Instrument was used for sampling through January 5, 2001. A Landtec GEM 500 has been used for all subsequent monitoring events beginning January 17, 2001.

6/1/02

**TABLE 1**  
**Exploration Summary**  
**Former Cobb Quarry**  
**Proposed Sexton Place Development Site**  
**Beaverton, Oregon**

Boring/ Monitoring Well	Boring Depth (Feet)	Soil Sample Depth (Feet)	Groundwater Sample Depth (Feet)	Monitoring Well Screen Interval (Feet)
GP-SP1	13.0	10.0 - 13.0	--	--
GP-SP2	26.5	9.0 - 12.0	--	--
GP-SP3	3.0	0.0 - 3.0	--	--
GP-SP4	28.0	2.0 - 5.0	--	--
GP-SP5	16.0	6.0 - 8.0	--	--
GP-SP6	32.0	10.0 - 13.0	--	--
GP-SP7	24.0	FS	20.0 - 24.0	--
GP-SP8	27.0	FS	IS	--
MW-SP1	18.5	4.0 - 7.0	3.5 - 18.5	3.5 - 18.5
MW-SP2a	40.0	8.0 - 11.0	--	--
MW-SP2a	30.0	--	5.0 - 30.0	5.0 - 30.0
MW-SP3	27.2	3.0 - 6.0	4.5 - 27.0	4.5 - 27.0

Notes:  
 IS - insufficient groundwater available for sampling  
 FS - field screened only  
 -- - not applicable



Cre-science, inc

Table 3

Polymor-53-T5031001

TABLE 3  
Summary Of Soil Chemical Analytical Data  
Former Cobb Quarry  
Proposed Sexton Place Development Site  
Beaverton, Oregon

Sample ID	Depth (feet)	Date	EPA Method 8270S14 (µg/kg)													
			Benzo(a)-anthracene	Benzo(a)-pyrene	Benzo(b)-fluoranthene	Benzo(g,h,i)-perylene	Benzo(k)-fluoranthene	Chrysene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Phenanthrene	Pyrene	Others			
CP-SP-1	10.0 - 13.0	06/01/01	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0
GP-SP-2	9.0 - 12.0	06/01/01	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0
GP-SP-3	0.0 - 3.0	06/01/01	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0
GP-SP-4	2.0 - 5.0	06/01/01	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0
GP-SP-5	6.0 - 8.0	06/01/01	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0
GP-SP-6	10.0 - 13.0	06/01/01	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0
MW-SP1	4.0 - 7.0	06/06/01	21.3 <sup>1</sup>	38.8 <sup>1</sup>	37.0 <sup>1</sup>	32.2 <sup>1</sup>	12.5 <sup>1</sup>	22.2 <sup>1</sup>	53.3 <sup>1</sup>	19.7 <sup>1</sup>	22.6 <sup>1</sup>	72.3 <sup>1</sup>	ND<10.0	ND<10.0	ND<10.0	ND<10.0
MW-SP2	8.0 - 11.0	06/06/01	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0
MW-SP3	3.0 - 6.0	06/06/01	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0	ND<10.0
EPA Region 9 Residential PRG			620	52	620	620	6200	62,000	2,300,000	620	620	2,300,000	2,300,000	Varies		

Notes:

µg/19 - chromatograms per kilogram

ND - Not detected above laboratory method reporting limits

EPV - U.S. Environmental Protection Agency

PRG - Preliminary Remediation Goal

1 - Not analyzed/collapsible

1 Based on a follow-up total fingerprint analysis, the PAHs detected in this soil sample are due to the presence of a low concentration of small grains of asphalt. The chromatogram for the EPA method 8013M analysis is included with the laboratory report in Appendix B.

TABLE 5  
 Summary Of Groundwater Chemical Analytical Data  
 Former Cobb Quarry  
 Proposed Sexton Place Development Site  
 Beaverton, Oregon

Sample ID	Depth (Feet)	Date	Petroleum Hydrocarbon Identification Method NWTPH-HCLD (mg/l)			VOCs EPA Method 8260B (ug/l)	PAHs EPA Method 8270SIM (ug/l)	SVOCs EPA Method 8270C (ug/l)	PCBs EPA Method 8081A/8082 (ug/l)	Organochlorine Pesticides EPA Method 8081A/8082 (ug/l)
			Gasoline	Diesel	Heavy Oil					
GF-SP7-W	20.0 - 24.0	06/07/01	ND	ND	ND	Toluene 1.17	ND<0.0500	NO	ND	NO
MW-SP1	3.5 - 18.5	06/08/01	ND<0.250	ND<0.630	ND<0.630	gas ND asphalt	ND<0.0500	--	--	--
MW-SP2	5.0 - 30.0	06/08/01	ND<0.250	ND<0.630	ND<0.630	ND	ND<0.0500	--	--	--
MW-SP3	7.5 - 27.0	06/08/01	ND	ND	ND	ND	ND<0.0500	ND	ND	ND
MW-SP3	7.5 - 27.0	07/19/01	ND	ND	ND	ND	--	--	ND	ND
EPA Region 9 Residential PRG			--	--	--	Toluene 728	Varies	Varies	Varies	Varies

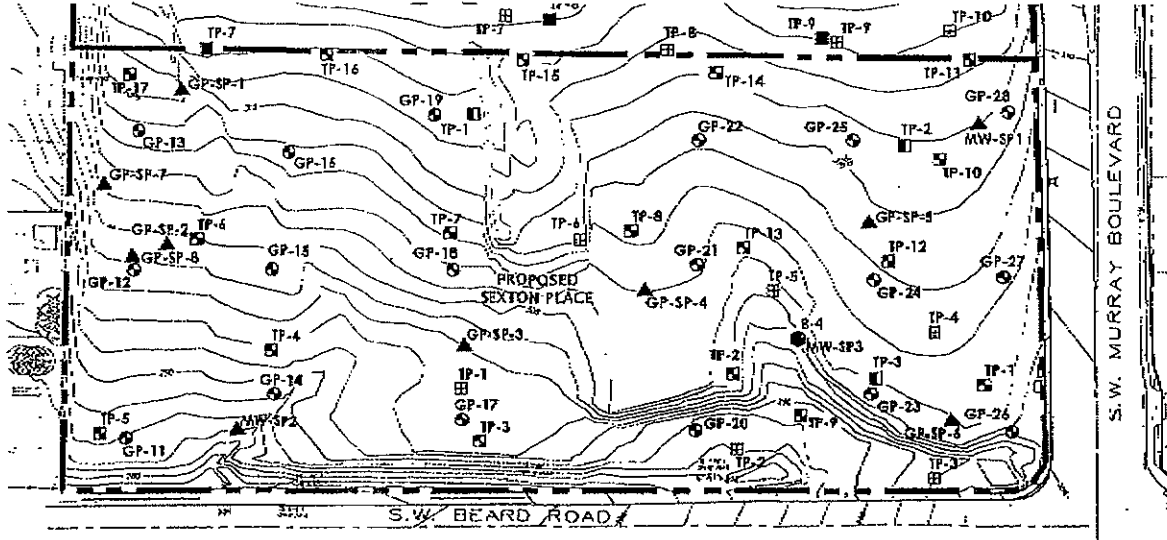
Notes  
 VOCs - volatile organic compounds  
 PAHs - polynuclear aromatic hydrocarbons  
 SVOCs - semi-volatile organic compounds  
 PCBs - polychlorinated biphenyls  
 mg/l - milligrams per liter  
 ug/l - micrograms per liter  
 EPA - U.S. Environmental Protection Agency  
 PRG - Preliminary Remediation Goal  
 -- - Not analyzed/not applicable

*Drinking water standard*

TABLE 7  
Summary Of Groundwater Chemical Analytical Data  
Former Cobb Quarry  
Proposed Sexton Plate Development Site  
Beaverton, Oregon

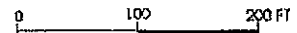
Sample ID	Depth (Feet)	Date	pH EPA Method 150.1	EPA Hardness Method 130.2 (mg/l CaCO <sub>3</sub> )	Total Alkalinity EPA Method 310.1 (mg/l CaCO <sub>3</sub> )	Specific Conductance EPA Method 120.1 (µmhos@20C)	TDS EPA Method 160.1 (mg/l)	COD EPA Method 410.4 (mg/l)	Ammonia (AS n) EPA Method 8350.1 (mg/l)	Chloride EPA Method SW9056 (mg/l)	Sulfate EPA Method SW9056 (mg/l)	Fecal Coliform EPA Method 9221E (MPN/100 ml)	Total Kjeldahl Nitrogen (mg/l)	Nitrate Nitrogen (mg/l)
GP-SP7-W	20.0 - 24.0	06/07/01	6.09	490	496	821	530	25.0	1.40	4.69	0.65	--	--	--
MW-SP3	7.5 - 27.0	06/08/01	6.42	339	390	667	424	21.7	0.151	6.06	3.33	--	--	--
MW-SP3	7.5 - 27.0	07/19/01	6.43	340	383	632	414	ND	ND	6.72	4.36	ND	0.485	ND<0.03
EPA Secondary Drinking Water Standard (Enforceable)			6.5 to 8.5	--	--	--	500	--	--	250	250	0.01 <sup>1</sup>	--	10.0

Notes  
 mg-l - milligrams per liter  
 EPA - US Environmental Protection Agency  
 TDS - total dissolved solids  
 COD - chemical oxygen demand  
 1 - criteria standard for coliforms  
 MPN - most probable number  
 ml - milliliters  
 -- Not analyzed/applicable



EXPLANATION:

- ▲ GP-SP-1 GEOPROBE COMPLETED BY GEODESIGN, INC. (JUNE 2001)
- ▲ MW-SP1 MONITORING WELL COMPLETED BY GEODESIGN, INC. (JUNE 2001)
- ⊙ GP-11 GEOPROBE COMPLETED BY GEODESIGN, INC. (MAY 2000)
- ⊙ TP-1 TEST PIT COMPLETED BY GEODESIGN, INC. (APRIL 2000)
- ⊙ TP-1 TEST PIT COMPLETED BY AGRA EARTH & ENVIRONMENTAL, INC. (OCT. 1997)
- ⊙ TP-7 TEST PIT COMPLETED BY AGRA EARTH & ENVIRONMENTAL, INC. (OCT. 1995)
- ⊙ B-4 BORING COMPLETED BY BRAUN INTERTEC NORTHWEST (JUNE 1992)
- ⊙ TP-1 TEST PIT COMPLETED BY RITTENHOUSE-ZEMAN & ASSOCIATES (APRIL 1989 NOT CONFIRMED)



EXPLORATIONS ARE APPROXIMATELY LOCATED

SITE PLAN FROM DRAWING PROVIDED BY ALPHA ENGINEERING, INC.



SEXTON PLACE SITE PLAN

AUGUST 2001

FIGURE 2

POLYCON-93

TABLE 2  
 Summary Of Soil Chemical Analytical Data  
 Former Cobb Quarry  
 Proposed Sexton Place Development Site  
 Beaverton, Oregon

*Common lab quality for (with) lower than standard Field PRG -*

Sample ID	Depth (Feet)	Date	Petroleum Hydrocarbon Identification Method NWTPH-HCID (mg/kg)			VOCs EPA Method 8260B (µg/kg)		SVOCs EPA Method 8270C (µg/kg)	PCBs EPA Method 8081A/8082 (µg/kg)	Organochlorine Pesticides EPA Method 8081A/8082 (µg/kg)
			Gasoline	Diesel	Heavy Oil	Acetone	Others			
GP-SP-1	10.0 - 13.0	06/01/01	ND<25.0	ND<62.5	ND<125	ND<100	ND	--	--	--
GP-SP-2	9.0 - 12.0	06/01/01	ND<24.4	ND<61.0	ND<122	168	ND	ND	ND	ND
GP-SP-3	0.0 - 3.0	06/01/01	ND<24.1	ND<60.2	ND<120	ND<100	ND	--	--	--
GP-SP-4	2.0 - 5.0	06/01/01	ND<26.3	ND<65.8	ND<132	ND<100	ND	--	--	--
GP-SP-5	6.0 - 8.0	06/01/01	ND<26.0	ND<64.9	ND<130	ND<100	ND	ND	ND	ND
GP-SP-6	10.0 - 13.0	06/01/01	ND<26.0	ND<64.9	ND<130	ND<100	ND	--	--	--
MW-SP1	4.0 - 7.0	06/06/01	ND	ND	ND	ND	ND	--	--	--
MW-SP2	8.0 - 11.0	06/06/01	ND	ND	ND	ND	ND	--	--	--
MW-SP3	3.0 - 6.0	06/06/01	ND	ND	ND	ND	ND	--	--	--
EPA Region 9 Residential PRG			--	--	--	1,600,000	Varies	Varies	Varies	Varies

Notes:  
 VOCs - volatile organic compounds  
 PAHs - polynuclear aromatic hydrocarbons  
 SVOCs - semivolatile organic compounds  
 PCBs - polychlorinated biphenyls  
 mg/kg - milligrams per kilogram  
 µg/kg - micrograms per kilogram  
 EPA - U.S. Environmental Protection Agency  
 PRG - Preliminary Remediation Goal  
 -- - Not analyzed/applicable

*Related to Asphalt -*

**TABLE 4**  
**Summary Of Soil Chemical Analytical Data**  
**Former Cobb Quarry**  
**Proposed Sexton Place Development Site**  
**Beaverton, Oregon**

Sample ID	Depth (Feet)	Date	EPA Method 6010E (mg/kg)							EPA Method SW7471 (mg/kg)
			Arsenic	Barium	Cadmium	Chromium	Lead	Selenium	Silver	Mercury
GP-SP-1	10.0 - 13.0	06/01/01	ND<9.62	698	2.07	5.10	1.40	ND<9.62	ND<9.62	ND<0.0200
GP-SP-2	9.0 - 12.0	06/01/01	ND<1.75	386	0.632	12.4	7.89	ND<1.75	ND<1.75	0.0793
GP-SP-3	0.0 - 3.0	06/01/01	ND<1.89	168	0.624	16.2	7.36	ND<1.89	ND<1.89	ND<0.0200
GP-SP-4	2.0 - 5.0	06/01/01	ND<9.26	155	1.90	5.19	ND<9.26	ND<9.26	ND<9.26	0.0214
GP-SP-5	6.0 - 8.0	06/01/01	2.90	145	0.431	19.6	10.6	ND<1.96	ND<1.96	0.0297
GP-SP-6	10.0 - 13.0	06/01/01	2.62	160	0.49	18.0	8.89	ND<2.0	ND<2.0	0.0345
MW-SP1	4.0 - 7.0	06/06/01	3.16	104	0.657	19.2	38.9	ND<1.96	ND<1.96	ND<0.0200
MW-SP2	8.0 - 11.0	06/06/01	2.49	108	0.509	15.1	7.30	ND<1.79	ND<1.79	ND<0.0200
MW-SP3	3.0 - 6.0	06/06/01	ND<9.62	581	1.01	9.62	ND<9.62	ND<9.62	ND<9.62	ND<0.0200

EPA Region 9 Residential PRG      0.39 or 22      5,400      37      210      100      390      390      23

Notes:  
 mg/kg - milligrams per kilogram  
 ND - Not detected above laboratory method reporting limits  
 EPA - U.S. Environmental Protection Agency  
 PRG - Preliminary Remediation Goal  
 - - - Not analyzed/applicable

*Rev. OK*  
*Not sure what LF is*

*Standard*

TABLE 6  
Summary Of Groundwater Chemical Analytical Data  
Former Cobb Quarry  
Proposed Section Three Development Site  
Benton, Oregon

Sample ID	Depth (ft)	Date	EPA Method 8080A (mg/l)													Method SW7700 (mg/l)	Method SW7001 (mg/l)											
			Arsenic	Barium	Beryllium	Chromium	Cobalt	Copper	Iron	Manganese	Nickel	Silver	Vanadium	Zinc	Lead			Mercury	Selenium									
CPSPW	2.0 - 24.0	06/27/01	ND-0.0200	0.236	ND-0.0100	ND-0.00500	0.0133	ND-0.0100	27.9	14.4	ND-0.00500	ND-0.0100	ND-0.0100	ND-0.0100	ND-0.00500	ND-0.00500	ND-0.00500	ND-0.00500	ND-0.00500	ND-0.00500	ND-0.00500	ND-0.00500	ND-0.00500	ND-0.00500	ND-0.00500	ND-0.00500	ND-0.00500	
MW-03	7.5 - 27.2	06/28/01	ND-0.0200	0.706	ND-0.0100	ND-0.00500	0.0140	ND-0.0100	2.80	8.12	ND-0.00500	ND-0.0100	ND-0.0100	ND-0.0100	ND-0.00500	ND-0.00500	ND-0.00500	ND-0.00500	ND-0.00500	ND-0.00500	ND-0.00500	ND-0.00500	ND-0.00500	ND-0.00500	ND-0.00500	ND-0.00500	ND-0.00500	ND-0.00500
MW-04	7.5 - 27	07/9/01	ND-0.0200	0.290	ND-0.0100	ND-0.00500	0.0115	ND-0.0100	1.35	6.06	ND-0.00500	ND-0.0100	ND-0.0100	ND-0.0100	ND-0.00500	ND-0.00500	ND-0.00500	ND-0.00500	ND-0.00500	ND-0.00500	ND-0.00500	ND-0.00500	ND-0.00500	ND-0.00500	ND-0.00500	ND-0.00500	ND-0.00500	ND-0.00500
EPA Method 8080A			0.00500	3.0	0.020	0.010	2.2	1.4	11	5.88	0.71	0.15	0.36	11	0.00500	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010

*Below Tap water standards  
Iron / manganese = From Fill? or natural  
Quarry 100 ft deep.*

Notes:  
1. ND = not detected  
2. L.C. = laboratory detection limit  
3. M.L. = method detection limit  
4. M.C. = method detection limit  
5. M.L. = method detection limit  
6. M.C. = method detection limit

AS 10/15/01 10:08 AM

TABLE 6

**TABLE I  
Summary Of Methane Monitoring Data  
Former Cobb Quarry  
Sexton Place Development Site  
Beaverton, Oregon**

Sample ID	Date	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Static Pressure (inches water column)
MW-SP1	06/13/01	9.6	15.8	0.8	0.0
	06/19/01	6.4	16.2	0.8	0.0
	08/03/01	1.0	9.1	10.2	0.0
MW-SP-2	06/13/01	2.2	12.8	6.1	0.0
	06/19/01	0.5	8.4	9.9	0.0
	08/03/01	0.0	10.2	10.7	0.1
MW-SP3	06/13/01	0.0	12.1	3.7	0.0
	06/19/01	0.0	12.4	3.5	0.0
	08/03/01	0.0	8.2	11.7	0.0

Notes:  
% - Percent by volume



**Environmental Quality Commission**

- Rule Adoption Item
- Action Item
- Information Item

**Agenda Item D**  
**June 25, 1999, Meeting**

**Title:**

Temporary Rulemaking To Designate Methane Gas Generated From Solid Waste Landfills, In Certain Circumstances, As A Hazardous Substance, Pursuant To ORS 465.400.

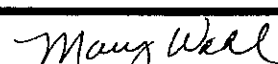
**Summary:**

This action is necessary to allow the Department to use the Solid Waste Orphan Site Account to address threats to public health and safety from methane generated at an abandoned landfill. Construction of a new methane collection system is necessary to mitigate risks associated with the site in its current condition. Immediate action is necessary; however, the property owner and former landfill operator is a dissolved corporation with no assets. Because unconfined methane produced by a landfill is not currently a "hazardous substance" for purposes of ORS Chapter 465, the Department cannot use Orphan Site Account funds to address these problems. ORS 465.400 authorizes the commission to designate additional substances as "hazardous substances" for purposes of ORS Chapter 465. Approval of this rule will allow the Department to use Solid Waste Orphan Site Account funds to construct a new methane clection system and protect public health and safety.

**Department Recommendation:**

The Department recommends that the Commission temporarily adopt OAR 340-122-115(3) as presented in Attachment A of the Department Staff Report.

  
Report Author

  
Mary Weal  
Division Administrator

Director 

**Date:** June 8, 1999  
**To:** Environmental Quality Commission  
**From:** Langdon Marsh, Director  
**Subject:** Agenda Item D, EQC Meeting June 25, 1999

**Statement of Purpose**

The Department recommends adoption of the attached temporary rule to provide the Waste Management and Cleanup Division with a source of funding to address a serious public health threat. As discussed more fully in the background section, the site most directly impacted by this rule is a closed and abandoned landfill located in Portland, known as Killingsworth Fast Disposal (KFD).

At KFD, uncontrolled movement of methane gas presents a substantial and ongoing danger to the health, safety and welfare of on-site workers and neighboring homes, businesses, residents and others in the area. The quantity and concentration of methane at the facility poses a present and future danger to human health. Construction of a new methane collection system is required to mitigate risks associated with the site in its current condition.

Immediate action is necessary at the landfill; however, the property owner and former landfill operator is a dissolved corporation with no assets other than the contaminated property. Presently, the Department is using bankruptcy settlement funds to monitor the situation and to design a new methane collection system. However, the bankruptcy settlement funds will not be adequate for construction of the methane collection system or continued monitoring. No other funds are currently available to address this problem.

The Department has concluded that the necessary improvements at the landfill should be funded from the Solid Waste Orphan Site Account established by ORS 459.236. However, the Solid Waste Orphan Site Account, like the Industrial Waste Orphan Site Account, is available only for actions related to ORS Chapter 465 "hazardous substances." Under ORS Chapter 465, the statutorily-defined hazardous substances include oil, hazardous substances under CERCLA and hazardous wastes as defined in ORS 466.005 (ORS Chapter 466 implements RCRA). Methane is not a hazardous substance under any of the preceding categories; therefore, unconfined methane produced by a solid waste landfill is not a "hazardous substance" for purposes of ORS Chapter 465,

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

and the Solid Waste Orphan Site Account may not be used to remedy a hazard created by methane gas from a landfill.

ORS 465.400 authorizes the commission to designate other substances as "hazardous substances" in addition to the statutorily-defined hazardous substances. Before designation of a "hazardous substance" under ORS 465.400, the commission must find that "the substance, because of its quantity, concentration, or physical, chemical or toxic characteristics, may pose a present or future hazard to human health, safety, welfare or the environment should a release occur." For the reasons discussed below, under the circumstances described in the proposed rule, methane gas released from landfills clearly meets the statutory criteria.

Substances designated "hazardous" by the commission are "hazardous substances" for purposes of ORS Chapter 465 and for purposes of the Solid Waste Orphan Site Account. The Department therefore recommends the designation of methane, under certain conditions, as a "hazardous substance" subject to ORS 465. Approval of this rule will allow the Department to use Solid Waste Orphan Site Account funds to carry out the necessary cleanup actions.

### Background

The Department has proposed adoption of this temporary rule in order to address the human health hazards created by the former (KFD) landfill. KFD is a 24-acre landfill facility in NE Portland. The landfill operated under a Metro franchise and DEQ permit from approximately 1981 to 1990.

The landfill was lined along the bottom and sides, and is equipped with a leachate collection system. The final landfill cover, consisting of a geomembrane, compacted soil, and grass, was completed in 1991. A gas control system, consisting of 35 methane gas extraction wells, was installed in 1991 as part of final closure.

Methane, carbon dioxide, and other landfill gases continue to be generated in substantial quantities at KFD through the decomposition of organic wastes. Methane gas is potentially explosive at concentrations of 5 to 15% by volume in air; it also poses a substantial hazard to human health in both larger and smaller concentrations. Confined spaces like basements, crawl spaces, culverts, utility vaults, manholes and other structures are susceptible to methane buildup. High density residential and industrial developments are located within ten feet of the landfill along its south and southwest boundaries, and a high use golf course is located within one hundred fifty feet to the north. KFD is constructed in an old gravel pit and intersects highly porous sand and gravel deposits to depths of about 60 to 80 feet. The water table in the area is about 100 feet below ground surface, substantially below the base and side-walls of the landfill. These hydrogeologic

conditions promote methane mobility and create a high risk of offsite gas migration into neighboring residential and industrial areas:

The original methane collection system at KFD was poorly designed and is failing. It is now operational in only one corner of the landfill. KFD has been the source of several subterranean fires, most recently in November and December of 1998, which have further damaged the methane collection system and the landfill cap. The Department's consulting engineer has determined that the system has deteriorated to the point that it must be fully replaced. The Department proposes to install a landfill gas collection system during the next available construction season, i.e., the summer of 1999. Expedited construction is necessary to minimize risks to adjacent residents and properties.

Installation of improvements is necessary at KFD; however, the landfill owner and operator has abandoned the property and is unable to pay for the necessary improvements. Soon after closure of the landfill, the landfill owner and operator, Riedel Waste Systems, Inc. (RWS), became insolvent and was unable to meet its post-closure permit requirements, which included monitoring of on and off site methane emissions, maintenance of the limited methane collection system, and maintenance of the landfill cap. RWS was subsequently abandoned by its parent corporation and sole shareholder, Columbia Western Inc. (CWI), during CWI's bankruptcy proceedings.

There are no other responsible parties. Because of the environmental and public health concerns at the site, the Department has become involved. Since 1996, the department has been carrying out limited monitoring and maintenance activities at the landfill using funds obtained through a settlement agreement with CWI. Less than \$50,000 remains in this fund. The Department estimates a construction cost of \$1,300,000 for the new methane collection system and related improvements.

A temporary rule is recommended to enable construction of the methane collection system at KFD in the next available construction season. Recent subterranean fires have damaged the existing gas collection system, increasing the risk to neighboring residents and businesses. If the Department does not address the problem this construction season, the residents will face increased risks from migrating methane during the next year.

For the past six months, the Department has been pursuing external funding sources to address the methane problems at KFD. Those funds have not materialized, and the Department has concluded that the appropriate way to pay for necessary improvements at KFD is to use the Solid Waste Orphan Site account. Adoption of this temporary rule will provide the department with the authority and source of funds to carry out the necessary improvements at KFD.

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

The commission has the authority to develop and approve these temporary rules under ORS 465.200(15)(d), 465.400(3) and 183.335.

### **Alternatives and Evaluation**

Other feasible alternatives have not been identified. The hazardous waste program explored the possibility of designating methane a characteristic hazardous waste under RCRA so that rulemaking would not be required to enable use of the Solid Waste Orphan site Account. After discussion with the Department of Justice and consideration of all issues, it was decided not to pursue this approach. Given recent federal court opinions, it was not clear that methane produced by a solid waste landfill would meet the criteria for a characteristic hazardous waste. The property is owned by a dissolved corporation with no assets or officers. The environmental liabilities, costs for remediation, and restrictions on use of the property (to protect the geomembrane cover) have discouraged potential purchasers.

### **Summary of Public Input Opportunity**

The Department is sending notice of the proposed rulemaking and a summary of the proposed rule to a mailing list of persons known by the Department to be potentially affected by or interested in the proposed rulemaking action.

### **Intended Future Actions**

Upon adoption of the temporary rule, the Department intends to carry out necessary removal or remedial actions under ORS Chapter 465 at the Killingsworth Fast Disposal landfill in northeast Portland using funds from the Solid Waste Orphan Site Account. After adoption of this temporary rule, the Department will evaluate public comments and meet with appropriate advisory groups to determine whether to propose a permanent rule for this matter. The rule does not impact currently operating landfills because, by its terms, it applies only to abandoned facilities.

### **Department Recommendation**

It is recommended that the Commission temporarily adopt OAR 340-122-115(30) as presented in Attachment A of the Department Staff Report.

**Attachments**

- A. Temporary Rule Proposed for Adoption
- B. Statement of Need and Justification for Temporary Rule

**Reference Documents (available upon request)**

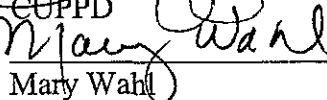
- 1. ORS Chapters 183, 459 and 465.
- 2. Killingsworth Landfill – 96 Percent Design Report, prepared by Ecology & Environment, dated March 1999.
- 3. Contract Documents, Landfill Gas Management System, 95 Percent Design, prepared by Ecology & Environment, dated March 1999.
- 4. Post-closure Care Interim Site Management Plan, prepared by Ecology & Environment, dated May 1998.
- 5. Gas Extraction System Engineering Evaluation, prepared by Emcon<sup>†</sup>, dated December 12, 1997.

Approved:

Section:

  
Paul Slyman  
CUPPD

Division:

  
Mary Wahl  
Waste Management & Cleanup

Report Prepared By: Charles Landman  
Phone: (503) 229-6461  
Date Prepared: June 8, 1999

**BEFORE THE ENVIRONMENTAL QUALITY COMMISSION  
OF THE STATE OF OREGON**

In the Matter of Temporary Rulemaking     )  
To Designate Methane Gas Generated     )     Proposed Temporary Rule  
From Solid Waste Landfills, In Certain     )  
Circumstances, As a Hazardous Substance,     )  
Pursuant to ORS 465.400     )

1. Proposed adoption of the following temporary rule amending Oregon Administrative Rule 340-122-115 as follows:

(30) "Hazardous substance" means:

- (a) Hazardous waste as defined in ORS 466.005;
- (b) Any substance defined as a hazardous substance pursuant to section 101(14) of the federal Comprehensive Environmental Response, Compensation and Liability Act, P.L. 96-510, as amended, and P.L. 99-499;
- (c) Oil as defined in ORS 465.200(19); and
- (d) Any substance designated by the commission under ORS 465.400. Under ORS 465.400, the commission has designated methane gas, from abandoned landfills as defined in ORS 459.005, provided: (1) methane is present, or is reasonably likely to be present at concentrations exceeding 5% by volume (the lower explosive limit for methane); and (2) a potential exists for methane to migrate into confined spaces or occupied structures and pose a hazard to human health and safety; and (3) the accumulations of methane are uncontrolled, poorly controlled, or require continued operation and maintenance of a landfill gas collection system.

Secretary of State  
**STATEMENT OF NEED AND JUSTIFICATION**

Department of Environmental Quality, Waste Management and Cleanup Division

In the Matter of Temporary Rulemaking	)	Statutory Authority,
To Designate Methane Gas Generated	)	Statutes Implemented,
From Solid Waste Landfills, In Certain	)	Statement of Need,
Circumstances, As a Hazardous Substance,	)	Principal Documents Relied Upon
Pursuant to ORS 465.400	)	

**Statutory Authority:** The Commission has authority to adopt hazardous substance rules under ORS 465.400 and the authority to adopt temporary rules under ORS 183.335.

**Statutes Implemented:** The Commission is implementing ORS 465.205 and 465.400(3) by adopting this temporary rule.

**Need for the Temporary Rule:** Failure to immediately adopt the temporary rule will result in serious prejudice to the public interest and specific individuals. Prejudice will result because the Department will not have the authority or funding to prevent the imminent and ongoing threats to human health posed by an abandoned solid waste disposal landfill. Adoption of this temporary rule will insure that the department will have the authority and resources to take immediate action to prevent risks to human health posed by the potential movement of methane gas out of the landfill and into confined spaces such as neighboring residences and businesses.

**Documents Relied Upon:**

1. Killingsworth Landfill – 95 Percent Design Report, prepared by Ecology & Environment, dated March 1999.
2. Contract Documents, Landfill Gas Management System, 95 Percent Design, prepared by Ecology & Environment, dated March 1999.
3. Post-closure Care Interim Site Management Plan, prepared by Ecology & Environment, dated May 1998.
4. Gas Extraction System Engineering Evaluation, prepared by Emcon, dated December 12, 1997.



Susan Greco



## ATTACHMENT D - PROPOSED TEMPORARY AND PERMANENT RULE

1. Proposed adoption of the following temporary rule amending Oregon Administrative Rule 340-122-115 as follows:

- (30) "Hazardous substance" means:
  - (a) Hazardous waste as defined in ORS 466.005;
  - (b) Any substance defined as a hazardous substance pursuant to section 101(14) of the federal Comprehensive Environmental Response, Compensation and Liability Act, P.L. 96-510, as amended, and P.L. 99-499;
  - (c) Oil as defined in ORS 465.200(18); and
  - (d) Any substance designated by the commission under ORS 465.400. **Under ORS 465.400, the commission has designated methane gas, from abandoned landfills as defined in ORS 459.005, provided: (1) methane is present, or is reasonably likely to be present at concentrations exceeding 5% by volume (the lower explosive limit for methane); and (2) a potential exists for methane to migrate into confined spaces or occupied structures and pose a hazard to human health and safety; and (3) the accumulations of methane are uncontrolled, poorly controlled, or require continued operation and maintenance of a landfill gas collection or monitoring system.**

## ATTACHMENT E - INTERESTED PERSONS

Polygon Northwest Company  
c/o Fred Gast  
2700 NE Andresen, Suite D-22  
Vancouver, WA 98661

Briar Development Company  
c/o Joel Gordon  
902 Waterfront Place  
1011 Western Avenue  
Seattle, WA 98104 - 1097

Mayor Rob Drake  
City of Beaverton  
4755 SW Griffith Road  
P.O. Box 4755  
Beaverton, Oregon 97076



# Oregon

John A. Kitzhaber, M.D., Governor

## Department of Environmental Quality

Northwest Region  
2020 SW Fourth Avenue  
Suite 400  
Portland, OR 97201-4987  
(503) 229-5263 Voice  
TTY (503) 229-5471

December 14, 2000

John Osterberg  
Development Services Division  
City of Beaverton  
PO Box 4755  
Beaverton OR 97076

Re: Sexton Mountain landfill  
Washington County

Dear Mr. Osterberg:

The Department of Environmental Quality's Site Assessment Program has been investigating complaints about the Sexton Mountain Landfill, a former "Clean Fill" landfill site located within the City of Beaverton. Initially, neighbors contacted the Department with concerns about the proposed Haggan Food Store's close proximity to the landfill. Subsequently, Sexton Crest Development, a residential development, was also proposed for construction near (and partly on) the landfill. Although this landfill was never permitted by the Department to accept solid waste, it is apparent from the methane gas testing results that the landfill operator illegally accepted substantial amounts of biodegradable solid waste.

The Department is concerned about the methane gas concentrations measured at the site. Dangerous methane concentrations (levels above the lower explosive limit) have been detected in several subsurface probes located on and adjacent to the landfill, including areas earmarked for residential development. Make no mistake about it, landfill gas is a serious threat to public safety, especially when human activities occur near the landfill. A life-threatening incident that occurred four years ago at the North Marion County Landfill near Woodburn Oregon underscores the Department's concern. Two employees were badly injured in a methane explosion when they entered the landfill scale-house and turned on a switch. Although the State Fire Marshal's office conducted a thorough investigation, they could not determine how methane migrated from the landfill to the building. This building was located hundreds of feet away from the landfill, the source of the methane.

Methane gas is combustible and potentially explosive at concentrations of 5 to 15% by volume in air (the explosive range). Poorly ventilated enclosures such as basements, crawl-spaces, manholes, culverts, buried utility vaults and similar structures are particularly susceptible to methane buildup. Methane is lighter than air and may enter buildings and other confined spaces through foundation cracks, open-ended electrical conduits and other buried utility lines. Methane can migrate long distances through soils, fractured rock or man-made features such as utility



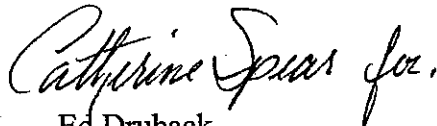
trenches. Weather conditions including atmospheric pressure, soil properties, hydrogeologic properties, impervious surfaces (e.g. pavement), surrounding development and the landfill's own physical and environmental characteristics all affect the rate and extent of methane movement. With all these influences methane's subsurface movement is unpredictable, unless it is controlled by well-engineered containment and control systems and checked by comprehensive monitoring. To our knowledge the Sexton Mountain Landfill has neither a landfill gas control system nor a comprehensive monitoring program.

Development on or near property used for "clean fill" generally is not an alarming prospect to the Department. To reiterate, though, the Sexton Mountain Landfill appears to be actively biodegrading and generating significant amounts of methane gas. Inert material ("clean fill") lacks the potential to biodegrade and produce methane.

The Department questions whether the developer has adequately investigated the problem or designed adequate safeguards to protect public health and safety. Under the circumstances, anything less could have grave consequences. Accordingly, the Department strongly urges the City of Beaverton to retain the services of an independent expert to provide detailed review of this proposal and recommendations to the city about appropriate engineering and monitoring measures.

If you have any questions, please contact Tim Spencer of my staff at (503) 229-5826.

Sincerely,



Ed Druback  
Manager Solid Waste Program  
Northwest Region

ED:ts

cc: Chris Taylor, DEQ HQ  
Dave St Louis, DEQ NWR  
Steve Fortuna, DEQ NWR  
Jeff Christensen, DEQ HQ  
Charlie Sandman, DEQ HQ  
Tim Spencer, DEQ NWR  
x:SolidWaste\SWPermits\SWltrs-00\BeavertonSextonMILF(12-00)-ltr

# BALL JANIK LLP

A T T O R N E Y S

101 SOUTHWEST MAIN STREET, SUITE 1100  
PORTLAND, OREGON 97204-3219

www.balljanik.com

TELEPHONE 503-228-2525

FACSIMILE 503-295-1058

RICHARD H. ALLAN

rallan@bjllp.com

Direct Fax (503) 226-3910

September 17, 2001

BY HAND-DELIVERY

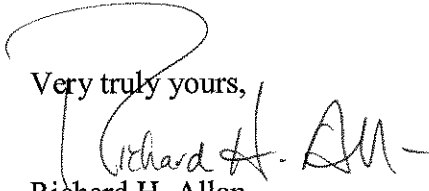
Oregon Environmental Quality Commission  
811 SW Sixth Avenue  
10<sup>th</sup> Floor  
Portland, OR 97204  
Attention: Mr. Mikell Omealy

Re: Response to Petition for Temporary and Permanent Rulemaking

Dear Chairperson Eden and Members of the Environmental Quality Commission:

This firm represents Polygon Northwest Company and Briar Development Company, which are involved in redevelopment of the former Cobb's Quarry property in Beaverton, which is the subject of a Petition for Temporary and Permanent Rulemaking to list methane as a hazardous substance. Polygon Northwest Company and Briar Development Company agree with the conclusion of the Department of Environmental Quality's Staff Report that the Environmental Quality Commission should not adopt the rule proposed by Petitioner. Enclosed is a response to the Petition. I respectfully request that you consider our response in making a determination on the Petition.

Very truly yours,

  
Richard H. Allan

RHA:bwo  
Enclosure

cc: Paul Slyman  
Christopher W. Rich  
Mayor Rob Drake (by fax)  
Joel Gordon (by fax)  
Fred Gast (by fax)

::ODMA\PCDOCS\PORTLAND\267353\1

PORTLAND, OREGON

WASHINGTON, D.C.

BEND, OREGON

**BEFORE THE DEPARTMENT OF ENVIRONMENTAL QUALITY  
STATE OF OREGON**

In the Matter of the Amendment of )  
OAR 340-122-115 defining Methane )  
As a Hazardous Substance )  
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**RESPONSE TO PETITION FOR  
TEMPORARY AND PERMANENT  
RULEMAKING TO AMEND  
OAR 340-122-115**

Briar Development Company (“Briar”) and Polygon Northwest Company (“Polygon”) hereby submit this Response to the Petition by “CLEAN” for a temporary and permanent rulemaking declaring methane to be a hazardous substance under certain circumstances. Polygon and Briar request that the Environmental Quality Commission deny the Petition for the reasons set forth below.

**1. Interest of Polygon Northwest Company and Briar Development Company in this proceeding.**

As indicated in Paragraph 3 of CLEAN’s Petition, Polygon and Briar have been engaged for several years in obtaining land use approvals necessary for the development of the former Cobb’s Quarry site in Beaverton. CLEAN’s Petition for a temporary and permanent rulemaking identifies no other sites allegedly requiring regulation of methane, and CLEAN does not purport to have an interest in DEQ regulation of any other specific site. The Cobb’s Quarry site and the development proposals by Polygon and Briar plainly are the target of the Petition.

CLEAN has known of the presence of methane at the former Cobb’s Quarry site for at least a year. CLEAN’s Petition comes before the Commission at this time because CLEAN and related

1      **RESPONSE TO PETITION FOR TEMPORARY  
AND PERMANENT RULEMAKING TO  
AMEND OAR 340-122-115**

opponents of development at the site have nearly exhausted their opportunities to appeal land use approvals for development of the site. The Petition, in other words, is a transparent attempt to obtain from the Commission relief that the Petitioner and related opponents could not obtain through numerous land use appeals, and to further delay development of the site in the hope that delay will cause Polygon and Briar to abandon their development plans. The Commission should not allow its rulemaking process to be abused in this manner.

**2. Rulemaking is Unjustified.**

The requirements for adoption of a temporary rule are set forth in ORS 183.335(b). The first requirement is that the agency adopting the temporary rule must provide findings that the agency's failure to act promptly will result in serious prejudice to the public interest or the interest of the parties concerned. For several reasons, those findings cannot be made in this instance.

First, the only site specifically identified by the Petitioners as a justification for the temporary rule is the former Cobb's Quarry site in Beaverton. The Petitioner has not presented the Commission with any facts justifying a statewide rule of general applicability.

Second, neither a temporary rule nor a permanent rule is necessary to address methane issues associated with the Cobb's Quarry site. As noted in the Department's Staff Report, Cobb's Quarry is not an orphan site. To the contrary, Polygon and Briar have committed to addressing any methane issues, even though they did not cause or contribute to the presence of methane. Polygon and Briar have paid for investigation and monitoring of methane on the site, and have worked with the City of Beaverton, the City's consultant, and Department of Environmental Quality staff to address any

legitimate concerns regarding methane. Thus, Petitioner's first justification for a temporary and permanent rulemaking – that it will allow DEQ access to necessary funding to abate and address methane concerns “where responsible persons have not taken such remedial actions” – is irrelevant to the situation at the former Cobb's Quarry site. For that reason, the temporary rule adopted by the Commission in June 1999 does not serve as a justification for the proposed temporary rule. As discussed in the staff report, the temporary rule adopted in 1999 was intended to make funds from the Orphan Site Account available to address methane threats at a specific orphan site. Petitioner has not identified any such orphan site to justify the rule Petitioner proposes.

Petitioner's second rationale – that the rulemaking will provide DEQ with adequate authority to order remedial actions to abate methane concerns – also provides no justification because any necessary remedial actions will be taken regardless of whether DEQ has regulatory authority. Finally, monitoring already performed at over forty locations across the site indicates there is no offsite migration of methane, and there is not pressure that would result in the potential movement of methane onto neighboring properties. Thus, there is no evidence that pockets of methane at the former Cobb's Quarry site present any threat to neighboring properties.

In summary, the situation at the former Cobb's Quarry site is Petitioner's only specific justification for the temporary and permanent rulemaking, and that situation is no justification whatsoever.

### **3. The Proposed Rule Would Delay Efforts to Address Methane Issues at Cobb's Quarry**

3 RESPONSE TO PETITION FOR TEMPORARY  
AND PERMANENT RULEMAKING TO  
AMEND OAR 340-122-115



The temporary and permanent rule proposed by Petitioner would list methane as a hazardous substance under certain circumstances, but would not address the cleanup standards applicable to sites at which methane is present. If the Commission were to adopt the rule without concurrently adopting standards for remediating methane, Polygon and Briar would have no way of determining whether the work they currently are performing would meet DEQ standards. In that circumstance, work to address methane at the former Cobb's Quarry site could come to a halt. That may be the result CLEAN desires, but such delay is inconsistent with the goal of achieving protection of human health and safety.

#### **4. Conclusion.**

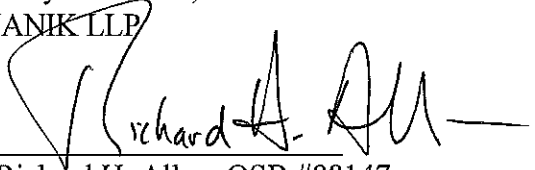
The ultimate irony of CLEAN's Petition is that Polygon and Briar, and their proposed development of the former Cobb's Quarry site, are the solution rather than the problem. Methane exists on the site whether or not the site is developed. If CLEAN and its members feel that their neighboring properties are threatened by methane at the site, they should welcome developers that were willing to spend substantial sums on investigation of methane even prior to purchasing any portion of the site. In addition, Polygon and Briar voluntarily agreed to a condition of approval of local land use permits requiring that they address methane issues to the satisfaction of an independent expert, and they are committed to complying with that condition. Polygon and Briar's development plans offer the only near term opportunity to address methane issues on portions of the site that may require ongoing monitoring or control.

Polygon and Briar respectfully request that the Commission deny the Petition for Temporary and Permanent Rulemaking.

Dated: September 17, 2001.

Respectfully submitted,  
BALL JANIK LLP

By:



Richard H. Allan, OSB #88147  
Of Attorneys for Polygon Northwest  
Company and Briar Development Company

5 RESPONSE TO PETITION FOR TEMPORARY  
AND PERMANENT RULEMAKING TO  
AMEND OAR 340-122-115

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Beaverton, OR 97076

6 RESPONSE TO PETITION FOR TEMPORARY  
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AMEND OAR 340-122-115

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CHRISTOPHER A. RYCEWICZ

BRIAN D. CHENOWETH\*

CHRISTOPHER W. RICH†

CHRISTOPHER E. MARTIN\*

STEVEN C. BURKE\*

---

\*ADMITTED IN OR AND WA

†ADMITTED IN OR AND CO

September 21, 2001

*Via Fax at (541) 482-8310*

Environmental Quality Commission

c/o Stephanie Hallock, Director

Oregon Department of Environmental Quality

811 SW 6<sup>th</sup> Avenue, 10<sup>th</sup> Floor

Portland, OR 97204

RE: *Cobb's Quarry Landfill*

Dear Environmental Quality Commission:

As you are aware, I represent "CLEAN," an association of citizens concerned about environmental conditions and safety issues at the former Cobb's Quarry Landfill in Beaverton, Oregon.

On August 21, 2001, I submitted a Petition for Temporary and Permanent Rulemaking, on behalf of CLEAN, related to providing DEQ adequate authority to regulate methane gas at abandoned landfills as a "hazardous substance" under OAR 340-122-115. The Department, in its staff report on this agenda item, has recommended that the Commission grant the Permanent Rulemaking Petition and direct the Department to initiate rulemaking.

I wish to briefly respond on behalf of my client to a "Response to Petition for Temporary and Permanent Rulemaking to Amend OAR 340-122-115" submitted on behalf of Polygon Northwest Company and Briar Development (Polygon/Briar).

1. Rulemaking is Needed Now, and In the Future.

Polygon/Briar suggest that no other site in Oregon allegedly requires regulation of methane, and that this somehow makes rulemaking unnecessary. While Polygon/Briar has no basis for such a broad statement, CLEAN wishes to point out that its goal in filing the Petition is to provide DEQ with adequate authority to regulate methane now, *and* in the future. Abandoned landfills, venting methane at explosive levels, have been discovered in the past, exists today at the Cobb's Quarry site, and new sites could be discovered tomorrow. The simple truth is that DEQ lacks the tools it needs to protect the public and environment at such sites. The rule now proposed by CLEAN was necessary in 1999, and DEQ acknowledges the need for such authority at the Cobb's Quarry site, as well as any sites that are later discovered.

2. Voluntary Measures Alone are Insufficient.

It is very troubling that Polygon/Briar has characterized the rulemaking petition before the Commission as merely delay or subterfuge. CLEAN has consistently maintained that any development of the Cobb's Quarry Landfill site, if appropriate, must be done in such a manner that protects human health and the environment. Without the proposed rule, who will decide whether methane has been adequately addressed? What happens if a developer disagrees with DEQ's suggestions? What happens if the current developers' funding runs out? CLEAN believes that the best interests of the people and the environment are served by adequate DEQ oversight and regulatory authority, and asks the Commission to act with this goal in mind.

Polygon/Briar suggests that rulemaking is unjustified because they are "committed to addressing any methane issues." While voluntary measures can be useful as part of the regulatory approach, there is a gaping hole in DEQ's ability to *ensure* (via regulation, oversight, and enforcement, as necessary) that methane generated at abandoned landfills is adequately controlled, and that any attempt to develop such sites is done in a safe manner.

The environmental laws of the past thirty years were adopted with the fundamental tenets that environmental concerns are best regulated by agencies charged with this specific task, and that such oversight should not be left just to "market forces." No other entity in Oregon, besides DEQ, possesses the technical expertise, experience, and mission to protect citizens in such cases. CLEAN does not understand why Polygon/Briar would not welcome rulemaking designed only to ensure public safety and safe development of abandoned landfills with methane concerns.

3. Rulemaking Should Not be Denied to Rush Through a Particular Development.

Polygon/Briar complains that the proposed rulemaking may cause delay in its development, as it already has obtained certain permits and approvals from the City of Beaverton to move forward. It is precisely this posture - a rush to develop the site in the absence of clear methane rules - that concerns CLEAN. Hurrying development of a potentially dangerous site cannot be an overriding consideration. Methane, at explosive levels and at positive pressures (i.e., venting) has been documented at this site - and likely exists elsewhere. Hundreds of residents live around the Cobb's Quarry site, and many more would be present during any development thereof. Utility corridors, sewer lines, and impervious surfaces might change the character of venting or migrating methane. Under these circumstances, caution, patience, and certainty should be the overriding factors. The issues raised by the Petition have broader significance than one site, and the Petition deserves to be considered on its own merit. I thank the Commission for its consideration of these comments

Respectfully submitted,

RYCEWICZ & CHENOWETH, LLP



Christopher W. Rich

# BALL JANIK LLP

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RICHARD H. ALLAN

rallan@bjllp.com

Direct Fax (503) 226-3910

September 17, 2001

BY HAND-DELIVERY

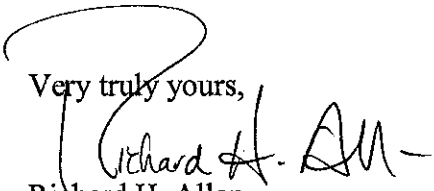
Oregon Environmental Quality Commission  
811 SW Sixth Avenue  
10<sup>th</sup> Floor  
Portland, OR 97204  
Attention: Mr. Mikell Omealy

Re: Response to Petition for Temporary and Permanent Rulemaking

Dear Chairperson Eden and Members of the Environmental Quality Commission:

This firm represents Polygon Northwest Company and Briar Development Company, which are involved in redevelopment of the former Cobb's Quarry property in Beaverton, which is the subject of a Petition for Temporary and Permanent Rulemaking to list methane as a hazardous substance. Polygon Northwest Company and Briar Development Company agree with the conclusion of the Department of Environmental Quality's Staff Report that the Environmental Quality Commission should not adopt the rule proposed by Petitioner. Enclosed is a response to the Petition. I respectfully request that you consider our response in making a determination on the Petition.

Very truly yours,

  
Richard H. Allan

RHA:bwo  
Enclosure

cc: Paul Slyman  
Christopher W. Rich  
Mayor Rob Drake (by fax)  
Joel Gordon (by fax)  
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::ODMA\PCDOCS\PORTLAND\267353\1

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**1. Interest of Polygon Northwest Company and Briar  
Development Company in this proceeding.**

As indicated in Paragraph 3 of CLEAN's Petition, Polygon and Briar have been engaged for several years in obtaining land use approvals necessary for the development of the former Cobb's Quarry site in Beaverton. CLEAN's Petition for a temporary and permanent rulemaking identifies no other sites allegedly requiring regulation of methane, and CLEAN does not purport to have an interest in DEQ regulation of any other specific site. The Cobb's Quarry site and the development proposals by Polygon and Briar plainly are the target of the Petition.

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1      **RESPONSE TO PETITION FOR TEMPORARY  
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In summary, the situation at the former Cobb's Quarry site is Petitioner's only specific justification for the temporary and permanent rulemaking, and that situation is no justification whatsoever.

### **3. The Proposed Rule Would Delay Efforts to Address Methane Issues at Cobb's Quarry**

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#### **4. Conclusion.**

The ultimate irony of CLEAN's Petition is that Polygon and Briar, and their proposed development of the former Cobb's Quarry site, are the solution rather than the problem. Methane exists on the site whether or not the site is developed. If CLEAN and its members feel that their neighboring properties are threatened by methane at the site, they should welcome developers that were willing to spend substantial sums on investigation of methane even prior to purchasing any portion of the site. In addition, Polygon and Briar voluntarily agreed to a condition of approval of local land use permits requiring that they address methane issues to the satisfaction of an independent expert, and they are committed to complying with that condition. Polygon and Briar's development plans offer the only near term opportunity to address methane issues on portions of the site that may require ongoing monitoring or control.

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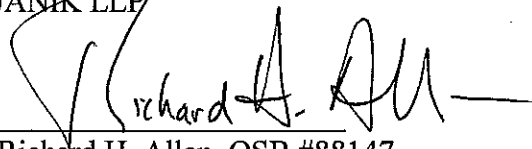
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101 Southwest Main Street, Suite 1100  
Portland, Oregon 97204-3219  
Telephone 503-228-2525

Polygon and Briar respectfully request that the Commission deny the Petition for Temporary and Permanent Rulemaking.

Dated: September 17, 2001.

Respectfully submitted,  
BALL JANIK LLP

By:

A handwritten signature in black ink, appearing to read "Richard H. Allan", is written over a horizontal line. The signature is stylized and cursive.

Richard H. Allan, OSB #88147  
Of Attorneys for Polygon Northwest  
Company and Briar Development Company

5 RESPONSE TO PETITION FOR TEMPORARY  
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Portland, Oregon 97204-3219  
Telephone 503-228-2525

State of Oregon  
Department of Environmental Quality

Memorandum

**Date:** September 7, 2001  
**To:** Environmental Quality Commission  
**From:** Stephanie Hallock, Director *S. Hallock*  
**Subject:** Agenda Item M, Temporary Rule Adoption: Pollution Control Facilities Tax Credit  
September 21, 2001 EQC Meeting

**Need For Rulemaking** The 2001 Legislature passed Senate Bill 764-B (Oregon Laws, 2001, Chapter 928, Attachment B) extending the Pollution Control Facilities Tax Credit another six years. The 2001 law becomes effective on October 6, 2001. Section 6(1), when considered in conjunction with the effective date and other language in the Act, is ambiguous with respect to facilities that were constructed or installed under the provisions of the 1999 version of the tax credit statutes. A strict interpretation could unintentionally exclude some Oregon taxpayers from the tax credit benefits provided under ORS 315.304.

The Department is proposing a temporary rule to clarify section 6(1) with respect to a key provision that allows a 50% tax credit for facilities "certified under ORS 468.150 to 468.190 (1999 Edition)."

**Effect of Rule** The rule would continue to allow filing under the 1999 Edition for facilities constructed on or before December 31, 2001. These facilities would continue to have two years after substantial completion to submit an application and would be eligible for the 50% maximum tax credit under ORS 315.304.

**Commission Authority** The Commission has authority to address this issue under ORS 468.020 and 183.335(5).

**Stakeholder Involvement** No workgroups, committees or public hearings were convened. The proposed temporary rule is intended to clarify ambiguous language in the legislation.

**Public Comment** There was no public comment period.

Agenda Item M, Temporary Rule Adoption: Pollution Control Facilities Tax Credit  
September 21, 2001 EQC Meeting

**Key Issues**

The 1999 version of ORS 468.155 to 468.190 provides that any person who constructs a pollution control facility on or before December 31, 2001 has two years after substantial completion to submit an application for certification. A taxpayer that has a facility certified under the 1999 version is allowed 50% of the facility cost as a tax credit.

The 2001 Act provides that any person who constructs a pollution control facility has one year from substantial completion to submit an application rather than the two years provided under the 1999 version. The 2001 Act also provides the taxpayer a range from 50% to 15% of the certified facility cost as a tax credit depending on a number of conditions.

Section 6(1) of the 2001 amendments provides that the 50% credit is available "[I]f the facility is certified under ORS 468.155 to 468.190 (1999 Edition)." This provision, if read literally, could apply only to those facilities the Environmental Quality Commission (Commission) certified before the October 6, 2001 effective date. This literal interpretation:

- Would preclude the Commission from certifying any facility under the 1999 version on or after October 6, 2001, regardless of when the facility was constructed and whether the taxpayer filed the application with the Department prior to October 6, 2001;
- Would preclude certification on or after October 6, 2001 if the taxpayer filed the application during the second year after the substantial completion of the facility; and
- Would not provide a tax credit under section 6 if the taxpayer commenced construction of the facility and filed the application for certification in 2001, and the facility is not certified prior to October 6, 2001.

The Department believes that this strict interpretation would unfairly exclude some Oregon taxpayers that relied on the existing tax credit provisions being effective through December 31, 2001 (the date that the 1999 version of the law was scheduled to sunset.) The Department does not believe this literal interpretation is consistent with the Legislature's intent (Attachment E) when it adopted the new tax credit laws. The Department believes that section 6(1) was intended to allow taxpayers that constructed or installed facilities prior to December 31, 2001 to apply for and receive tax credits under that version.

Agenda Item M, Temporary Rule Adoption: Pollution Control Facilities Tax Credit  
September 21, 2001 EQC Meeting

- Next Step** The proposed temporary rule, if adopted, would go into effect on October 1, 2001. The Director will appoint an Advisory Committee to address the Pollution Control Facilities Tax Credit rules that would include this temporary rule. The Department will support a technical correction to ORS 468.150 to 468.190 regarding this clarification of section 6 as part of 2003 legislative proposals.
- Department Recommendation** The Department recommends the Commission adopt the proposed temporary rule as presented in Attachment A to be effective October 1, 2001.
- Attachments**
- A. Proposed Rule Revisions
  - B. Senate Bill 764-B
  - C. Fiscal and Economic Impact Statement
  - D. Statement of Need and Justification
  - E. Exhibits from Legislative Record
  - F. Fact Sheet - 2001 Legislation
- Available Upon Request**
1. ORS 468.150 to 468.190, OAR 340-016-0005 to 340-016-0080, and ORS 315.304

Approved:

Section:

*James Duggan for SPR*

Division:

*Judith Waters for Helen Lottidge*

Report Prepared By: Maggie Vandehey  
Phone: 503-229-6878

# **Attachment A**

## **DEPARTMENT OF ENVIRONMENTAL QUALITY**

### **DIVISION 16**

### **POLLUTION CONTROL TAX CREDITS**

#### **340-016-0008**

For the purposes of Oregon Laws, 2001, Chapter 928, Section 6(1), a facility may be certified under the 1999 edition of ORS 468.155 to 468.190 if the facility was substantially completed on or before December 31, 2001 and an application was filed with the Department within two years after the date of substantial completion.



# Attachment B

71st OREGON LEGISLATIVE ASSEMBLY-2001 Regular Session

## Enrolled Senate Bill 764

Sponsored by Senator L BEYER; Representative NELSON (at the request of Associated Oregon Industries)

CHAPTER .....

### AN ACT

Relating to pollution control tax credits; creating new provisions; amending ORS 315.304, 468.165 and 468.170; and prescribing an effective date.

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

SECTION 1. ORS 468.165 is amended to read:

468.165. (1) Any person may apply to the Environmental Quality Commission for certification under ORS 468.170 of a pollution control facility or portion thereof erected, constructed or installed by the person in Oregon if:

(a) The air or water pollution control facility was erected, constructed or installed on or after January 1, 1967.

(b) The noise pollution control facility was erected, constructed or installed on or after January 1, 1977.

(c) The solid waste facility was under construction on or after January 1, 1973, the hazardous waste or used oil facility was under construction on or after October 3, 1979, and if:

(A) The facility's principal or sole purpose conforms to the requirements of ORS 468.155 (1) and (2);

(B) The facility will utilize material that would otherwise be solid waste as defined in ORS 459.005, hazardous waste as defined in ORS 466.005 or used oil as defined in ORS 459A.555 by mechanical process or chemical process or through the production, processing including presegregation, or use of, materials which have useful chemical or physical properties and which may be used for the same or other purposes, or materials which may be used in the same kind of application as its prior use without change in identity;

(C) The end product of the utilization is an item of real economic value;

(D) The end product of the utilization, other than a usable source of power, is competitive with an end product produced in another state; and

(E) The Oregon law regulating solid waste imposes standards at least substantially equivalent to the federal law.

(d) The hazardous waste control facility was erected, constructed or installed on or after January 1, 1984, and if:

(A) The facility's principal or sole purpose conforms to the requirements of ORS 468.155 (1) and (2); and

(B) The facility is designed to treat, substantially reduce or eliminate hazardous waste as defined in ORS 466.005.

(2) The application shall be made in writing in a form prescribed by the Department of Environmental Quality and shall contain information on the actual cost of the facility, a description of the materials incorporated therein, all machinery and equipment made a part thereof, the existing or proposed operational procedure thereof, and a statement of the purpose of prevention, control or reduction of air, water or noise pollution or solid or hazardous waste or recycling or appropriate disposal of used oil served or to be served by the facility and the portion of the actual cost properly allocable to the prevention, control or reduction of air, water or noise pollution or solid or hazardous waste or to recycling or appropriately disposing of used oil.

(3) The Director of the Department of Environmental Quality may require any further information the director considers necessary before a certificate is issued.

(4) The application shall be accompanied by a fee established under subsection (5) of this section. The fee may be refunded if the application for certification is rejected.

(5) By rule and after hearing the commission may adopt a schedule of reasonable fees which the department may require of applicants for certificates issued under ORS 468.167 and 468.170. Before the adoption or revision of any such fees the commission shall estimate the total cost of the program to the department. The fees shall be based on the anticipated cost of filing, investigating, granting and rejecting the applications and shall be designed not to exceed the total cost estimated by the commission. Any excess fees shall be held by the department and shall be used by the commission to reduce any future fee increases. The fee may vary according to the size and complexity of the facility. The fees *[shall]* may not be considered by the commission as part of the cost of the facility to be certified.

(6) The application shall be submitted after construction of the facility is substantially completed and the facility is placed in service and within *[two years]* one year after construction of the facility is substantially completed. Failure to file a timely application shall make the facility ineligible for tax credit certification. An application *[shall]* may not be considered filed until it is complete and ready for processing. The commission may grant an extension of time to file an application for circumstances beyond the control of the applicant that would make a timely filing unreasonable. However, the period for filing an application *[shall]* may not be extended to a date beyond December 31, *[2003]* 2008.

**SECTION 2.** ORS 468.170 is amended to read:

468.170. (1) The Environmental Quality Commission shall act on an application for certification before the 120th day after the filing of the application under ORS 468.165. The action of the commission shall include certification of the actual cost of the facility and the portion of the actual cost properly allocable to the prevention, control or reduction of air, water or noise pollution or solid or hazardous waste or to recycling or appropriately disposing of used oil. The actual cost or portion of the actual cost certified *[shall]* may not exceed the taxpayer's own cash investment in the facility or portion of the facility. Each certificate shall bear a separate serial number for each such facility.

(2) If the commission rejects an application for certification, or certifies a lesser actual cost of the facility or a lesser portion of the actual cost properly allocable to the prevention, control or reduction of air, water or noise pollution or solid or hazardous waste or to recycling or appropriately disposing of used oil than was claimed in the application for certification, the commission shall cause written notice of its action, and a concise statement of the findings and reasons therefor, to be sent by registered or certified mail to the applicant before the 120th day after the filing of the application.

(3) If the application is rejected for any reason, including the information furnished by the applicant as to the cost of the facility, or if the applicant is dissatisfied with the certification of actual cost or portion of the actual cost properly allocable to prevention, control or reduction of air, water or noise pollution or solid or hazardous waste or to recycling or appropriately disposing of used oil, the applicant may appeal from the rejection as provided in ORS 468.110. The rejection or the certification is final and conclusive on all parties unless the applicant takes an appeal therefrom as provided in ORS 468.110 before the 30th day after notice was mailed by the commission.

(4)(a) The commission shall certify a pollution control, solid waste, hazardous waste or used oil facility or portion thereof, for which an application has been made under ORS 468.165, if the commission finds that the facility:

(A) Was erected, constructed or installed in accordance with the requirements of ORS 468.165 (1);

(B) Is designed for, and is being operated or will operate in accordance with the requirements of ORS 468.155; and

(C) Is necessary to satisfy the intents and purposes of ORS 454.010 to 454.040, 454.205 to 454.255, 454.505 to 454.535, 454.605 to 454.755, ORS chapters 459, 459A, 466 and 467 and ORS chapters 468, 468A and 468B and rules thereunder.

(b) No determination of the proportion of the actual cost of the facility to be certified shall be made until receipt of the application.

(c) If one or more facilities constitute an operational unit, the commission may certify such facilities under one certificate.

(d) A certificate under this section is effective for purposes of tax relief in accordance with ORS 307.405 and 315.304 if, on or before December 31, [2001] 2007, erection, construction or installation of the facility is completed, the facility is placed in service and the application for certification is filed with the commission under ORS 468.165.

(5) A person receiving a certificate under this section may take tax relief only under ORS 315.304, depending upon the tax status of the person's trade or business except that:

(a) A corporation organized under ORS chapter 65 or any subsequent transferee of the corporation shall take tax relief only under ORS 307.405; and

(b)(A) A corporation organized under ORS chapter 62 or any predecessor to ORS chapter 62 relating to the incorporation of cooperative associations or the subsequent transferee of the corporation may make an irrevocable election to take the tax relief under either ORS 315.304 or 307.405. The corporation shall make the election at the time of applying for the certificate, except that a corporation receiving a certificate prior to December 31, 1995, may make the election at any time on or before December 31, 1995. If a corporation elects on or before December 31, 1995, to take the tax relief under ORS 315.304, any income taxes, penalties or interest otherwise payable by the corporation for improperly taking the tax relief under ORS 315.304 in a taxable year prior to making the election shall be waived.

(B) In the case of a corporation making the election under subparagraph (A) of this paragraph, the election applies to:

(i) All existing or future facilities that are certified under this section, if the corporation claimed a credit under ORS 315.304 for a tax year beginning prior to December 31, 1995; or

(ii) All future facilities that are certified under this section, if the corporation did not claim a credit under ORS 315.304 for a tax year beginning prior to December 31, 1995.

(6) If the person receiving the certificate is a partnership, each partner shall be entitled to take tax credit relief as provided in ORS 315.304, based on that partner's pro rata share of the certified cost of the facility.

(7) Certification under this section of a pollution control facility qualifying under ORS 468.165 (1) shall be granted for a period of 10 consecutive years which 10-year period shall begin with the tax year of the person in which the facility is certified under this section, except that if ad valorem tax relief is utilized by a corporation organized under ORS chapter 62 or 65 the facility shall be exempt from ad valorem taxation for a period of 20 consecutive years.

(8) Portions of a facility qualifying under ORS 468.165 (1)(c) may be certified separately under this section if ownership of the portions is in more than one person. Certification of such portions of a facility shall include certification of the actual cost of the portion of the facility to the person receiving the certification. The actual cost certified for all portions of a facility separately certified under this subsection [shall] may not exceed the total cost of the facility that would have been certified under one certificate. The provisions of ORS 315.304 (8) [shall] apply to any sale, exchange or other disposition of a certified portion of a facility.

(9) A certificate issued under this section shall state the applicable percentage of the certified cost of the facility, as determined under section 6 of this 2001 Act.

(10) If the construction or installation of a facility is commenced after December 31, 2005, the facility may be certified only if the facility or applicant is described in section 6 (3) of this 2001 Act. A facility described in section 6 (2) of this 2001 Act for which construction or installation is commenced after December 31, 2005, may not be certified under this section.

**SECTION 3.** (1) Notwithstanding ORS 315.304 (9), in the case of a pollution control facility for which unexpired tax credits exist as of the tax year of the taxpayer that begins in the 2001 calendar year, if the facility is in use and operation during the tax year immediately following the third succeeding tax year described in ORS 315.304 (9), any credit under ORS 315.304 remaining unused may be carried forward to that fourth succeeding tax year. If the facility is in use and operation during the tax year immediately following the fourth succeeding tax year, any credit under ORS 315.304 remaining unused may be carried forward to that fifth succeeding tax year. If the facility is in use and operation during the tax year immediately following the fifth succeeding tax year, any credit under ORS 315.304 remaining unused may be carried forward to that sixth succeeding tax year, but may not be carried forward to any tax year thereafter.

(2) For purposes of this section, unexpired tax credits include credits claimed pursuant to ORS 315.304 (2) and credits carried over from previous tax years pursuant to ORS 315.304 (9).

**SECTION 4.** ORS 315.304 is amended to read:

315.304. (1) A credit against taxes imposed by ORS chapter 316 (or, if the taxpayer is a corporation, under ORS chapter 317 or 318) for a pollution control facility or facilities certified under ORS 468.170 shall be allowed if the taxpayer qualifies under subsection (4) of this section.

(2) For a facility certified under ORS 468.170, the maximum credit allowed in any one tax year shall be the lesser of the tax liability of the taxpayer or *[one-half]* the applicable percentage of the certified cost of the facility, as determined under section 6 or 7 of this 2001 Act, multiplied by the certified percentage allocable to pollution control, divided by the number of years of the facility's useful life. The number of years of the facility's useful life used in this calculation shall be the remaining number of years of useful life at the time the facility is certified but not less than one year nor more than 10 years.

(3) To qualify for the credit the pollution control facility must be erected, constructed or installed in accordance with the provisions of ORS 468.165 (1) and must be certified for tax relief under ORS 468.155 to 468.190.

(4) To qualify for a tax credit under this section:

(a) The taxpayer who is allowed the credit must be:

(A) The owner, including a contract purchaser, of the trade or business that utilizes Oregon property requiring a pollution control facility to prevent or minimize pollution;

(B) A person who, as a lessee or pursuant to an agreement, conducts the trade or business that operates or utilizes such property; or

(C) A person who, as an owner, including a contract purchaser, or lessee, owns or leases a pollution control facility that is used:

(i) In a business that is engaged in a production activity described in 40 C.F.R. 430.20 (as of July 1, 1998); or

(ii) For recycling, material recovery or energy recovery as defined in ORS 459.005; and

(b) The facility must be owned or leased during the tax year by the taxpayer claiming the credit and must have been in use and operation during the tax year for which the credit is claimed.

(5) Regardless of when the facility is erected, constructed or installed, a credit under this section may be claimed by a taxpayer:

(a) For a facility qualifying under ORS 468.165 (1)(a) or (b), only in those tax years which begin on or after January 1, 1967.

(b) For a facility qualifying under ORS 468.165 (1)(c), in those tax years which begin on or after January 1, 1973.

(c) For a facility qualifying under ORS 468.165 (1)(d), in those tax years which begin on or after January 1, 1984.

(6) For a facility certified under ORS 468.170, the maximum total credit allowable shall not exceed one-half of the certified cost of the facility multiplied by the certified percentage allocable to pollution control.

(7) The credit provided by this section is not in lieu of any depreciation or amortization deduction for the facility to which the taxpayer otherwise may be entitled under ORS chapter 316, 317 or 318 for such year.

(8) Upon any sale, exchange or other disposition of a facility, notice thereof shall be given to the Environmental Quality Commission who shall revoke the certification covering such facility as of the date of such disposition. Notwithstanding ORS 468.170 (4)(c), the transferee may apply for a new certificate under ORS 468.170, but the tax credit available to such transferee shall be limited to the amount of credit not claimed by the transferor. The sale, exchange or other disposition of shares in an S corporation as defined in section 1361 of the Internal Revenue Code or of a partner's interest in a partnership shall not be deemed a sale, exchange or other disposition of a facility for purposes of this subsection.

(9) Any tax credit otherwise allowable under this section which is not used by the taxpayer in a particular year may be carried forward and offset against the taxpayer's tax liability for the next succeeding tax year. Any credit remaining unused in such next succeeding tax year may be carried forward and used in the second succeeding tax year, and likewise, any credit not used in that second succeeding tax year may be carried forward and used in the third succeeding tax year, but may not be carried forward for any tax year thereafter. Credits may be carried forward to and used in a tax year beyond the years specified in ORS 468.170.

(10) The taxpayer's adjusted basis for determining gain or loss shall not be further decreased by any tax credits allowed under this section.

(11) A person described in subsection (4)(a)(C) of this section may, but need not, operate the facility or conduct a trade or business that utilizes property requiring the facility. If more than one person has an interest under subsection (4)(a)(C) of this section in the facility, only one person may claim the credit allowed under this section. However, portions of the facility may be certified separately in the same manner as provided in ORS 468.170 (8) if ownership of the portions is in more than one person. The person claiming the credit as between an owner, including a contract purchaser, and lessee under this subsection shall be designated in a written statement signed by both the lessor and lessee of the facility. This statement shall be filed with the Department of Revenue not later than the final day of the first tax year for which a tax credit is claimed.

(12)(a) A taxpayer may not be allowed a tax credit under this section for any tax year during which the taxpayer is convicted of a felony under ORS 468.922 to 468.956 that is related to the facility for which the tax credit would otherwise be claimed, or for the four tax years succeeding the tax year during which the taxpayer is convicted.

(b) The amount of any tax credit that is otherwise allowable under this section but for paragraph (a) of this subsection shall be considered to be claimed by the taxpayer for purposes of determining the amount of tax credit that may be claimed in a tax year in which paragraph (a) of this subsection permits the taxpayer to claim the credit.

**SECTION 5.** Sections 6 to 8a of this 2001 Act are added to and made a part of ORS 468.155 to 468.190.

**SECTION 6.** For purposes of ORS 315.304, the applicable percentage of the certified cost of a facility shall be one of the following:

(1) If the facility is certified under ORS 468.155 to 468.190 (1999 Edition) or if construction or installation of the facility is commenced prior to January 1, 2001, and completed prior to January 1, 2004, 50 percent.

(2) Except as provided in subsection (1) or (3) of this section, if the facility is certified pursuant to application for certification filed on or after January 1, 2002, and:

(a) Construction or installation of the facility is commenced on or after January 1, 2001, and on or before December 31, 2003, 25 percent; or

(b) Construction or installation of the facility is commenced after December 31, 2003, and on or before December 31, 2005, 15 percent.

(3) If certified pursuant to application for certification filed on or after January 1, 2002, 35 percent if:

(a) The applicant is certified under International Organization for Standardization standard ISO 14001;

(b) A Green Permit that applies to the facility has been issued under ORS 468.501 to 468.521;

(c) The facility is a nonpoint source or is regulated as a confined animal feeding operation under ORS 468B.200 to 468B.230;

(d) The facility is used for material recovery or recycling, as those terms are defined in ORS 459.005;

(e) The facility is used in an agricultural or forest products operation and is used for energy recovery, as defined in ORS 459.005;

(f) The certified cost of the facility does not exceed \$200,000;

(g) Construction or installation of the facility is entirely voluntary and no portion of it is required in order to comply with a federal law administered by the United States Environmental Protection Agency, a state law administered by the Department of Environmental Quality or a law administered by a regional air pollution authority; or

(h) The applicant demonstrates to the Department of Environmental Quality that the applicant uses an environmental management system at the facility. In order for the department to determine that the applicant uses an environmental management system at the facility:

(A) The applicant must have the environmental management system used at the facility reviewed by an independent third party familiar with environmental management systems and submit a report to the department stating that the provisions of this paragraph have been met. The report shall be accompanied by supporting materials that document compliance with the provisions of this paragraph. The report shall include certification from a registered or certified environmental management auditor employed by, or under contract with, the independent third party that reviewed the environmental management system; or

(B) The department shall contract with an independent third party familiar with environmental management systems to review the environmental management system employed at the facility. The third party shall review the environmental management system, and, if the third party determines that the environmental management system meets the provisions of this paragraph, a registered or certified environmental management system auditor employed by, or contracted with, the third party shall certify that determination to the department. The department shall recover from the applicant the costs incurred by the department as prescribed in ORS 468.073. An applicant shall be liable for the costs of the department under this subparagraph without regard to whether the department certifies the facility as a pollution control facility. The department may not certify a facility to which this subparagraph applies until the department has received full payment from the applicant.

**SECTION 6a.** As used in section 6 of this 2001 Act, "environmental management system" means a continual cycle of planning, implementing, reviewing and improving the actions undertaken at the facility to meet environmental obligations and improve environmental performance that meet:

(1) The standards established by the International Organization for Standardization under ISO 14001;

(2) The standards established in the Green Permit program established under ORS 468.501 to 468.521; or

(3) Other standards that meet criteria established by the Environmental Quality Commission by rule.

**SECTION 7.** (1) If a person has obtained pollution control facility certification in which the applicable percentage is 35 percent because of issuance of a Green Permit described under section 6 (3)(b) of this 2001 Act that applies to the certified facility and the Green Permit is revoked, the applicable percentage for any remaining tax credit to be claimed under ORS 315.304 shall be the applicable percentage described under section 6 (2) of this 2001 Act. If the construction or installation of the facility is commenced on or after January 1, 2006, the pollution control facility certification shall be revoked.

(2) The Department of Environmental Quality shall inform the Department of Revenue of the revocation.

**SECTION 8.** If a person is convicted of a felony under ORS 468.922 to 468.956, the county district attorney or the Attorney General, whichever was the prosecuting officer, shall give notice of the conviction to the Department of Revenue.

**SECTION 8a.** For purposes of ORS 468.155 to 468.190, the construction or installation of a facility is commenced when the person constructing or installing the facility has obtained all necessary preliminary approvals and has begun continuous on-site modification, construction, installation or other activity, the completion of which will cause the person to be able to obtain certification under ORS 468.155 to 468.190. Interruptions and delays resulting from natural disasters, strikes, litigation or other matters beyond the control of the owner shall be disregarded in determining whether the actions undertaken by the person are continuous. The burden of demonstrating that construction or installation of a facility is commenced shall be borne by the person filing an application for certification under ORS 468.165.

**SECTION 9.** (1) The Legislative Assembly finds that the concept of environmental responsibility has matured beyond basic compliance with regulatory requirements to one in which citizens and businesses voluntarily implement innovative solutions to achieve shared environmental goals.

(2) The Legislative Assembly declares that a pollution control tax credit that shifts the majority of the incentive away from compensation for basic regulatory compliance and toward encouraging voluntary investment is an effective way to achieve environmental goals.

(3) The Legislative Assembly finds and declares that it is the policy of this state to promote sustainability and provide incentives for the voluntary prevention, elimination, reduction or control of air pollution, water pollution, solid waste and hazardous waste through the voluntary application of innovative solutions to achieve the environmental goals of this state.

(4) The Legislative Assembly declares it to be the policy of this state to promote social, economic and environmental principles of sustainability by providing incentives to individuals and businesses that support social, economic and environmental sustainability goals.

**SECTION 10.** (1) There is created the Pollution Control Tax Credit Improvement and Review Task Force. The task force is charged with the following two primary undertakings:

(a) To study and review the existing pollution control tax credit program under ORS 468.155 to 468.190 and 315.304; and

(b) To compare the pollution control tax credit program with other types of incentives to see which type of incentive is most efficient and effective in achieving the policies set forth in section 9 of this 2001 Act.

(2) In studying and reviewing the existing pollution control tax credit program under subsection (1)(a) of this section, the task force shall consider, but is not limited to considering:

(a) Ways to achieve administrative efficiency;

(b) Measures to simplify the existing program and reduce the complexity faced by the applicant in the application and certification process; and

(c) Methods for measuring the environmental effectiveness or economic development achieved as a result of the pollution control tax credit program.

(3) In studying pollution control incentives under subsection (1)(b) of this section, the task force shall consider, but is not limited to considering:

(a) Incentives that promote sustainability, recycling or reductions in harmful emissions and toxics;

(b) Benefits to local economies and local government tax revenues that are related to the incentives being reviewed; and

(c) Incentives that simultaneously support community economic, environmental and social sustainability objectives through the collaborative efforts of business, government and nonprofit organizations.

(4) The Governor shall appoint to the task force:

(a) Not more than seven members, with the concurrence of the Speaker of the House of Representatives and the President of the Senate. A member appointed under this section must represent one of the following interests, each interest of which must be represented on the task force:

(A) Agriculture;

(B) Business;

(C) Environmental advocacy; and

(D) The general public. A member of the general public appointed under this paragraph must be knowledgeable about the principles of sustainability.

(b) One ex officio nonvoting representative from the Economic and Community Development Department and one ex officio nonvoting representative of the Department of Environmental Quality and the Environmental Quality Commission.

(5)(a) The President of the Senate shall appoint one senator to the task force and the Speaker of the House of Representatives shall appoint one member of the House of Representatives to the task force.

(b) A member of the Legislative Assembly appointed to the task force shall be entitled to an allowance as authorized by ORS 171.072 from funds appropriated to the Legislative Assembly.

(6)(a) The task force shall report on an ongoing and periodic basis to the interim committees of the Seventy-first Legislative Assembly having jurisdiction over revenue and environmental matters.

(b) The task force shall prepare a final written report of the findings and recommendations of the task force and shall present the report to the committees of the Seventy-second Legislative Assembly having jurisdiction over revenue and environmental matters.

(7) The Legislative Revenue Officer shall provide the staff and administrative support necessary for the performance of the functions of the task force.

(8) Official action by the task force created under this section shall require the approval of a majority of the members of the task force. All legislation recommended by official action of the task force must indicate that it is introduced at the request of the task force. Such legislation shall be prepared in time for pre-session filing pursuant to ORS 171.130, for presentation to the regular session of the Seventy-second Legislative Assembly.

SECTION 11. Section 10 of this 2001 Act is repealed July 1, 2003.

SECTION 12. This 2001 Act takes effect on the 91st day after the date on which the regular session of the Seventy-first Legislative Assembly adjourns sine die.



Passed by Senate June 7, 2001

Repassed by Senate July 4, 2001

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Secretary of Senate

.....  
President of Senate

Passed by House July 3, 2001

.....  
Speaker of House

Received by Governor:

.....M.,....., 2001

Approved:

.....M.,....., 2001

.....  
Governor

Filed in Office of Secretary of State:

.....M.,....., 2001

.....  
Secretary of State

# Attachment C

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY

## Temporary Rulemaking Proposal for Pollution Control Facility Tax Credit

### Fiscal and Economic Impact Statement

#### Introduction

Oregon Laws, 2001, Chapter 928 (Enrolled Senate Bill 764) significantly amended the Pollution Control Facilities Tax Credit statutes and extended the program for another six years. Section 6(1) of the Act, when considered in conjunction with the effective date and other language in the Act, is ambiguous with respect to facilities that were constructed or installed under the provisions of the 1999 version of the tax credit statutes. This temporary rule clarifies that the language in section 6(1) means that a facility is to be certified under the 1999 law if the facility is substantially completed by December 31, 2001 and the application for certification is filed within two years after substantial completion.

#### General Public

Individuals can take pollution control facilities tax credit against state personal income tax; or for cooperatives and non-profit corporations, as a credit against ad valorem taxes. There could be a direct impact to the general public in the amount of the tax credit depending on the interpretation of the 2001 law.

#### Small Business

Small businesses with 50 or fewer employees submit over 80% of applications for this tax credit each year, averaging 144 applications per year. Small businesses utilize the tax credit program for investments such as automotive refrigerant recovery equipment, alternatives to open field burning, oil/water separators, animal waste treatment systems, wood chippers, and underground and above ground storage tank systems. There could be a direct impact to small businesses in the amount of the tax credit depending on the interpretation of the 2001 law. This impact is indeterminate because the number of applications and the amount of qualifying investment cannot be know in advance.

#### Large Business

Large businesses submit less than 20% of applications for this tax credit each year, averaging 36 per year. There could be a direct impact to large business in the amount of the tax credit depending on the interpretation of the 2001 law. This impact is indeterminate because the number of applications and the amount of qualifying investment cannot be know in advance.

### Local Governments

Local governments are not eligible for certification of a pollution control tax credit and therefore, a change in program benefits will not have a direct financial impact on local governments.

The tax credit statutes and rules allow cooperatives and non-profit corporations to claim credits against ad valorem taxes. Any change in tax credit program benefits to such organizations could potentially result in an increase or decrease in ad valorem tax collections by local governments; however, this proposal does not change the impact on ad valorem tax collection.

### State Agencies

The Department of Environmental Quality (DEQ) is already involved in processing tax credit applications. The Oregon Department of Agriculture will continue to participate in tax credit application reviews. This amendment does not change the Oregon Department of Revenue's participation in that they process income tax returns redeeming the credit. The proposed rule amendment does not have a fiscal impact on DEQ or other state agencies. The amount of tax credits issued and taken by persons for pollution control facilities represents the amount by which tax collections, and hence the state's General Fund, will diminish.

### Assumptions

No other assumptions were made in developing the proposed temporary rule.

### Housing Cost Impact Statement

The Department has determined that this proposed rulemaking will have no effect on the cost of development of a 6,000 square foot parcel and the construction of a 1,200 square foot detached single family dwelling on that parcel.

# Attachment D

Secretary of State

## STATEMENT OF NEED AND JUSTIFICATION

A Certificate and Order for Filing Temporary Administrative Rules accompanies this form.

Department of Environmental Quality, Management Services Division

Agency and Division

In the Matter of	)	Statutory Authority,
	)	Statutes Implemented,
OAR 340-016-0005	)	Statement of Need,
OAR 340-016-0010	)	Principal Documents Relied Upon,

**Statutory Authority:** ORS 468.020 and 183.335(5).

**Statutes Implemented:** ORS 468.150 to 468.190 and ORS 315.304

**Need for the Temporary Rule(s):** Oregon Laws, 2001, Chapter 928 (Enrolled Senate Bill 764-B) significantly amended the Pollution Control Facilities Tax Credit statutes and extended the program another six years. The 2001 law becomes effective on October 6, 2001. Section 6(1) of the Act, when considered in conjunction with the effective date and other language in the Act, is ambiguous with respect to facilities that were constructed or installed under the provisions of the 1999 version of the tax credit statutes.

**Documents Relied Upon:** Oregon Law, 2001, Chapter 928

**Justification of Temporary Rule(s):** The Environmental Quality Commission (EQC) finds that failure to clarify the ambiguous provision in the new statute prior to its effective date will result in serious prejudice to the interests of parties concerned with the application of the statute. The ambiguous language in section 6(1) could be construed to exclude some Oregon taxpayers from the tax credit benefits provided under ORS 315.304. Taxpayers affected by the provisions would be disadvantaged if they were required to wait for the adoption of permanent rules or the judicial review of specific Commission decisions interpreting the statute to determine whether facilities are eligible for certification and the deadline for submission of applications for certification. The temporary rule is needed to clarify section 6(1).

**Housing Cost Impact Statement:** The Department has determined that this proposed rulemaking will have no effect on the cost of development of a 6,000 square foot parcel and the construction of a 1,200 square foot detached single family dwelling on that parcel.

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Rules Coordinator Signature and Date

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Melinda Eden, Chair  
Environmental Quality Commission

## Attachment E

### Proposed Amendments to SB 764A: Pollution Control Credit

- SB 764A
1. Extends period for construction of facilities eligible for pollution control tax credits through December 31, 2007 (Under current law this provision sunsets December 31, 2001).
  2. Extends period for submitting applications for certification of pollution control facilities through December 31, 2009 (Under current law this provision sunsets December 31, 2003).
  3. Allows additional 3 year carryforward for unused pollution control tax credits provided credits haven't expired as of the 2001 tax year and the facility remains in operation during the additional carryforward period.
  4. Allows taxpayer engaged in agricultural plastics recycling to sell their pollution control credit to another taxpayer if approved by Department of Revenue.

- A24 Revises pollution control credit program as follows:

1. Extends period for construction of facilities eligible for pollution control tax credits through December 31, 2007 (Under current law this provision sunsets December 31, 2001).
2. Extends period for submitting applications for certification of pollution control facilities through December 31, 2008 (Under current law this provision sunsets December 31, 2003).
3. Shortens period between project completion and submission of application for certification from two years to one year.
4. Projects commenced before January 1, 2001 and completed before January 1, 2004 (or certified by December 31, 2001) receive "safe-harbor" treatment same as current law program (credit is 50% of certified costs).
5. Projects not meeting criteria below commenced 1/1/01-12/31/03 eligible for 25% of certified costs; projects commenced 1/1/04-12/31/05 eligible for 15% of certified costs; no credit for these projects certified after 12/31/2005.
6. Following types of projects ("upper tier") eligible for 35% of certified costs (full credit): ISO 14001 certified, holds DEQ green permit, non-point source or CAFO, material recovery or recycling, agricultural or forest products energy recovery, "small" projects (<\$200,000 certified costs), controls not required by federal, state or regional law, or certified Environmental Mgt. System.
7. Disqualifies facility from upper tier tax credit if green permit is revoked.
8. Disallows credit for 5 years if taxpayer is convicted of environmental offences (related to the facility qualifying for the credit) under ORS 468.922 - 468.956.
9. Creates interim pollution control tax credit improvement and review task force.
10. Allows additional 3 year carryforward for unused pollution control tax credits provided credits haven't expired as of the 2001 tax year and the facility remains in operation during the additional carryforward period.

MEASURE: SB 764  
 EXHIBIT: 1  
 H. SCH. FUND & TAX FAIRNESS/REV  
 DATE: JUL 01 2001 PAGES: 3  
 SUBMITTED BY: Water

<b>Provision</b>	<b>Current Law</b>	<b>SB 764A</b>	<b>- A18</b>	<b>- A20</b>	<b>- A24</b>
<b>Sunset (construction – application)</b>	12/31/01 – 12/31/03	12/31/07 – 12/31/09	12/31/05 – 12/31/07	12/31/07 (applications)	12/31/07 – 12/31/08
<b>Safe Harbor (% of certified costs)</b>					Construction commenced before 1/1/01 and completed before 1/1/04 50%
<b>Credit for “lower-tier” projects and projects required by law (% of certified costs)</b>	50%	50%	35%	Application filed by: 6/30/03 15% 6/30/05 10% After 6/30/05 0%	Construction commenced by 12/31/03 25% by 12/31/05 15% after 12/31/05 0%
<b>Credit for “upper-tier” projects and projects not required by law, etc. (% of certified costs)</b>	50%	50%	50%	25%	35%
<b>Additional credit for climate change gas or PBT mitigation (% of certified costs)</b>	-	-	-	5%	-
<b>Credit cap</b>	None	None	None	\$0.5 mil. per project, \$1 mil. per applicant	None
<b>Maximum period</b>	10 years	10 years	10 years	10 years	10 years
<b>Carry forward</b>	3 years	3 years	3 years	None	3 years
<b>Additional carryforward (for existing projects)</b>	-	3 years	3 years	3 years	3 years
<b>Allows Ag. Plastics recycler to sell unused credit?</b>	-	Yes	No	No	No
<b>Interim Task Force</b>	-	No	Yes / formal	Yes	Yes / formal
<b>Disqualification for felony (-A19)</b>	-	-	-	-	Yes

**Estimated Revenue Impact (\$ million)**

	<u>2001-3</u>		<u>2003-5</u>		<u>2005-7</u>	
<b>Extend Sunset (SB 764A)</b>	-1.59		-9.64		-17.11	
- A18	-1.16	+ 0.4	-7.08	+ 2.6	-12.66	+ 4.5
- A20	-0.51	+ 1.1	-2.81	+ 6.8	-4.17	+ 12.9
- A24	-0.83	+ 0.8	-4.92	+ 4.7	-7.72	+ 9.4

# Elements of SB 764 with Negotiated Amendments Proposed 7/1/01

MEASURE: SB 764  
EXHIBIT: 6  
H. SCH. FUND & TAX FAIRNESS/REV  
DATE: 01.2001 PAGES: 2  
SUBMITTED BY: Ledger

- 1. Extension.** Extends application dates for certification of credits (see over).
- 2. Phase out.** Reduction of program over time (see over).
- 3. Tiered Credit Awards.** The percentage credit eligible for certification is tiered depending on project and is reduced over time (see over).
- 4. Violations.** Prohibits cash-in or carry forward of credits for five years if convicted of a felony under Environmental Crimes Act (*Expanded Haas proposal, Section 4 (12), and Section 8 of amendments*).
- 5. Policy.** Sets out policy on Incentives and Sustainability (*Section 9 of amendments*)
- 6. Determine Effectiveness and Options.** Establishes Work Group to review program, studies study alternatives, determine effectiveness, proposal to legislature (*Section 12 of amendments*).
- 7. Limited Carry Forward Extension.** Maintains extra 3-year carry forward provision (*GP provisions, already in bill*)





# Rates and Dates Proposed Under 7/1/01 Negotiated Amendments

## Current Level - 50 Percent

Projects completed by 12/31/01

Projects commencing construction prior to 1/1/01 and completed before 1/1/04

## New High Tier - 35 Percent

Projects commencing construction on or after 1/1/01 and completed by 12/31/07

*Recycling*

*ISO 14001 certified*

*Projects certified < \$200,000*

*Nonpoint Source*

*DEQ Green Permitted*

*Voluntary Controls*

*Certified Environmental Management System*

## New Low Tier - Ramp Down

### 25 Percent

Projects that commence construction 1/1/01 through 12/31/03



### 15 Percent

Projects that commence construction after 12/31/03 and through 12/31/05



### 0 Percent

Projects that commence construction after 12/31/05



## Pollution Control Facilities Tax Credit and the 2001 Law



State of Oregon  
Department of  
Environmental  
Quality

Management Services  
Division  
Tax Credit Program  
811 SW 6<sup>th</sup> Avenue  
Portland, OR 97204  
Phone: (503) 229-6878  
(800) 452-4011  
Fax: (503) 229-6730  
Contact: Maggie Vandehey  
[www.deq.state.or.us](http://www.deq.state.or.us)

### Program extended

The Seventy-first Legislative Assembly extended the Pollution Control Facilities Tax Credit for another six years.

### No tax credits for violators

A tax credit is not available to any taxpayer convicted of a felony related to a certified pollution control facility.

### Application filing period changes

The period for filing an application changes from two years to one year after construction of the facility is completed.

### Task Force

The Governor will appoint a task force to study the pollution control tax credit.

### Reduced maximum tax credit percentage

Tax credit values are a percent of the facility cost; the maximum percentage will be reduced according to these conditions:

#### **50%** Applies to any facility

- Certified under the 1999 Edition of ORS 468.155 to 468.190; or
- If construction commenced before 1/1/01 and completed before 1/1/04.

The reduced maximum tax credit percentages apply to applications filed on or after 1/1/02 if the facility does not qualify for the 50% maximum tax credit.

#### **35%** Applies if any one of the following conditions is true.

- a) Certified facility cost does not exceed \$200,000.
- b) Construction or installation of the facility is voluntary.
- c) The applicant
  - is ISO 14001 certified; or
  - uses an environmental management system at the facility.
- d) A Green Permit applies to the facility.
- e) The facility is used for one of the following purposes:
  - nonpoint source pollution control;
  - confined animal feeding operation;
  - material recovery or recycling; or
  - energy recovery in an agricultural or forest products operation.

If the facility or applicant does not qualify for the 35% maximum tax credit then the following percentages apply .

- 25%** If construction commenced 1/1/01 through 12/31/03;
- 15%** If construction commenced 1/1/04 through 12/31/05; or
- 0%** If construction commenced after 12/31/05.

Minutes are not final until approved by the Commission.

## **Environmental Quality Commission Minutes of the Two Hundred and Ninety-Eighth Meeting**

**September 20-21, 2001  
Regular Meeting<sup>1</sup>**

The following Environmental Quality Commission members were present for the regular meeting, held at the Windmill Inns, 2525 Ashland Street, Ashland, Oregon.

Melinda Eden, Chair  
Tony Van Vliet, Vice Chair  
Harvey Bennett, Member  
Deirdre Malarkey, Member  
Mark Reeve, Member<sup>2</sup>

Also present were Larry Knudsen, Oregon Department of Justice (DOJ), Stephanie Hallock, Department of Environmental Quality (DEQ) Director, and DEQ staff.

Prior to calling the meeting to order on September 20, Chair Eden requested a moment of silence in remembrance of the victims of the tragic events of September 11, 2001. Chair Eden then called the meeting to order at approximately 10:00 a.m. Agenda items were taken in the following order.

### **A. Discussion Item: Development of Performance Appraisal Process for Director**

Commissioner Bennett reported that since the August 9-10, 2001, EQC meeting, he and Commissioner Van Vliet had continued working on a potential performance appraisal process for the Director. The Commission discussed the frequency of evaluation and how to gain external input from the Governor's office, state leaders and DEQ staff during the appraisal process. Commissioner Bennett and Commissioner Van Vliet suggested scheduling a report to the Commission at the December 6-7, 2001, EQC meeting to consider their recommendation for an appraisal process. The Commission agreed to hold a discussion at the December meeting.

Helen Lottridge, DEQ Management Services Division Administrator, explained a new state requirement for Commission review and approval of agency head transactions. Ms. Lottridge requested the Commission adopt a policy delegating review and approval of certain financial transactions of the Director to the Management Services Division Administrator, with annual Commission review of the approved transactions. The Commission discussed the policy with Ms. Lottridge and Director Hallock. Commissioner Bennett moved the Commission approve the policy. Commissioner Malarkey seconded the motion and it passed with four "yes" votes.

### **B. Discussion Item: Strategic Doing and Performance Measures**

Director Hallock introduced this item and asked Ms. Lottridge and Dawn Farr, Strategic Planning Coordinator, to facilitate discussion with the Commission. Ms. Lottridge explained DEQ's development of

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<sup>1</sup> Staff reports and written material submitted at the meeting are made part of the record and available from DEQ, Office of the Director, 811 SW Sixth Avenue, Portland, Oregon 97204.

<sup>2</sup> Mark Reeve is also a member of the Oregon Watershed Enhancement Board (OWEB). He participated in parts of a concurrent OWEB meeting and was present for agenda items C and E of the EQC meeting.

strategic priorities and executive performance measures that the agency will use to track progress. Ms. Lottridge gave an overview of the timeline for completing this work and involving the Commission in final review of the agency strategic plan. Commissioners, the Director, and Ms. Lottridge discussed key actions for involving Oregonians in solving environmental problems, protecting Oregon's water, protecting public health from toxic chemicals, and achieving excellence in agency performance. Commissioners asked the Department to present a final draft of the strategic plan for discussion at the December 6-7, 2001, EQC meeting.

### **C. Contested Case No. WQ/I-NWR-00-125 regarding Reggie Huff**

Larry Knudsen, Assistant Attorney General, introduced this item and explained that neither Reggie Huff nor the Department requested oral arguments to the Commission on this case. Mr. Knudsen summarized findings of fact made by the Hearing Officer and arguments made by Mr. Huff and the Department. Mr. Knudsen asked Commissioners to declare any ex parte contacts or conflicts of interest regarding this case. Commissioners declared none. The Commission discussed the case and considered setting this matter over to the December 6-7, 2001, meeting to provide Mr. Huff and the Department the opportunity to present oral argument on the issues of the proper interpretation of the phrase "likely to escape or be carried into waters of the state" in ORS 468B.025 and the hearing officer's application of that language. Commissioner Bennett moved to set the matter over to the December meeting for that purpose. Commissioner Van Vliet seconded the motion and it passed with five "yes" votes.

### **D. Informational Item: Geoff Huntington, OWEB Director**

Chair Eden welcomed Geoff Huntington, Director of the Oregon Watershed Enhancement Board (OWEB), to describe the OWEB's structure and role. Mr. Huntington explained the OWEB's formation, membership and strategy for achieving healthy watersheds, drawing connections to DEQ's work. The Commission discussed with Mr. Huntington and Director Hallock ways for DEQ and OWEB to improve interagency coordination. Chair Eden thanked Mr. Huntington for his presentation.

### **E. Joint Discussion with the Oregon Watershed Enhancement Board**

Commissioners joined the OWEB for a joint meeting and discussion of interagency coordination for achieving water quality standards, funding monitoring work, implementing Total Maximum Daily Loads (TMDLs) and addressing toxics in the Willamette River. Commissioners discussed issues and opportunities with Board member, OWEB and DEQ staff, and local watershed council representatives and stakeholders.

The meeting was adjourned at approximately 5:00 p.m. on September 20. That evening, the Commission held a joint reception with the OWEB at the Windmill Inns in Ashland, Oregon.

On September 21, the Commission held an executive session at 8:00 a.m., to consult with counsel concerning legal rights and duties with regard to current and potential litigation involving the Department. Executive session was held pursuant to ORS 192.660(1)(h).

Chair Eden called the meeting to order at approximately 8:30 a.m.

### **F. Approval of Minutes**

August 9-10, 2001 Minutes: No changes were proposed to the draft minutes. Commissioner Van Vliet moved the Commission approve the minutes. Commissioner Malarkey seconded the motion and it passed with four "yes" votes.

### **C. Consideration of Tax Credit Requests**

Ms. Lottridge introduced this item and asked Maggie Vandehey, Tax Credit Program coordinator, and Jim Roys, Management Services Division manager, to present pollution control tax credit requests. Chair Eden asked Commissioners to declare any conflicts of interests associated with the requests. Commissioner Van

Vliet stated a conflict of interest with application numbers 5573, 5574 and 5575, and abstained from discussion and decision on these requests.

Ms. Vandehey recommended the Commission approve forty-six applications and deny one application. Commissioners discussed the applications and Department recommendations. Commissioner Van Vliet moved the Commission approve applications as recommended by the Department with the exception of application numbers 5573, 5574 and 5575. Commissioner Bennett seconded the motion and it passed with four "yes" votes. Commissioner Bennett moved the Commission approve application numbers 5573, 5574 and 5575. Commissioner Malarkey seconded the motion and it passed with three "yes" votes. Commissioner Van Vliet abstained from this vote. Commissioner Malarkey moved the Commission deny application number 5498 as recommended by the Department. Commissioner Van Vliet seconded the motion and it passed with four "yes" votes.

#### **M. Temporary Rule Adoption: Pollution Control Facilities Tax Credit**

Ms. Lottridge introduced this item and explained implementation issues associated with the new Pollution Control Facilities Tax Credit law, effective on October 6, 2001. Ms. Lottridge requested the Commission adopt a temporary rule to clarify one section of the law with respect to a key provision that allows a fifty percent tax credit for facilities certified under the 1999 Edition of the law (ORS 468.150 to 468.190). The Commission discussed the need for the temporary rule with Ms. Lottridge. Commissioner Van Vliet moved the Commission adopt the temporary rule to clarify the new law. Commissioner Malarkey seconded the motion and it passed with four "yes" votes.

#### **H. Action Item: Approval Process for Umatilla Chemical Agent Disposal Facility Operation**

Wayne Thomas, DEQ Administrator of the Chemical Demilitarization Program, presented to the Commission a proposed modification to the Umatilla Chemical Agent Disposal Facility permit to require Department approval for the start of surrogate testing operations and Commission approval for the start of chemical agent operations. Mr. Thomas introduced Robert Nelson, Environmental Protection Specialist for the Umatilla Chemical Depot, who attended on behalf of L.T.C. Fred Pellisier, Commander of the Umatilla Chemical Depot. Mr. Nelson gave a status report on the Depot operations plan.

Mr. Thomas and Thomas Beam, DEQ Chemical Demilitarization Program staff, described key issues, alternatives for EQC action and next steps for the program. The Commission discussed Depot operations and the recommended permit modification. Commissioner Van Vliet moved the Commission approve the proposed modification. Commissioner Malarkey seconded the motion and it passed with 4 "yes" votes. Commissioner Van Vliet made a motion to clarify Commission approval of Alternative 3 as presented in the staff report: to direct the Department to prepare a proposed modification to the permit explicitly requiring Commission approval for the start of chemical agent operations, but deferring to the Department the decision to approve the start of surrogate testing operations. Commissioner Bennett seconded the motion and it passed with four "yes" votes.

#### **I. Director's Report**

Director Hallock gave the Director's report to the Commission and discussed with Commissioners current issues and recent events involving the Department.

#### **Public Forum**

At approximately 11:30 a.m., Chair Eden asked whether anyone wished to provide public comment. No public comment was provided.

#### **J. Rule Adoption: On-Site Vehicle Testing Program for Auto Dealers**

Ted Kotsakis, DEQ Vehicle Inspection Program manager introduced proposed rules to establish an On-Site Vehicle Testing program for auto dealers in the Portland and Medford areas. Jerry Coffey, Vehicle Inspection

Program staff, described the reasons for the rulemaking, stakeholder involvement in development of the proposed program and next steps. Commissioners discussed key issues with Mr. Kotsakis and Mr. Coffey. Commissioner Bennett moved the Commission adopt rules as proposed by the Department. Commissioner Van Vliet seconded the motion and it passed with four "yes" votes.

#### **K. Rule Adoption: Water Quality General Permit Program Rule Amendments**

Mike Llewelyn, DEQ Water Quality Division Administrator, introduced proposed rules to update parts of the water quality general permit program and adopt by reference twenty current general permits into rule. Mike Kortenhof and Ranei Nomura, Water Quality Division staff, explained the need for the amendments to maintain consistency with federal regulations and to provide a broader public participation process for general permit issuance by requiring adoption of general permits in rule. The Commission discussed the proposed rules and the general permit program. Commissioner Malarkey moved the Commission adopt amendments as proposed by the Department. Commissioner Van Vliet seconded the motion and it passed with four "yes" votes.

#### **L. Action Item: Petition for Temporary and Permanent Rulemaking to Amend OAR 340-122-0115, regarding Hazardous Substances**

Paul Slyman, DEQ Land Quality Division Administrator, presented this item. Mr. Slyman explained that an association of citizens concerned about issues regarding development of the former Cobb's Quarry Landfill in Beaverton, Oregon, called CLEAN, petitioned the Commission for temporary and permanent rulemaking to add methane to the list of hazardous substances subject to Oregon's environmental cleanup rules. Mr. Slyman discussed the petition with Commissioners and recommended the Commission (1) deny the petition for temporary rulemaking, and (2) direct DEQ to consult with stakeholders, initiate permanent rulemaking to address methane issues, and present a status report to the Commission at its meeting in December, 2001: The Commission discussed the possibilities for methane regulation and legal issues associated with adopting the temporary rule as requested by the petitioners. Commissioner Van Vliet moved the Commission deny the petition for temporary rulemaking and direct the Department to work with a stakeholder advisory committee on permanent rulemaking to address methane issues. Commissioner Malarkey seconded the motion and it passed with four "yes" votes.

#### **N. Commissioners' Reports**

Chair Eden reported the status of the Executive Review Panel, which was appointed by the Governor to report on the readiness of the Chemical Stockpile Emergency Preparedness Program.

Chair Eden adjourned the meeting at approximately 1:00 p.m. on September 21.

# A STRATEGY FOR ACHIEVING

# HEALTHY WATERSHEDS

# IN OREGON



The Oregon Watershed Enhancement Board

January 2001

# A GRAPHIC OVERVIEW

## PLANNING

### OWEB's VISION

*"To help create and maintain healthy watersheds and natural habitats that support thriving communities and strong economies."*

**Benchmarks**  
measure progress toward achieving the vision.  
(2001-2003)

### Outcomes

move Oregon toward the vision.

### Strategies

OWEB will use to achieve outcomes.

### Work Plans

contain OWEB actions and timelines for implementing strategies.  
(2001-2003)

**OUTCOME ONE**  
Effective and accountable investment in watershed health

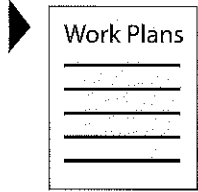
- 1 Statewide Strategy
- 2 Local Priorities
- 3 Monitor Progress
- 4 Exchange Information
- 5 Report Results

**OUTCOME TWO**  
Partnering to achieve watershed health

- 6 Shared Government Priorities
- 7 Public/Private Relationships
- 8 Local Partnerships
- 9 Research

**OUTCOME THREE**  
Citizen understanding of watershed health

- 10 Support Local Education Efforts
- 11 Reach Out to Citizens and Youth



## IMPLEMENTATION



“Healthy, functioning watersheds provide clean drinking water, diverse plant and animal life, flood control, recreational opportunities, and other resources. OWEB’s vision is to take a lead in helping Oregonians improve watershed health and functions, supporting a sustainable economy and quality of life now and in the future.”

– Mark Reeve

Environmental Quality Commission  
Member and Co-Chair of the Oregon  
Watershed Enhancement Board

## OVERVIEW

The Oregon Watershed Enhancement Board (OWEB) is charged with promoting and funding voluntary actions aimed at enhancing Oregon’s watersheds. The Board is structured to foster collaboration among citizens, agencies, and local interests to accomplish this charge. Such collaboration supports Oregon’s statewide efforts to restore critical salmon runs, improve water quality across the landscape, and enhance the biodiversity of ecosystems that are critical to achieving healthy watersheds. OWEB administers a grant program that awards more than \$20 million annually to support voluntary efforts by Oregonians consistent with this charge.

*A Strategy for Achieving Healthy Watersheds in Oregon* presents the Board’s vision for OWEB as it emerges as a newly created agency with an enhanced role and a long-term endowment of funds. This plan identifies three broad *outcomes* which if achieved will move Oregon toward OWEB’s vision for sustainable, healthy watersheds. They are: greater accountability for the results of our investments in Oregon watersheds; partnering to advance local restoration efforts; and greater citizen understanding of the health of their local watershed. To achieve these outcomes, OWEB presents eleven *strategies* which the Board will seek to implement so that every individual action is taken in the context of a single overarching vision: *to create and maintain healthy watersheds and natural habitats that support thriving communities and strong economies.*

In the year 2001, OWEB will seek broad public input on the *outcomes* and *strategies* outlined in this document both in a variety of public forums and by soliciting comments on the agency’s Web site located at [www.oweb.state.or.us](http://www.oweb.state.or.us). In addition, the Board encourages everyone interested in our mission to suggest opportunities and approaches for implementing these strategies.

For many years, vitality and innovation have spirited Oregon’s support for voluntary individual efforts to enhance the State’s watersheds. This strategy is initiated with the intent of honoring and building on these efforts so that a meaningful and lasting legacy results.

**OWEB'S VISION** To help create and  
maintain healthy watersheds and natural habitats  
that support thriving communities and strong  
economies.



# OUTCOMES & STRATEGIES

## OUTCOME ONE

EFFECTIVE AND ACCOUNTABLE INVESTMENT IN WATERSHED HEALTH

- 1 FRAME A STATEWIDE STRATEGY** A statewide watershed strategy will coordinate effective investments in watershed health with restoration planning efforts. ....
- 2 INTEGRATE LOCAL PRIORITIES** Locally sponsored priorities and plans will coordinate restoration projects to support a statewide watershed strategy. ....
- 3 MONITOR PROGRESS** A comprehensive monitoring plan, based on shared protocols for collecting and managing data, will provide information on watershed conditions across the state. ....
- 4 FOSTER INFORMATION EXCHANGE** A clearinghouse of information on watershed conditions in Oregon will promote the use of shared data protocols and serve all local, state, and federal partners in restoration. ....
- 5 REPORT RESULTS** Public investments in watershed health will be reported clearly and the relationship between Oregon's investments and the economic well-being of communities will be promoted. ....

## OUTCOME TWO

PARTNERING TO ACHIEVE WATERSHED HEALTH

- 6 ESTABLISH SHARED GOVERNMENT PRIORITIES** Oregon public board and commissions will share priorities with federal agencies for supporting watershed enhancement work, and this will be demonstrated by coordination of agency programs within watershed councils. ....
- 7 ENHANCE PUBLIC/PRIVATE RELATIONSHIPS** Relationships between public and private interests will support watershed health by targeting funds to shared priorities, producing incentives for local participation, and providing tools and materials for watershed enhancement. ....
- 8 PROMOTE LOCAL PARTNERSHIPS** OWEB incentives and programs will promote fully developed partnerships and coordination between watershed councils, soil and water conservation districts, tribes, and others who support landowner restoration efforts. ....
- 9 INITIATE RESEARCH** Research projects will advance state and local priorities for understanding and achieving watershed health. ....

## OUTCOME THREE

CITIZEN UNDERSTANDING OF WATERSHED HEALTH

- 10 SUPPORT LOCAL EDUCATION EFFORTS** OWEB will promote the role of watershed councils and soil and water conservation districts to undertake local outreach and education efforts. ....
- 11 REACH OUT TO CITIZENS AND YOUTH** Citizen understanding of watershed health will be advanced through outreach and education opportunities for the general public and youth. ....

## BIENNIAL REPORT

1997-1999

A profile of the Governor's Watershed Enhancement Board work in the 1997-1999 biennium

*“OWEB intends to be a leader in strengthening Oregon’s  
accountability for public investments in watershed health.”*

**- Jane O’Keeffe**

Lake County Commissioner and public member of  
the Oregon Watershed Enhancement Board

## OUTCOME ONE

The results of investments in watershed health will demonstrate that OWEB has made a positive difference in the priorities of statewide watershed enhancement. Investments will be evaluated relative to long-term goals, reported regularly to citizens and policy makers, and clearly linked to healthy, economically viable communities.

# ACCOUNTABILITY

### **Effective and Accountable Investment in Watershed Health**

All Oregon governments and groups that invest public funds are accountable to Oregonians for the results of their efforts. Investing in watershed health is more effective when the actions of governments and groups are coordinated to achieve common goals and shared priorities. OWEB intends to be a leader in improving Oregon's accountability for investments targeted to enhance and restore watersheds.

### **OWEB is committed to achieving this outcome by implementing five strategies in its work as a Board and an agency.**

- Strategy 1: Frame a Statewide Strategy
- Strategy 2: Integrate Local Priorities
- Strategy 3: Monitor Progress
- Strategy 4: Foster Information Exchange
- Strategy 5: Report Results



## STRATEGY 1

FRAME A  
STATEWIDE  
STRATEGY

*A statewide watershed strategy  
will coordinate effective  
investments in watershed health  
with restoration planning efforts.*

**What is it?**

A statewide watershed strategy provides shared priorities for improving watershed health, based on complete information on the conditions of our watersheds. Common priorities for enhancing watershed function support the Oregon Plan for Salmon and Watersheds by improving the effectiveness of our restoration efforts, whether we are restoring instream habitats, estuaries, riparian zones, or upland areas.

Across the state, local groups are systematically assessing watershed conditions to determine problems and restoration opportunities using the *Oregon Watershed Assessment Manual*. The information gained from assessments provides a necessary starting place for planning ways to restore watershed function. As councils complete assessments, they collaborate with landowners, soil and water conservation districts (SWCDs), businesses, government, and others on restoration projects designed to resolve problems and improve watershed health. When aggregated, watershed assessments will play a critical role in developing a statewide strategy that points us toward key restoration opportunities in each region of the state.

**Why is it important?**

To get the most from our investments to achieve sustainable, healthy watersheds, there must be a deliberate, statewide strategy for funding watershed assessment and restoration activities. A strategy must target investments to address priority problems identified by assessments, and take advantage of restoration opportunities unique to each watershed. Support for voluntary efforts of landowners, watershed councils, and others to improve their watersheds must be provided in the context of a larger effort, seeking to provide the most restoration benefit possible for each dollar invested.

**Where we are and where we're going**

Watershed conditions differ in Oregon's coastal range, Columbia plateau, Willamette River valley, high central desert, and southeastern region; and restoration strategies in these areas should reflect differing conditions. While assessments of watershed conditions in the coastal and Willamette basins are either complete or actively progressing toward completion, many watersheds in central and eastern Oregon have not been evaluated using a standardized assessment approach. OWEB believes it is important to finish assessing conditions in all

- 1 FRAME A STATEWIDE STRATEGY
- 2 INTEGRATE LOCAL PRIORITIES
- 3 MONITOR PROGRESS
- 4 EXCHANGE INFORMATION
- 5 REPORT RESULTS



regions of the state so that a picture of restoration opportunities in each region can be developed to guide investment decisions. To meet this need in the year 2001 and beyond:

- OWEB is targeting funds to work with councils to complete watershed assessments in priority areas, which include the Clackamas, Day, Grande Ronde, Umatilla, Deschutes, Hood River, and Willamette Basins, and minor tributaries to the Columbia River.
- OWEB has applied to the Northwest Power Planning Council for funds to complete watershed assessments in the Columbia River Basin using the widely accepted framework of the Oregon Watershed Assessment Manual and will solicit participation from councils and others.
- OWEB is cooperating with state and federal agencies to develop guidance for creating restoration strategies that will support the Northwest Power Planning Council subbasin planning process and the Board will press for recognition of these strategies as compatible with the Endangered Species Act (ESA) requirements for protected species. Every effort must be made to harmonize restoration goals with those identified by the federal agencies and to coordinate charges with recovery of species listed under the ESA.
- OWEB intends to provide a spatial picture of the limiting factors in each hydrologic basin by compiling priority problems identified by local assessments and entities. OWEB is taking the first step to compile restoration priorities for each basin in areas where assessments are complete or other information is available.
- The final step in creating a statewide strategy will be to coordinate the watershed restoration work that is occurring at local and federal levels to create a set of shared, regional restoration strategies that aggregate and enhance local priorities. This will allow local groups to chart the course within their watershed in the context of addressing broader regional restoration goals.



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[www.oweb.state.or.us](http://www.oweb.state.or.us)



STRATEGY 2

INTEGRATE LOCAL PRIORITIES

*Locally sponsored priorities and plans will coordinate restoration projects to support a statewide watershed strategy.*

**What is it?**

Ultimately, real progress will be made and measured watershed by watershed—by those who call the watershed home and tackle issues identified locally. While a statewide plan that guides strategic investment in watershed restoration activities will provide an important compass for Oregon’s effort, it must be based on locally sponsored restoration priorities. Local priorities are the foundation of the Oregon Plan for Salmon and Watersheds—our approach to improving important natural habitats and sustaining watershed functions over time.

**Why is it important?**

Locally developed priorities and plans are a powerful tool for increasing community support and participation in watershed restoration. Given the breadth of privately owned lands and the diversity of land ownership in Oregon, locally sponsored priorities for taking care of our watersheds are essential to restoration and long-term stewardship.

**Where we are and where we’re going**

The day is coming when preference for funding watershed restoration work will be given to projects that implement locally established priorities based on an assessment of local watershed conditions. Indeed, OWEB has already started to move in that direction. The Board is now developing a small grant program that will make watershed improvement funds more easily available to landowners for activities that are prioritized by councils and soil and water conservation districts (SWCDs) as most effectively addressing local watershed conditions.

In the year 2001 and beyond, OWEB plans to take the following steps to foster local priorities that support a statewide restoration strategy.

- OWEB will target funds to complete watershed assessments in priority basins and encourage development of local restoration plans from assessment information.
- OWEB will launch an enhanced small grant program designed to foster coordination between watershed councils and SWCDs, and to target funds to locally sponsored priorities.
- OWEB will initiate a process for linking local priorities to development of regional investment goals so that public funds are most effectively invested.



- 1 FRAME A STATEWIDE STRATEGY
- 2 INTEGRATE LOCAL PRIORITIES
- 3 MONITOR PROGRESS
- 4 EXCHANGE INFORMATION
- 5 REPORT RESULTS



- In addition, OWEB recognizes the need for local collaboration among watershed councils and SWCDs in the development of shared restoration priorities, and will work to create mechanisms that address this need.

OWEB is taking these steps and making these plans recognizing that a single entity has a paramount role in creating local or regional strategies for restoration. Local citizens and groups have the greatest understanding of watershed priorities in their local areas. OWEB has been successful in the role of nesting locally crafted priorities within the larger context of regional resource concerns in order to support a statewide watershed restoration strategy. OWEB will continue to depend upon local watershed councils, SWCDs, tribes, local government, and others—to assist with this charge.



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## STRATEGY 3

MONITOR  
PROGRESS

*A comprehensive monitoring plan, based on shared protocols for collecting and managing data, will provide information on watershed conditions across Oregon.*

**What is it?**

Three general types of monitoring support a strategy for successful investment in watershed health: implementation, evaluation, and validation monitoring. Implementation monitoring determines if watershed restoration projects were completed correctly; evaluation monitoring learns whether our actions adequately addressed the problems as we expected; and validation monitoring determines if our solutions cumulatively had the desired effect in the watershed. When based on shared protocols for collecting and managing data (see Strategies 4 and 5), the information gained from monitoring is more easily shared and applied to resource management decisions.

**Why is it important?**

Implementation monitoring is being done by local groups, landowners, and others on a project-by-project basis. Through the Oregon Plan Monitoring Team, state and federal agencies have initiated evaluation monitoring to learn how our restoration efforts are affecting species and watershed health. The Team coordinates interagency monitoring of water quality, species, and stream, estuarine, and upland conditions, as well as citizen compliance with environmental laws. The Team has also laid a foundation for validation monitoring to assess whether our collective actions are working to recover species and restore watersheds.

The Oregon State of the Environment Report 2000 recognizes the present need for a greater emphasis on validation monitoring. It concludes that most existing state programs lack the capacity to effectively measure ecological conditions and trends. It calls for the state to develop and institutionalize a statewide framework for assessing environmental conditions to provide a comprehensive picture of Oregon's environmental health.<sup>1</sup> OWEB agrees with this need and supports a greater emphasis on validation monitoring within the context of a durable framework that coordinates and promotes this work over time.

**Where we are and where we're going**

OWEB is charged with developing a comprehensive system for the collection, management, and reporting of natural resources information in Oregon (ORS 541.371(1)(d)). Carrying out this directive will ultimately depend on two things: collaboration among state and federal agencies, universities, and others to develop a common information management framework; and integration of watershed effectiveness and

<sup>1</sup> Oregon State of the Environment Report 2000, Statewide Summary, September 2000. Oregon Progress Board, p.71.



- 1 FRAME A STATEWIDE STRATEGY
- 2 INTEGRATE LOCAL PRIORITIES
- 3 MONITOR PROGRESS
- 4 EXCHANGE INFORMATION
- 5 REPORT RESULTS



species recovery validation monitoring into a single effort by and the Oregon Plan Monitoring Team.

In 2001-2003, OWEB will begin to build a statewide program the effectiveness of watershed restoration efforts. Some steps already been taken.

- OWEB partnered with the Oregon Plan Monitoring Team to provide a technical guidebook for citizens and local groups to monitor local water quality conditions in their watersheds.
- In June 2000, OWEB authorized investing up to \$412,000 for complete mapping of stream networks, salmon distribution, and water quality limited streams in Oregon at the 1:24,000 scale, an important foundation for local and state monitoring.
- Also in June 2000, OWEB invested \$391,580 in the National Heritage Advisory Council's development of a centralized information data base on sensitive, threatened, and endangered species. The project will update and digitize species data, complete riparian and wetland classification and mapping, and provide technical assistance to councils for watershed assessment and project planning.
- In September 2000, OWEB invested \$63,995 in fish monitoring projects critical to evaluating restoration effectiveness in the Rogue Basin and South Coast.
- OWEB is structuring a new way to track investments by basins of restoration activities undertaken in Oregon's basins and the critical factors limiting watershed health that are being addressed.
- OWEB monitors the progress of local restoration work statewide with the Watershed Restoration Inventory.

The Oregon Plan Monitoring Team has made significant strides in evaluating the impact of our actions and creating a foundation for determining our effectiveness over time. OWEB is committed to working with the Team and others to establish a comprehensive monitoring program that integrates these efforts and promotes shared information protocols, in order to provide Oregonians with consistent information about local watershed conditions over time.

 Thoughts? Ideas?  
Share with us at:  
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STRATEGY 4

EXCHANGE OF INFORMATION

*A clearinghouse of information on watershed conditions in Oregon will promote the use of shared data protocols and serve all local, state, and federal partners in restoration.*

**What is it?**

A clearinghouse is a type of library that receives, organizes, and provides information. The clearinghouse OWEB envisions would collect valuable information on the health of Oregon's watersheds and make that information easily available to people and groups who are working to improve watershed health statewide.

**Why is it important?**

Accurate, accessible information is an essential foundation for local restoration work that addresses the underlying sources of watershed problems as opposed to the observable symptoms of those problems.

The Oregon State of the Environment Report 2000 confirms what many have experienced: there is no single entity currently responsible for coordinating the collection, management, and distribution of environmental data in the state, and thus it can be both confusing and difficult to obtain information needed for restoration work. Specifically, the report recognizes that no system exists to link all data sources to a common network to support the sharing of data among agencies and other users.<sup>2</sup> As a result, sharing is difficult, cooperative development of information and conclusions is uncommon, and little information exists to provide a comprehensive picture of the health of any given watershed.

Standard protocols for collecting and managing data are needed as part of a comprehensive monitoring program (see Strategy 3) to improve information sharing and availability in Oregon. An information clearinghouse would promote the use of data protocols, identify critical data gaps, and incorporate new information into a growing statewide assessment of watershed conditions.

**Where we are and where we're going**

OWEB has taken several steps to coordinate and synthesize data collection, meet information needs, and make information more accessible.

- In 2000, OWEB invested \$1,053,058 in new data bases to address critical information needs, and through investments, required the use of shared data protocols. These included up to \$412,000 to complete mapping of stream networks, salmon distributions, and water quality limited streams for the state, all at the 1:24,000 scale.

<sup>2</sup>Oregon State of the Environment Report 2000. Oregon Progress Board, p.146.

- 1 FRAME A STATEWIDE STRATEGY
- 2 INTEGRATE LOCAL PRIORITIES
- 3 MONITOR PROGRESS
- 4 EXCHANGE INFORMATION
- 5 REPORT RESULTS



- OWEB partnered with the Oregon Plan Monitoring Team to provide guidance for citizens and local groups on using standard data protocols in collecting data on local water quality conditions.
- OWEB provides information on the progress of local watershed restoration work being done by citizens, agencies, and organizations statewide in the Annual Watershed Restoration Inventory.

These are important steps to making natural resource data more complete and useful in watershed restoration. But much more is needed.

- OWEB supports the long-term funding of a data library that coordinates the collection, management, and distribution of natural resource information. The Board is committed to working with the Oregon Geographic Information Council and other organizations and universities to accomplish this.
- OWEB supports the establishment of shared protocols for collecting and managing data in order to facilitate and promote information exchange. While OWEB can influence the development of shared protocols by targeting its investments, the agency cannot require the adoption of protocols by other natural resource agencies and entities. OWEB concurs with the State of the Environment Report and recognizes the need to establish a lead agency responsible for coordinating the development of shared protocols. OWEB has submitted a 2001-2003 budget request to the Legislature that moves toward addressing this need.

OWEB cannot accomplish this outcome alone. The Board is committed to being a voice that continues to advocate for restructuring, funding, and funding current information systems to meet the needs identified in the State of the Environment Report and to support local watershed restoration.



STRATEGY 5

# REPORT RESULTS

*Public investments in watershed health will be reported clearly, and the relationship between Oregon's investments and the economic well-being of communities will be promoted.*

**What is it?**

Reports on the investment of public funds in watershed restoration should provide Oregonians with four fundamental types of information. First, they should show the types of project activities that resulted from the public dollars invested. Second, they should describe the relationship between the dollars invested and the most significant problems identified in the watershed. Third, they should report overall changes in watershed health that can be attributed to the investments. Fourth, reports should portray how our investments relate to local community and economic well being.

**Why is it important?**

Clear, understandable reports of the results of Oregon's investment in watershed restoration are an essential part of a comprehensive monitoring program (see Strategy 3) that tracks changes in watershed conditions. Effective reports are also needed to maintain accountability for the use of public funds and provide people with accurate information about their local watershed over time. OWEB has an opportunity to foster a system that meets these needs and coordinates the involvement of other agencies, stakeholders, and local groups in reporting progress.

**Where we are and where we're going**

OWEB has taken steps to report the investment of public funds in watershed restoration and to make this information easy to understand and use.

- OWEB maintains a Watershed Restoration Inventory that tracks the progress of landowners, watershed councils, SWCDs, and other local groups in doing watershed improvement projects. An annual report on the Inventory provides a picture of the type of watershed work that is happening statewide to help us determine the effectiveness of our investments. Moving forward, this report will incorporate federal restoration projects and will show all activities on a basin-wide scale.
- OWEB systematically tracks the status of all grants and reports the amount of funds being used in each region for on-the-ground restoration projects, watershed assessment, monitoring, education and outreach, and watershed council support.

- 1 FRAME A STATEWIDE STRATEGY
- 2 INTEGRATE LOCAL PRIORITIES
- 3 MONITOR PROGRESS
- 4 EXCHANGE INFORMATION
- 5 REPORT RESULTS



- OWEB has cooperated in the development of a consistent methodology for federal and state reporting of watershed restoration activities on a basin-wide basis.

OWEB recognizes the need to be able to portray investments in watershed restoration and the restoration benefits they intend to achieve. While some on-ground restoration work is producing immediate benefits, others are designed to provide cumulative, long-term improvements that will not be fully realized over the course of one, five, or ten years. Reporting should account for these long-term benefits and show the relationship between the types of restoration projects being funded and the critical factors limiting watershed health. Geographic Information System (GIS) technology is an important tool for illustrating critical problems that are being addressed statewide.

For the year 2001 and beyond, OWEB will be building information systems to provide Oregonians with a clear and accurate picture of how public investments are benefiting watersheds and communities.

- OWEB is developing a new way to track restoration investments by the types of restoration activities undertaken and the critical factors limiting watershed health that are being addressed. This information will help us clearly report the progress of watershed restoration activities in each basin across the state.
- OWEB commissioned a study by the University of Oregon to evaluate and report the impact of our watershed health on local communities and economies.
- As part of OWEB's review of proposals for acquiring land and water rights to support restoration, OWEB considers potential economic impacts of the proposal to the local community as well as the level of community support for the project.

OWEB will continue to collaborate with other agencies and with experts to demonstrate how public investments are improving watershed health and supporting community prosperity. As a leader in this effort, OWEB will work to identify key players and build coordination to move forward toward this goal.



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## STRATEGY 6

# ESTABLISH SHARED GOVERNMENT PRIORITIES

*Oregon public boards and commissions will share priorities with federal agencies for supporting watershed enhancement work, and this will be demonstrated by coordination of agency programs within watersheds.*

### What is it?

Boards and commissions guide state agencies, establish policies, and set priorities for agency programs. *Shared* priorities for watershed restoration means helping to build cooperation across agency boundaries—both state and federal—and with other entities in order to achieve common objectives. Greater collaboration between agencies will also help strengthen public/private partnerships and enhance local and regional cooperation.

### Why is this important?

A key component of the Oregon Plan for Salmon and Watersheds is the coordination of state and federal agency programs around common goals for restoring watershed health. The OWEB Board is uniquely positioned to facilitate greater coordination, with six voting public members from all regions of the state including a tribal representative, five voting members of other state natural resource agency boards and commissions, five non-voting representatives of federal natural resource agencies, and a representative of the Oregon State University Extension Service. The Legislature specifically charged OWEB to nurture shared priorities and fund program initiatives supporting the Oregon Plan (ORS 541.371).

### Where we are and where we're going

OWEB is currently active in building partnerships to address shared priorities and support for local voluntary restoration efforts.

- State and federal agencies, OSU Extension, and others with knowledge of local conditions come together to review applications for watershed restoration grant funds through OWEB, in order to make investment recommendations to the Board.
- OWEB allocates funds to restoration efforts for the federal Pacific Coastal Salmon Recovery Fund, and coordinates public agency use of these funds for high priority initiatives that support broad Oregon Plan objectives. In 2000, OWEB used these funds to support initiatives sponsored by seven state agencies.
- OWEB establishes partnerships with other state agencies that serve common agency goals. As an example, OWEB committed \$917,500 in June 2000 for the acquisition and protection of Whalen Island in Tillamook County in partnership with Oregon Parks and Recreation Department and the county commission.



6 ESTABLISH SHARED GOVERNMENT PRIORITIES

7 ENHANCE PUBLIC/PRIVATE RELATIONSHIPS

8 PROMOTE LOCAL PARTNERSHIPS

9 INITIATE RESEARCH



- In September 2000, the Board joined together with the Board of Agriculture and the Weed Board to conduct a forum in Enterprise, Oregon, highlighting local restoration efforts and to discuss common priorities.
- OWEB maintains a Watershed Restoration Inventory that tracks and coordinates information on the progress of local efforts and provides a comprehensive view of our combined accomplishments. Federal land managers contribute extensively to this inventory and are currently working with OWEB to coordinate restoration efforts. Important information about restoration efforts on public lands is being shared.

In 2001 and beyond, OWEB will build partnerships among government agencies and implement shared priorities. As part of these efforts:

- OWEB will aggressively pursue programmatic recognition of Oregon Plan activities under the federal Endangered Species Act and National Marine Fisheries Service and U.S. Fish and Wildlife Service.
- OWEB will actively support the subbasin planning program of the Northwest Power Planning Council and work to ensure that Oregon's watershed assessment efforts are fully integrated into the federal process with common priorities for investment.
- The Board will meet jointly with the Oregon Fish and Wildlife Commission and Environmental Quality Commission in 2001.
- OWEB will target grant programs to support implementation of locally crafted water quality management plans.
- OWEB will work with the Oregon Water Resources Department and Oregon Department of Fish and Wildlife to develop shared priorities for enhancing streamflows in Oregon.

Many natural resource agency programs critical to the Oregon Plan are chronically underfunded. While OWEB cannot compensate for program funding shortfalls, the Board intends to help coordinate efforts most important to the Oregon Plan and find resources to help agencies fulfill their commitments to salmon and watershed restoration. OWEB's leadership in developing shared priorities can help agencies improve program delivery within existing resources.



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## STRATEGY 9

# INITIATE RESEARCH

*Research projects will advance state and local priorities for understanding and achieving watershed health.*

### **What is it?**

We have much to learn about what salmon need, how watersheds function, and how to achieve our goal of sustainable watershed health. Scientific research can improve the ways we work to restore watersheds by helping us understand the effectiveness of current approaches and by testing new strategies to improve our success. To be meaningful, the research results must be made accessible to all restoration partners, presented clearly, and aligned with implementation needs for salmon and watershed restoration.

### **Why is this important?**

Scientific learning is a foundation of the Oregon Plan and is critical to knowing how to best achieve watershed health. Adaptive management—evaluating the effectiveness of our actions and making improvements to watershed restoration efforts over time—is a commitment made by the plan. Presently, there is a need for scientific research to provide us with information and guidance necessary to practice adaptive management effectively. The Oregon State of the Environment Report 2000 recognizes this need and concludes that few data and models exist to help us understand the degree to which we are sustaining naturally functioning landscapes, the productive capacity of the environment, or in some cases, the extent to which we are meeting environmental laws.<sup>3</sup>

The State Legislature and Governor recognize the critical role of the Oregon Plan Independent Multidisciplinary Science Team (IMST) in evaluating the effectiveness of current restoration efforts and recommending improvements. As a funding body for research to support restoration, OWEB can help address the information needs noted by the State of the Environment Report and identified by the IMST and other restoration partners.

### **Where we are and where we're going**

In January 2001, OWEB adopted a strategy to guide its investments in key research needs supporting salmon and watershed restoration, and is now working to put the strategy into action. OWEB's investment in research will be guided by four fundamental principles:

1. *Identify critical information needs* – build on recommendations of the IMST, agencies, stakeholders, and others to synthesize important knowledge needs to advance our salmon and watershed restoration efforts.

<sup>3</sup> Oregon State of the Environment Report 2000. Oregon Progress Board, p.147.



- 6 ESTABLISH SHARED GOVERNMENT PRIORITIES
- 7 ENHANCE PUBLIC/PRIVATE RELATIONSHIPS
- 8 PROMOTE LOCAL PARTNERSHIPS
- 9 INITIATE RESEARCH



2. *Fund research to address priority needs first* – establish research priorities and partner with the IMST and other experts to review, and fund proposals that address priority information needs.
3. *Communicate research results to users* – ensure the products of funded research are transmitted to all potential users of the information, working in partnership with a number of education and outreach organizations.
4. *Evaluate what is learned and determine new priority needs* – engage agencies, stakeholders, scientists, and others to evaluate research results, determine how best to apply what is learned, and identify new priority information needs.

In 2001, OWEB intends to put this strategy into action and address the following:

- Initiate a broad public process to identify critical information needs that will advance Oregon’s salmon and watershed restoration efforts (early 2001).
- Establish priorities for investing in research based on important knowledge needs (fall 2001).
- Solicit and review research proposals that address priority information needs and involve the IMST and other experts to support investment decisions of the Board (late 2001).

With this investment strategy, and with OWEB’s statutory charge to fund research related to the restoration of natural habitats and watershed health (ORS 541.378), OWEB is uniquely positioned to address some of our critical knowledge needs to facilitate adaptive management of the Oregon Plan.

*“OWEB has an important role in providing all Oregonians—  
living in both urban and rural areas—with opportunities to  
better understand the health of their local watershed and  
become more involved in restoration.”*

**–George Brown**

Dean Emeritus of Oregon State University College of Forestry and  
public member of the Oregon Watershed Enhancement Board

## OUTCOME THREE

Every Oregonian will be familiar with their watershed, understand how individual actions influence watershed health, and act accordingly.

OWEB will be a recognized leader in fostering public wisdom in the care of Oregon watersheds.

# UNDERSTANDING

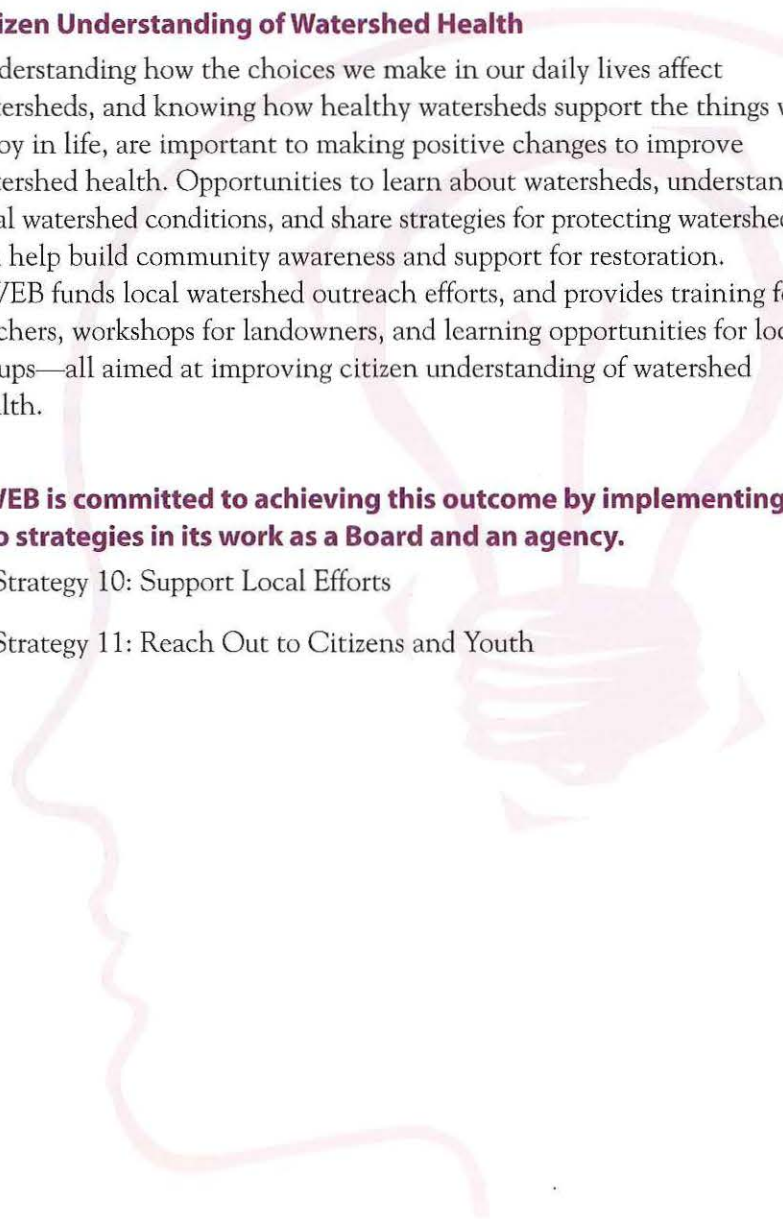
### **Citizen Understanding of Watershed Health**

Understanding how the choices we make in our daily lives affect watersheds, and knowing how healthy watersheds support the things we enjoy in life, are important to making positive changes to improve watershed health. Opportunities to learn about watersheds, understand local watershed conditions, and share strategies for protecting watersheds can help build community awareness and support for restoration. OWEB funds local watershed outreach efforts, and provides training for teachers, workshops for landowners, and learning opportunities for local groups—all aimed at improving citizen understanding of watershed health.

### **OWEB is committed to achieving this outcome by implementing two strategies in its work as a Board and an agency.**

Strategy 10: Support Local Efforts

Strategy 11: Reach Out to Citizens and Youth





## STRATEGY 10

# SUPPORT LOCAL EFFORTS

*OWEB will promote the role of watershed councils and soil and water conservation districts to undertake local outreach and education efforts.*

### **What is it?**

Watershed councils and soil and water conservation districts (SWCDs) routinely provide opportunities for citizens to better understand the health of their local watershed. These groups reach out to residents, landowners, and local partners to build community vision and support for watershed restoration efforts. OWEB is charged with supporting these local efforts, and is uniquely positioned to advance a strategy that leverages and promotes the capacity of councils and SWCDs to do outreach and education work.

### **Why is this important?**

While OWEB already funds education and outreach projects sponsored by councils and SWCDs, it is clear that more resources and support are needed. OWEB has an established relationship with these local groups, and can be an effective partner in their educational efforts by leveraging state resources with other fund sources and targeting investments to support effective efforts. Doing so can help provide councils and SWCDs with needed tools, information, training opportunities, and other resources in the context of a statewide effort designed to support these entities.

### **Where we are and where we're going**

OWEB currently supports councils and SWCDs in their citizen-learning efforts by providing grants to address local outreach and education priorities. In addition, OWEB provides learning opportunities and tools designed specifically for councils and SWCDs to make them more effective in their work.

- OWEB coordinates a biennial statewide conference convening watershed councils, SWCDs, and citizens to discuss progress, share lessons learned, and develop more effective approaches to restoration. The 2000 conference was held jointly with the Oregon Association of Conservation Districts and drew over 600 participants from across the state.
- OWEB sponsors workshops for councils, SWCDs, and others on building technical restoration skills, including watershed assessment, culvert improvement, and the use of geographic information systems.



- OWEB provides community-building training for council SWCDs on citizen outreach, meeting management, dispute resolution, and fiscal management.
- OWEB provides technical guidance and tools to local groups assessing watershed conditions, monitoring water quality, planning restoration work.
- OWEB funds water quality monitoring equipment and training to help local groups engage students in assessing watershed conditions so they better understand activities that impact watersheds in their community.
- OWEB funds community outreach tools, such as council newsletters, including the *Applegator*, *Curry Currents*, and the *Mt. Hood Watersheds News*.

In the 2001-2003 biennium, OWEB will work with watershed groups and SWCDs to determine ways to more strategically support these groups as they work to improve citizen understanding of local watersheds. Ultimately, OWEB intends to implement a citizen-learning program focused on providing adequate resources to help council SWCDs engage community members and landowners in understanding the importance of local restoration work.



## STRATEGY 11

# REACH OUT TO CITIZENS AND YOUTH

*Citizen understanding of watershed health will be advanced through outreach and education opportunities for the general public and youth.*

### **What is it?**

OWEB envisions every Oregonian knowing their watershed and how to act to ensure that its health is sustainable for present and future generations. OWEB can advance this vision by building on existing programs and targeting funds toward education and outreach efforts that effectively address the learning needs of the general public and youth.

### **Why is this important?**

Oregonians are making changes in their daily lives to create healthy, sustainable watersheds and community economic well being. These changes are founded on an awareness of how watersheds work, how we influence watershed health, and how watersheds can be protected and restored. OWEB investments in targeted education and outreach projects can be an important tool in improving this citizen awareness, now and in the future.

### **Where we are and where we're going**

OWEB currently invests in a number of unique programs that provide learning opportunities for citizens, landowners, educators, and youth.

- OWEB funds development of comprehensive education curricula on how watersheds function and can be restored, including *The Stream Scene* and *Watershed Uplands Scene*.
- OWEB supports workshops for K-12 teachers on using watershed education curriculum in class and doing hands-on projects.
- OWEB funds activities sponsored by school districts that provide environmental education opportunities for students.
- OWEB supports the Oregon Trout Salmon Watch Program which brings students outdoors to see and learn about spawning salmon.
- OWEB funds workshops for landowners on innovative approaches to watershed conservation and restoration.
- OWEB funds the Oregon Cattlemen's Association WEST Program to enhance landowner understanding of watershed and riparian function and water quality monitoring protocols.





- OWEB supports the Watershed Stewardship Education provided by Oregon State University Extension Service to help residents and volunteers be good stewards of the sheds, with important background information, exercise and resources for gaining assistance.

In 2001 and beyond, OWEB intends to focus its support for citizen understanding of the importance of healthy watershed partnering with established programs that offer effective outreach education opportunities for the general public, landowners, and youth.

# PROFILE OF THE 1997-1999 BIENNIUM

Summary of the Governor's Watershed Enhancement Board work  
1997-1999 biennium, as contemplated by ORS 541.392.

## Statewide Accomplishments:

Provided support for 45 watershed councils (currently OWEB provides grants to support 55 of the more than 90 councils that exist in Oregon)

Received nearly \$1,000,000 of federal funds for local restoration activities

Supported the technical assistance efforts of Oregon Departments of Forestry and Agriculture

Supported the compliance of agricultural and forest industries with Clean Water Act and Endangered Species Act requirements by funding technical assistance for landowners

Funded outreach and education for landowners including newsletters by local groups and technical workshops and training on restoration practices

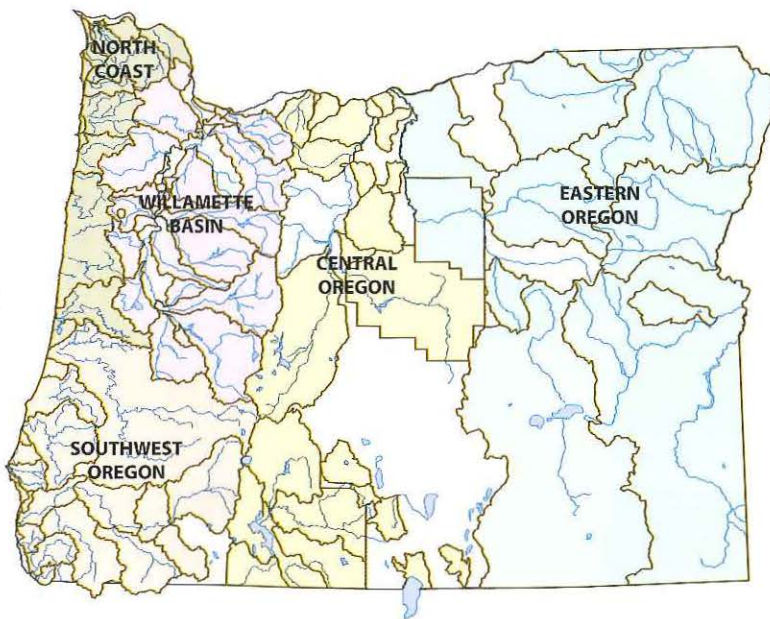
Initiated watershed assessments in all regions, with prioritized work in the North Coast Region as part of Oregon Plan implementation

Developed watershed assessment technical guidance for local councils

Printed and distributed common water quality monitoring guidance developed by the Oregon Plan Monitoring Team

Developed and began to implement the Conservation Reserve Enhancement Program (CREP) agreement with USDA, leveraging potentially more than \$280,000 in federal funds for riparian restoration

Maintained program overhead below 5%



**Oregon Watershed Council Boundaries**  
December 2000

## 1998-1999 Grant Administration Activity

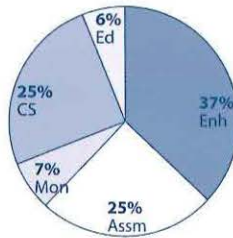
	North Coast	South west	Willamette Basin	Central Oregon	Eastern Oregon	State wide	Total
No. of Grants	127	161	97	50	92	34	561
Grants awarded	102	113	44	34	57	7	357
Dollars sought	\$5,435,866	\$16,306,634	\$4,419,828	\$1,709,502	\$3,747,988	\$2,073,925	\$33,693,743
Dollars awarded	\$3,369,010	\$5,760,876	\$1,633,079	\$1,396,114	\$2,597,341	\$271,786	<b>\$15,028,206</b>
Other funding to support the Oregon Plan for Salmon and Watersheds							\$6,796,025
							<b>\$21,824,231</b>



## Regional Highlights:

### North Coast

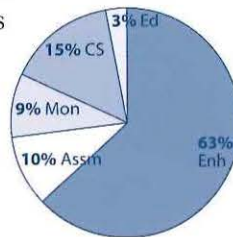
- Awarded \$3,369,010 to North Coast grant applicants
- Majority of grants were for on-the-ground projects, including instream, riparian, and wetland restoration
- Councils were supported throughout the North Coast
- Watershed assessments were initiated for nearly the entire region



Grants awarded in the North Coast \$3,369,010

### Southwest Oregon

- Awarded \$5,760,876 to Southwest Oregon grant applicants
- Majority of grants were for on-the-ground projects, riparian restoration (185 miles), removal of barriers to fish passage (84 projects), and road rehabilitation (11 miles)
- Critical monitoring of fish populations and water quality was funded



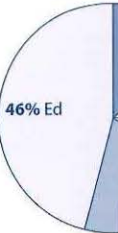
Grants awarded in Southwest Oregon \$5,760,876

#### Grant Type:

- ◆ Enhancement (Enh)
- ◇ Assessments (Assm)
- ◇ Monitoring (Mon)
- ◇ Council Support (CS)
- ◇ Education/Outreach (Ed)

### Willamette Basin

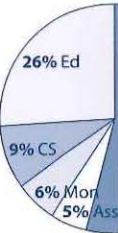
- Awarded \$1,633,079 to Willamette Basin grant applicants
- Significant funding went to council support to initiate local efforts
- Limited number of on-the-ground projects, wetland restoration, and barrier removal projects
- Significant investment in education and outreach efforts



Grants awarded in the Willamette Basin \$1,633,079

### Central Oregon

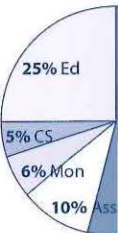
- Awarded \$1,396,114 to Central Oregon grant applicants
- Majority of grants were for on-the-ground projects, riparian restoration (21 miles), removal of fish passage barriers (11 barriers), and cost-shared conservation tillage (6,300 acres)
- Initiated council support and council formation



Grants awarded in Central Oregon \$1,396,114

### Eastern Oregon

- Awarded \$2,597,341 to Eastern Oregon grant applicants
- Majority of grants were for on-the-ground projects, riparian restoration (27 miles), range reseeding (2,830 acres), removal of fish passage barriers (18 barriers), road rehabilitation (21 miles), and reduced forest fuel loading (300 acres)
- Supported integrated water quality monitoring



Grants awarded in Eastern Oregon \$2,597,341



**Oregon Watershed Enhancement Board**

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