

5/16/1980

**OREGON
ENVIRONMENTAL QUALITY
COMMISSION MEETING
MATERIALS**



**State of Oregon
Department of
Environmental
Quality**

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OREGON ENVIRONMENTAL QUALITY COMMISSION MEETING

May 16, 1980

Hearing Room B
State Capitol Building
Salem, Oregon

REVISED TENTATIVE AGENDA

9:00 am CONSENT ITEMS

Items on the consent agenda are considered routine and generally will be acted on without public discussion. If a particular item is of specific interest to a Commission member, or sufficient public interest for public comment is indicated, the Chairman may hold any item over for discussion.

- A. Minutes of the April 18, 1980, Commission meeting.
- B. Monthly Activity Report for April 1980.
- C. Tax Credit Applications.

POSTPONED

- ~~D. Request for authorization to conduct a public hearing for revising the State Implementation Plan (SIP), OAR 340-31-010 regarding the State Ozone Ambient Air Quality Standard Attainment Plan Schedule.~~

POSTPONED

- ~~E. Request for authorization to conduct a public hearing on amendments to the State Implementation Plan (SIP) regarding Rules for New Source Review and Prevention of Significant Deterioration (PSD) of Air Quality.~~

POSTPONED

- ~~F. Request for authorization to conduct a public hearing for revising the State Implementation Plan (SIP) regarding the Special Rules for the Medford-Ashland Air Quality Maintenance Area (OAR Chapter 340, Division 30) affecting wigwam burners, schedules of compliance, and visible emissions from large wood-fired boilers.~~

POSTPONED

- ~~G. Request for authorization to conduct a public hearing for revising the State Implementation Plan (SIP) regarding the Salem Nonattainment Area Plan to meet the federal ozone ambient air quality standard.~~

- H. Request for authorization to conduct a public hearing to consider water quality rules governing approval or rejection of construction plans and specifications.

- I. Request for authorization to conduct a public hearing on proposed rules for "capping fill" alternative sewage disposal systems (OAR 340-71-039).

9:15 am PUBLIC FORUM

- J. Opportunity for any citizen to give a brief oral or written presentation on any environmental topic of concern. If appropriate the Department will respond to issues in writing or at a subsequent meeting. The Commission reserves the right to discontinue this forum after a reasonable time if an unduly large number of speakers wish to appear.

(MORE)

- 9:30 am K. Arlington Hazardous Waste Disposal Site - Request for issuance of hazardous waste disposal site license (number HW-1) to Chem-Security, Inc. for Arlington Hazardous Waste Disposal site.
- L. Columbia Sand and Gravel Pit - Request for hearing on the denial of Land Reclamation, Inc. application for a solid waste disposal facility permit.
- 10:00 am M. Medford Corporation - Hearing on the Medford Corporation Petition for Declaratory Ruling on applicability of OAR 340-30-060 to air conveying systems and veneer dryers.
- N. Sulfite Pulp Mill Regulation - Proposed adoption of modifications to the air quality sulfite pulp mill regulation (OAR 340-25-350 through 25-390).
- O. New Motorboat Noise Emission Limits - Proposed adoption of noise control regulation amendments to establish noise emission limits for new motorboats (OAR 340-35-025).
- P. Water Quality Rules - Proposed adoption of amendments to water quality rules which describe responsibility for pretreatment of industrial wastes discharged to publicly owned treatment works (OAR 340-45-063).
- Q. Subsurface Rules - Proposed adoption of temporary rule amending OAR 340-71-017(1), Inspection of Installed Subsurface Systems.

POSTPONED

- ~~R. Solid Waste Management - Proposed adoption of amendments to Oregon Administrative Rules to provide for siting of landfills by the Department (OAR Chapter 340, Division 61).~~

POSTPONED

- ~~S. State Financial Assistance to Public Agencies for Pollution Control Facilities for the Disposal of Solid Waste - Proposed adoption of amendments to Oregon Administrative Rules to provide for pass-through of federal money to local governments and require waste reduction program for funding (OAR Chapter 340, Division 82).~~

WORK SESSION

The Commission reserves this time if needed to further consider proposed action on any item on the agenda.

Because of the uncertain time span involved, the Commission reserves the right to deal with any item at any time in the meeting except those items with a designated time certain. Anyone wishing to be heard on an agenda item that doesn't have a designated time on the agenda should be at the meeting when it commences to be certain they don't miss the agenda item.

The Commission will breakfast (7:30 am) and lunch (noon) in the Blue Room in the basement of the Capitol Building.

THESE MINUTES ARE NOT FINAL UNTIL APPROVED BY THE EQC

MINUTES OF THE ONE HUNDRED TWENTY-FIRST MEETING
OF THE
OREGON ENVIRONMENTAL QUALITY COMMISSION

May 16, 1980

On Friday, May 16, 1980, the one hundred twenty-first meeting of the Oregon Environmental Quality Commission convened in Hearing Room B of the State Capitol Building in Salem, Oregon.

Present were all Commission members: Mr. Joe B. Richards, Chairman; Mr. Albert H. Densmore, Vice-Chairman; Mr. Ronald M. Somers; Mr. Fred J. Burgess; and Mrs. Mary V. Bishop. Present on behalf of the Department were its Director, William H. Young, and several members of the Department staff.

The staff reports presented at this meeting, which contain the Director's recommendations mentioned in these minutes, are on file in the Office of the Director of the Department of Environmental Quality, 522 Southwest Fifth Avenue, Portland, Oregon.

BREAKFAST MEETING

1. Willamette Valley Regional Manager's Report, Mr. John Borden, DEQ's Willamette Valley Regional Manager, presented a report to the Commission on activities in his Region. Mr. Borden's written report is made a part of the Commission's records.
2. Air Quality Offsets and Banking, Mr. E. J. Weathersbee, Administrator of the Department's Air Quality Division, reviewed for the Commission a preliminary draft rule on air quality offsets and banking. He indicated the staff was planning on having a rule ready for Commission adoption before the beginning of the next legislative session.

FORMAL MEETING

AGENDA ITEM A - MINUTES OF THE APRIL 18, 1980, COMMISSION MEETING

AGENDA ITEM B - MONTHLY ACTIVITY REPORT FOR APRIL 1980

AGENDA ITEM C - TAX CREDIT APPLICATIONS

AGENDA ITEM H - REQUEST FOR AUTHORIZATION TO CONDUCT A PUBLIC HEARING TO CONSIDER WATER QUALITY RULES GOVERNING APPROVAL OR REJECTION OF CONSTRUCTION PLANS AND SPECIFICATIONS

AGENDA ITEM I - REQUEST FOR AUTHORIZATION TO CONDUCT A PUBLIC HEARING ON PROPOSED RULES FOR "CAPPING FILL" ALTERNATIVE SEWAGE DISPOSAL SYSTEMS (OAR 340-71-039)

It was MOVED by Commissioner Somers, seconded by Commissioner Bishop and carried unanimously that the following action be taken in regard to the above agenda items:

Agenda Item A - Minutes of the April 18, 1980, Commission meeting be approved as presented.

Agenda Item B - The Monthly Activity Report for April 1980 be approved.

Agenda Item C - The following tax credit applications be approved, and applications T-1168 (Ellingson Lumber Company) and T-1197 (Menasha Corporation) be held over until the next meeting.

T-1150	Bohemia, Inc.
T-1155	Georgia-Pacific Corporation
T-1173	Bohemia, Inc.
T-1180	The Boeing Company
T-1182	Boise Cascade Corporation
T-1189	Lane Plywood, Inc.
T-1192	Naumes Orchards of Oregon, Inc.
T-1202	Crown Zellerbach Corporation
T-1203	Crown Zellerbach Corporation
T-1204	Crown Zellerbach Corporation
T-1211	Crown Zellerbach Corporation
T-1214	Crown Zellerbach Corporation

Agenda Item H - Public hearing authorized.

Agenda Item I - Public hearing authorized.

PUBLIC FORUM - No one wished to appear on any subject.

AGENDA ITEM N - SULFITE PULP MILL REGULATION - PROPOSED ADOPTION OF MODIFICATIONS TO THE AIR QUALITY SULFITE PULP MILL REGULATION (OAR 340-25-350 THROUGH 25-390)

This proposed modification to the sulfite pulp mill regulations deleted the ambient SO₂ monitoring requirement for small mills (Crown Zellerbach, Lebanon, is the only affected facility), specified emission testing methods, and deleted archaic language.

Director's Recommendation

Based upon the summation in the staff report, it is recommended that OAR 340-25-350 through 25-390, Air Quality Sulfite Pulp Mill Regulations, be amended as proposed.

It was MOVED by Commissioner Somers, seconded by Commissioner Densmore and carried unanimously that the Director's Recommendation be approved.

AGENDA ITEM Q - SUBSURFACE RULES - PROPOSED ADOPTION OF TEMPORARY RULE AMENDING OAR 340-71-017(1), INSPECTION OF INSTALLED SUBSURFACE SYSTEMS

The proposed rule would allow precover inspections of subsurface systems to be waived under certain conditions. The rule was proposed in response to the provisions of House Bill 2621, 1979 Oregon Legislative Session.

Mr. T. Jack Osborne, of the Department's Subsurface Sewage Section, told the Commission that this temporary rule may be amended as necessary in the next few months as part of the general rewrite of the subsurface regulations. Mr. Osborne indicated the Department received some suggestions on modifying this proposed temporary rule which would be looked at later.

Mr. Charles McCormick, Florence, thanked the Commission for their attention to this matter. He had appeared at their last meeting and requested this rule.

Mr. Roy Burns, Lane County, submitted a written statement, thanked the Commission for their rapid action on this matter, and stated that Lane County supported the adoption of the temporary rule. Mr. Burns' statement is made a part of the Commission's record in this matter.

Summation

1. House Bill 2621, 1979 Legislative Session, provided for flexibility in inspecting installed subsurface systems. That flexibility has not been incorporated into Administrative Rules.
2. Adoption of a temporary rule to become effective immediately is the alternative of choice in dealing with this situation.

Director's Recommendation

Based upon the Summation and the Findings included as Attachment B to the staff report, it is recommended that the Commission adopt the proposed temporary rule amending OAR 340-71-017.

Commissioner Somers proposed that the following be included in the proposed temporary rule (underlined portion is new wording):

340-71-017(1)(b) - The inspecting jurisdiction and the Department of Environmental Quality [has] have developed an impartial method...

It was MOVED by Commissioner Somers, seconded by Commissioner Bishop and carried unanimously that the Director's recommendation be approved including the amendment proposed by Commissioner Somers.

AGENDA ITEM K - ARLINGTON HAZARDOUS WASTE DISPOSAL SITE - REQUEST FOR ISSUANCE OF HAZARDOUS WASTE DISPOSAL SITE LICENSE (NUMBER HW-1) TO CHEM-SECURITY, INC. FOR ARLINGTON HAZARDOUS WASTE DISPOSAL SITE

On March 12, 1980, Chem-Security Systems, Inc., a wholly owned subsidiary of Chem-Nuclear Systems, Inc., applied for a license modification to operate the State's only hazardous waste disposal site known as the Arlington Pollution Control Center. The staff considered the license application and recommended issuance of the license.

Relative to the existing license, the following significant changes are included:

1. The expiration date is extended from February 20, 1981, to March 31, 1985.
2. The closure and post closure monitoring cash/surety bond is increased from \$75,000 to \$219,000 for 1980. Each year thereafter, for ten years, the total bond requirement is inflated at nine percent annually. The total bond requirement is met through an annual cash payment (\$25,000, which is up from \$5,625), a surety bond, an additional cash payment in lieu of a surety bond plus accrued interest on all cash bonds.
3. New language is added (Conditions C8 and C9) to provide the Commission with an opportunity to review and terminate the license if there is any doubt about the financial or technical management ability of the licensee or further issuance of capital stock shares in Chem-Security (initial issuance of 100 shares were to Chem-Nuclear Systems, Inc).
4. A deletion of the requirement to file a new disposal request any time the annual volume of waste from a generator increases by 50 percent over that originally authorized.
5. Included as part of the application is a guaranty of performance from the parent company, Chem-Nuclear Systems, Inc. which is effective for the term of the license.

During the discussions leading up to the final terms of the guaranty, Chem-Nuclear asked the Department to develop objective standards to be used to determine the continuing need for a guaranty beyond this initial license. The Department has expressed its willingness to try and develop such standards during the next six months. Such standards, if developed, would not be binding upon future participants in these matters but would be available for consideration at that time.

Director's Recommendation

Based upon the Summation in the staff report, it is recommended that the Commission issue a license for the Arlington Pollution Control Center to Chem-Security Systems, Inc. The Director shall establish and insert an effective date in the modified license upon a showing that:

1. The transfer of the Oregon property from Chem-Nuclear Systems, Inc. to Chem-Security Systems, Inc. has occurred, and
2. Chem-Security Systems, Inc. is in current compliance with Conditions C1 and C2 of the license.

It was MOVED by Commissioner Somers, seconded by Commissioner Densmore and carried unanimously that the Director's Recommendation be approved, with the further condition that it become effective when the guaranty conforms with the company by-laws including a resolution from the Board of Directors approving the guaranty and the guaranty signed by the company president and secretary-treasurer.

AGENDA ITEM L - COLUMBIA SAND AND GRAVEL PIT - REQUEST FOR HEARING ON THE DENIAL OF LAND RECLAMATION, INC. APPLICATION FOR A SOLID WASTE DISPOSAL FACILITY PERMIT

Mr. Ray Underwood, Department of Justice, explained to the Commission that this matter was based on a request for a contested case hearing. The hearing was foregone as a fact-finding process because the Department and the applicants entered into a stipulation of the facts. With regard to the Findings of Fact, and Conclusions of Law and Order of the Hearing Officer, Mr. Underwood said that was appealed to the Commission which resulted in this matter being before them in the same manner as a contested case hearing after a fact-finding hearing before a hearing officer. However, there was no fact-finding hearing in this case as the stipulation of facts was in lieu of that hearing.

Mr. Underwood presented the position of the Department in support of the Hearing Officer's Order, which supported the Department's rejection of the application of a solid waste disposal permit for the site known as Columbia Pit.

Mr. Richard J. Brownstein, Attorney for Land Reclamation, Inc. presented argument in favor of the Commission granting the disposal site permit.

Mr. Bryan Johnson, Mr. Randy Sweet, Mr. Arnold Cogan, and Mr. Ralph Gilbert all appeared in favor of the Department granting a permit to Land Reclamation, Inc. for a disposal site at Columbia Pit.

After some discussion among Commission members, Commissioner Somers MOVED, Commissioner Bishop seconded and the motion was carried with Chairman Richards dissenting, that the Hearing Officer's Findings and Order be approved.

AGENDA ITEM M - MEDFORD CORPORATION - HEARING ON THE MEDFORD CORPORATION PETITION FOR DECLARATORY RULING ON APPLICABILITY OF OAR 340-30-060 TO AIR CONVEYING SYSTEMS AND VENEER DRYERS

The Medford Corporation (Medco) has questioned the Department's authority to set specific plant site emission limits for its facilities in the Medford-Ashland AQMA. Medco filed a petition requesting a declaratory ruling

hearing on the matter by the EQC, which was granted. Subsequently Medco and the Department drafted briefs in preparation for the hearing which were forwarded to the EQC.

After presentation by the Petitioner and the Department, Chairman Richards expressed concern about the Department applying standards that were not specifically spelled out in the regulations. Other commission members also expressed concern about making a decision on this matter without further information on the definition of standards.

Chairman Richards asked the Department and Petitioners if they could prepare briefs on the questions of what the standards were and how those standards should be applied. He also asked the Department and the Petitioners to agree on a briefing schedule and then return to the Commission when they were prepared.

Commissioner Somers MOVED, Commissioner Bishop seconded and it was carried unanimously that this matter be continued pending the filing of further briefs which both sides have consented to.

AGENDA ITEM O - NEW MOTORBOAT NOISE EMISSION LIMITS - PROPOSED ADOPTION OF NOISE CONTROL REGULATION AMENDMENTS TO ESTABLISH NOISE EMISSION LIMITS FOR NEW MOTORBOATS (OAR 340-35-025)

The Oregon State Marine Board requested the Department propose noise control rules for the sale of new motorboats to supplement in-use, operational, standards.

A public hearing was held in Portland on March 25 to consider a proposed emission limit of 82 dBA to be effective for motorboats sold after June 30, 1980. Outboard motorboats that exhaust under the surface of the water would be exempt. Racing motorboats would be exempt if they operate only at racing events.

Director's Recommendation

Based on the Summation in the staff report, it is recommended that the Commission adopt rule amendments to OAR 340-35-025, Noise Control Regulations for the Sale of New Motor Vehicles and Motor Vehicle Sound Measurement Procedure Manual, NPC-21.

No one was present to testify on this matter.

It was MOVED by Commissioner Somers, seconded by Commissioner Burgess and carried unanimously that the Director's Recommendation be approved.

AGENDA ITEM P - WATER QUALITY RULES - PROPOSED ADOPTION OF AMENDMENTS TO WATER QUALITY RULES WHICH DESCRIBE RESPONSIBILITY FOR PRETREATMENT OF INDUSTRIAL WASTES DISCHARGED TO PUBLICLY OWNED TREATMENT WORKS (OAR 340-45-063)

Summation

1. EPA has adopted pretreatment rules and is in the process of adopting pretreatment standards for many industries.
2. Oregon does not have severe pretreatment problems but it would be to our advantage to administer the federal pretreatment program rather than leaving it to EPA.
3. The proposed rules will provide us the mechanism for implementing the required pretreatment program.
4. After public participation, no changes in the proposed rules are recommended.

Director's Recommendation

Based on the Summation, it is recommended that the rules be adopted as proposed.

No one was present to testify on this matter.

It was MOVED by Commissioner Somers, seconded by Commissioner Densmore and carried unanimously that the Director's Recommendation be approved.

There being no further business, the formal meeting was adjourned.

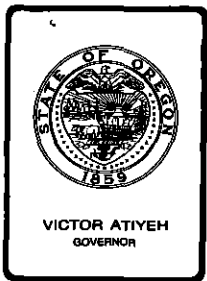
LUNCH MEETING

1. Progress report on Program Evaluation Study. Mr. Chuck Crump, Executive Department, reviewed some of the current activities of the study team members. He indicated the study was still on schedule.
2. Hearing Officer Duties. Ms. Linda Zucker, EQC Hearing Officer, requested the Commission's guidance on the proper role of their hearing officers in helping with the rulemaking process of the Department. Specifically, she asked if the hearing officers should be helping in the drafting of rules. After some discussion, the Commission agreed to take up this matter further at their next lunch meeting.

Respectfully submitted,



Carol A. Spletstaszer
Recording Secretary



Environmental Quality Commission

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

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item B, May 16, 1980, EQC Meeting

March, 1980 Air Quality Permits and April, 1980 Program Activity Reports

Discussion

Attached are the March, 1980, Air Quality Division Permits and April, 1980, Program Activity Reports for the Department. Beginning this Report, the Noise Control Section has been added showing Noise Control Actions Completed.

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

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

The purposes of this report are:

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

Recommendation

It is the Director's Recommendation that the Commission take notice of the reported program activities and contested cases, giving confirming approval to the air contaminant source plans and specifications listed on page 5 of this report.

WILLIAM H. YOUNG

M. Downs: ahe
229-6485
05-05-80



Contains
Recycled
Materials

DEPARTMENT OF ENVIRONMENTAL QUALITY

Monthly Activity Report

March, 1980

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DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Air Quality Division
(Reporting Unit)

March, 1980
(Month and Year)

SUMMARY OF AIR PERMIT ACTIONS

	Permit Actions Received		Permit Actions Completed		Permit Actions Pending	Sources Under Permits	Sources Reqr'g Permits
	Month	FY	Month	FY			
<u>Direct Sources</u>							
New	10	35	9	30	18		
Existing	4	11	2	14	8		
Renewals	51	122	21	89	119		
Modifications	<u>15</u>	<u>30</u>	<u>17</u>	<u>45</u>	<u>21</u>		
Total	80	198	49	178	166	1,943	1,969

Indirect Sources

New	7	25	3	28	16		
Existing							
Renewals							
Modifications	<u>0</u>	<u>2</u>	<u>0</u>	<u>2</u>	<u>0</u>		
Total	7	27	3	30	16	152	

Number of
Pending Permits

Comments

24	To be drafted by Northwest Region
8	To be drafted by Willamette Valley Region
18	To be drafted by Southwest Region
6	To be drafted by Central Region
4	To be drafted by Eastern Region
2	To be drafted by Program Planning Division
13	To be drafted by Program Operations
29	Awaiting Next Public Notice
63	Awaiting the end of 30-day Noted Period

55 Technical Assistancess
13 A-95's

DEPARTMENT OF ENVIRONMENTAL QUALITY

PERMITS ISSUED

DIRECT STATIONARY SOURCES

COUNTY	SOURCE	PERMIT NUMBER	APPLIC. RECEIVED	STATUS	DATE ACHIEVED	TYPE OF APPLICATION
BAKER	BLUE MOUNTAIN LIME CO	01	0002	09/07/79	PERMIT ISSUED	01/30/80 NEW
BENTON	EVANS PRODUCTS CO.	02	2203	06/06/77	PERMIT ISSUED	02/01/80 EXT
BENTON	BOISE CASCADE ADAIR	02	2478	02/01/80	PERMIT ISSUED	02/20/80 MOD
CLACKAMAS	PORTLAND ROAD & DRIVEWAY	03	1768	00/00/00	PERMIT ISSUED	03/12/80 RNW
CLACKAMAS	PORTLAND ROAD & DRIVEWAY	03	1898	00/00/00	PERMIT ISSUED	03/12/80 RNW
CLACKAMAS	INTERSTATE FEED & SEED	03	2518	10/09/79	PERMIT ISSUED	01/31/80 RNW
CLACKAMAS	MOLALLA SAND & GRAVEL	03	2628	10/15/79	PERMIT ISSUED	01/31/80 RNW
CLACKAMAS	WESTERN PACIFIC CONST CO	03	2639	10/15/79	PERMIT ISSUED	01/31/80 RNW
CURRY	CHAMPION BUILDING PRODUCT	08	0004	00/00/00	PERMIT ISSUED	12/28/79 MOD
CURRY	PORT ORFORD BLDG SUPPLY	08	0037	01/04/80	PERMIT ISSUED	01/13/80 MOD
DOUGLAS	INTERNATIONAL PAPER CO.	10	0056	02/23/79	PERMIT ISSUED	02/21/80 RNW
DOUGLAS	UMPUA SAND & GRAVEL CO.	10	0091	00/00/00	PERMIT ISSUED	02/27/80 MOD
DOUGLAS	JOHNSON ROCK PRODUCTS, IN	10	0123	11/08/79	PERMIT ISSUED	03/12/80 NEW
GRANT	TAYNTON MILL	12	0018	10/15/79	PERMIT ISSUED	02/21/80 RNW
JACKSON	SOUTHWEST FOREST INDUSTR.	15	0039	00/00/00	PERMIT ISSUED	02/26/80 MOD
JOSEPHINE	WESTBROOK WOOD PRODUCTS	17	0006	05/25/79	PERMIT ISSUED	02/05/80 RNW
KLAMATH	WEYERHAEUSER COMPANY	18	0013	12/11/79	PERMIT ISSUED	01/22/80 MOD
LAKE	OIL-DRI PRODUCTION CO.	19	0018	01/15/81	PERMIT ISSUED	02/22/80
				10/12/79	PERMIT ISSUED	02/22/80 MOD
LINCOLN	NORTH LINCOLN HOSPITAL	21	0039	09/27/79	PERMIT ISSUED	02/21/80 RNW
LINCOLN	ECKMAN CREEK QUARRIES INC	21	0044	11/08/79	PERMIT ISSUED	02/21/80 RNW
MALHEUR	ONTARIO ASPHALT&CONCRETE	23	0013	08/20/79	PERMIT ISSUED	01/03/80 RNW
MARION	FAIRVIEW HOSPITAL	24	5842	09/24/79	PERMIT ISSUED	01/31/80 MOD
MARION	AMERICAN ASPHALT PAVING	24	5866	11/08/79	PERMIT ISSUED	03/12/80 MOD
MARION	ALASKA SAND & GRAVEL	24	5948	11/08/79	PERMIT ISSUED	02/21/80 MOD
				02/06/80	PERMIT ISSUED	03/20/80 MOD
MARION	M P MATERIALS	24	5956	11/08/79	PERMIT ISSUED	03/12/80 MOD
MORRON	PORTLAND GENERAL ELECTRIC	25	0016	04/04/77	PERMIT ISSUED	02/12/80 MOD
MORROW	U. S. ARMY	25	0024	08/21/79	PERMIT ISSUED	02/13/80 EXT
MULTNOMAH	ROSS ISLAND SAND GRAVEL	26	1941	10/22/79	PERMIT ISSUED	02/21/80 RNW
MULTNOMAH	LONG SHAKE COMPANY (R.C.)	26	2161	11/06/79	PERMIT ISSUED	02/21/80 RNW
MULTNOMAH	ELECTRO-CHEM METAL FINISH	26	2804	10/15/79	PERMIT ISSUED	01/31/80 RNW
MULTNOMAH	MEDFORD CORP., ALDER DEPT	26	3022	10/15/79	PERMIT ISSUED	01/31/80 NEW
TILLAMOOK	LOUISIANA PACIFIC CO	29	0019	10/17/79	PERMIT ISSUED	03/12/80 RNW
UNION	R D MAC INC.	31	0020	10/08/79	PERMIT ISSUED	01/31/80 RNW
WASCO	MARTIN MARIETTA ALUMINUM	33	0001	12/26/78	PERMIT ISSUED	01/03/80 MOD
WASHINGTON	TEKTRONIX INC-DEAVERTON	34	2638	08/13/79	PERMIT ISSUED	01/03/80 MOD
WASHINGTON	DAELCO, INC.	34	2660	09/18/79	PERMIT ISSUED	02/21/80 NEW
WASHINGTON	SIEMENS-ALLIS, INC.	34	2661	09/26/79	PERMIT ISSUED	01/31/80 NEW
YAMHILL	OSBORNE ROCK PRODUCTS	36	6025	10/12/79	PERMIT ISSUED	05/12/80 RNW
YAMHILL	SPAULDING PULP & PAPER CO	36	6041	03/29/79	PERMIT ISSUED	01/03/80 NEW
PORT.SOURCE	OREGON STATE HWY DIVISION	37	0098	10/20/77	PERMIT ISSUED	03/03/80 RNW
PORT.SOURCE	ROSEBURG SAND & GRAVEL	37	0126	10/15/79	PERMIT ISSUED	01/31/80 RNW
PORT.SOURCE	RIVERDEID CONSTRUCTION	37	0149	10/17/79	PERMIT ISSUED	02/21/80 MOD
PORT.SOURCE	L W VAIL CO INC	37	0175	11/26/79	PERMIT ISSUED	03/12/80 RNW
PORT.SOURCE	MID-OREGON CRUSHING CO.	37	0239	09/05/79	PERMIT ISSUED	01/03/80 RNW
PORT.SOURCE	POE ASPHALT PAVING INC.	37	0240	10/08/79	PERMIT ISSUED	01/31/80 NEW

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Air Quality Division
(Reporting Unit)

March, 1980
(Month and Year)

PERMIT ACTIONS COMPLETED

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

Indirect Source

Multnomah	Purdy Brush Company 216 Spaces File No. 26-8001	03/06/80	Final Permit Issued
Clackamas	Greenhouse Square 261 Spaces File No. 03-8002	03/21/80	Final Permit Issued
Multnomah	Maruman Integrated Circuits, Inc. 265 Spaces File No. 26-8005	03/26/80	Final Permit Issued

DEPARTMENT OF ENVIRONMENTAL QUALITY

Monthly Activity Report

April, 1980

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DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

AQ, WQ, SW Divisions
(Reporting Unit)

April, 1980
(Month and Year)

SUMMARY OF PLAN ACTIONS

	Plans Received		Plans Approved		Plans Disapproved		Plans Pending
	Month	Fis.Yr.	Month	Fis.Yr.	Month	Fis.Yr.	
<u>Air</u>							
Direct Sources	<u>14</u>	<u>154</u>	<u>2</u>	<u>150</u>	<u>0</u>	<u>1</u>	<u>85</u>
<u>Water</u>							
Municipal	<u>56</u>	<u>709</u>	<u>52</u>	<u>706</u>	<u>0</u>	<u>0</u>	<u>22</u>
Industrial	<u>6</u>	<u>97</u>	<u>7</u>	<u>90</u>	<u>0</u>	<u>0</u>	<u>31</u>
<u>Solid Waste</u>							
General Refuse	<u>0</u>	<u>21</u>	<u>3</u>	<u>18</u>	<u>0</u>	<u>3</u>	<u>6</u>
Demolition	<u>0</u>	<u>4</u>	<u>0</u>	<u>4</u>	<u>0</u>	<u>1</u>	<u>0</u>
Industrial	<u>0</u>	<u>15</u>	<u>2</u>	<u>7</u>	<u>0</u>	<u>0</u>	<u>10</u>
Sludge	<u>0</u>	<u>4</u>	<u>0</u>	<u>3</u>	<u>0</u>	<u>0</u>	<u>0</u>
<u>Hazardous Wastes</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
<u>GRAND TOTAL</u>	<u>76</u>	<u>1,004</u>	<u>66</u>	<u>978</u>	<u>0</u>	<u>5</u>	<u>154</u>

DEPARTMENT OF ENVIRONMENTAL QUALITY
 MONTHLY ACTIVITY REPORT - APRIL, 1980

AIR QUALITY PLAN ACTIONS COMPLETED

COUNTY	NC NUMBER	SOURCE	PROCESS DESCRIPTION	DATE SCHEDULE	STATUS OF NC
COUNTY NAME	RDES	SOURCE NAME	PROCESS DESCRIPTION	DATE ACH	ACTION DESCRIPT
YAMHILL	599	MARTIN & WRIGHT PAVING	STREET SWEEPER	03/31/80	COMPLETED-APRVD
LANE	578	WEYERHAEUSER COMPANY	VENEER DRYER MODIFICATIONS	04/18/80	COMPLETED-APRVD

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Water Quality Division
(Reporting Unit)

April, 1980
(Month and Year)

PLAN ACTIONS COMPLETED

* County	* Name of Source/Project * /Site and Type of Same	* Date of * Action	* Action	*
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Municipal Waste Sources - 52

Jackson	Griffin Cr. Trunk Extension Bear Cr. Valley S.A.	04/14/80	PA	
Clackamas	West Wellow Subdivision CCSD No. 1	04/18/80	PA	
Yamhill	N.W. Cozine Ext. McMinnville	04/21/80	PA	
Lane	Cogswell Plat Eugene	04/16/80	PA	
Washington	Brodgen Street USA - Hillsboro	04/16/80	PA	
Jackson	Judy Way Extension BCVSA	04/16/80	PA	
Yamhill	Reed Park Subdivision Newberg	04/16/80	PA	
Jackson	Archer Drive S. Columbus Ave. BCVSA	04/22/80	PA	
Washington	Arranmore No. 2 USA - Durham	04/22/80	PA	
Deschutes	Oregon Water Wonderland Unit 2 OWW II Sanitary District (STP)	04/03/80	Comments sent to Engineer	

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Water Quality Division
(Reporting Unit)

April, 1980
(Month and Year)

PLAN ACTIONS COMPLETED

* County	* Name of Source/Project * /Site and Type of Same	* Date of * Action	* Action	*
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Municipal Waste Sources - Continued

Deschutes	Oregon Water Wonderland Unit 2 OWW II Sanitary (Collection System)	04/03/80	Comments sent to Engineer	
Multnomah	Randall's Hollybrook Unit 3 Gresham	04/04/80	PA	
Multnomah	N. Adriatic Avenue to N. Cecelia Portland - Col. Blvd.	04/09/80	PA	
Union	System Final Plans & Specs. Island City Area Sanitation District	03/19/80	PA	
Clackamas	Jupiter Court CCSD No. 1	04/08/80	PA	
Jackson	Connell Estates Subdivision Medford	04/08/80	PA	
Douglas	Speedway Road Extension Green Sanitary District	04/09/80	PA	
Washington	Cornell Road Condominiums USA - Rock Creek	04/10/80	PA	
Washington	Robin Hill USA - Rock Creek	04/10/80	PA	
Yamhill	Pinehurst Green Newberg	04/16/80	PA	

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Water Quality Division
(Reporting Unit)

April, 1980
(Month and Year)

PLAN ACTIONS COMPLETED

* County	* Name of Source/Project * /Site and Type of Same	* Date of * Action	* Action	*
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Municipal Waste Sources - Continued

Marion	Ferry St. Pump Station Modification Salem	04/15/80	PA	
Multnomah	SW South Ridge Drive and Private Property Portland - Tryon Creek	04/15/80	PA	
Marion	Hosanna Addition II Salem - Willow Lake	04/09/80	PA	
Grant	Carl Johns-Drawing "Alternate No. 2" Prairie City	04/14/80	PA	
Marion	Tierra Junipero No. 2 Salem	04/14/80	PA	
Washington	Lea Terra Subdivision USA - Rock Creek	04/15/80	PA	
Multnomah	SW Broadleaf Dr.-Balmer Circle to Lancaster Road Portland - Tryon Creek	04/15/80	PA	
Curry	North Sewer District Brookings	04/10/80	PA	
Jackson	Rawlings-Brandon Extension BCVSA	04/09/80	PA	
Clackamas	Knollwood Estates Subdivision Sandy	04/09/80	PA	

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Water Quality Division
(Reporting Unit)

April, 1980
(Month and Year)

PLAN ACTIONS COMPLETED

* County	* Name of Source/Project * /Site and Type of Same	* Date of * Action	* Action	* *
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Municipal Waste Sources - Continued

Marion	Norway & South Streets Reline Salem	04/18/80	PA	
Marion	State St. to Walker Field Salem	04/21/80	PA	
Clackamas	Beverly Hill Subdivision Oak Lodge S.D.	04/22/80	PA	
Jackson	NW Medford Light Ind. Park BCVSA	04/23/80	PA	
Jackson	Gross Heights Subdivision Ashland	04/23/80	PA	
Benton	Philomath LID Project Philomath	04/24/80	PA	
Jackson	Biddle Rd. S. of Vilas Rd. BCVSA	04/24/80	PA	
Deschutes	Blue Grouse Lane; River Village II Sunriver	04/24/80	PA	
Lane	Panarama, 5th Addition Eugene	04/24/80	PA	
Douglas	Hawthorne Street Extension Sutherlin	04/25/80	PA	
Lincoln	Spruce Woods Pump Station and Force Main Lincoln City	04/24/80	PA	

PA = Provisional Approval

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Water Quality Division
(Reporting Unit)

April, 1980
(Month and Year)

PLAN ACTIONS COMPLETED

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

Municipal Waste Sources - Continued

Wasco	Fred Meyer Properties Relocation The Dalles	04/10/80	PA	
Jackson	Oak Knolls Estates 2nd Addition N. Umpqua S.D.	04/17/80	PA	
Yamhill	Chehalem Townhouse Homes Newberg	04/18/80	PA	
Lane	Golden Terrace Subdivision Springfield	04/17/80	PA	
Washington	Sorrento No. 6 USA - Rock Creek	04/14/80	PA	
Marion	Four Winds Addition Salem	04/16/80	PA	
Lincoln	Spruce Woods Subdivision Lincoln City	04/21/80	PA	
Douglas	Duncan's First Addition Phase 1 Yoncalla	04/18/80	PA	
Marion	Marion Court Mt. Angel	04/21/80	PA	
Marion	Westhaven Annex Subdivision Salem	04/21/80	PA	
Curry	Mardon Manor Subdivision Brookings	04/21/80	PA	

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Water Quality Division
(Reporting Unit)

April 1980
(Month and Year)

PLAN ACTIONS COMPLETED

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

INDUSTRIAL WASTE SOURCES (7)

Jackson	Jerry Noble Dairy Grants Pass, Manure Handling	4/1/80	Approved	
Marion	Stayton Canning, Salem Add 2 Aerators	4/7/80	Approved	
Clatsop	Crown Zellerbach, Wauna Secondary Sludge Disposal	4/9/80	Approved	
Clatsop	Crown Zellerbach, Wauna Recycle Waste Water to Chlorine Washer	4/9/80	Approved	
Multnomah	Weyerhaeuser Co. Portland--Process Waste Settling Secondary Sludge	4/9/80	Approved	
Lincoln	Georgia Pacific, Toledo--Ocean Pumping Backup Power	4/18/80	Approved	
Multnomah	Pennwalt Corporation, Portland--Improve Outfall pH Control	4/21/80	Approved	

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Solid Waste Division	April, 1980
(Reporting Unit)	(Month and Year)

PLAN ACTIONS COMPLETED

* County	* Name of Source/Project * /Site and Type of Same	* Date of * Action	* Action
*	*	*	*
Grant	Dayville Proposed Landfill Operational Plan	03/28/80	Approved
Lane	Weyerhaeuser-Track Road Existing Industrial Site Closure Plan	04/07/80	Conditional Approval
Lane	Franklin Landfill Existing Landfill Updated Operational Plan	04/17/80	Approved
Yamhill	Willamina Lumber Proposed Industrial Site Operational Plan	04/22/80	Conditional Approval
Tillamook	Tillamook Landfill Conversion, Existing Site Amended Construction Plans	04/22/80	Approved

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Air Quality Division
(Reporting Unit)

April, 1980
(Month and Year)

SUMMARY OF AIR PERMIT ACTIONS

	Permit Actions Received		Permit Actions Completed		Permit Actions Pending	Sources Under Permits	Sources Reqr'g Permits
	Month	FY	Month	FY			
<u>Direct Sources</u>							
New	1	36	0	30	19		
Existing	3	14	0	14	11		
Renewals	4	126	0	89	123		
Modifications	2	32	3	48	20		
Total	10	208	3	181	173	1,943	1,973

Indirect Sources

New	0	25	3	31	13		
Existing							
Renewals							
Modifications	0	2	0	2	0		
Total	0	27	3	33	13	155	

Number of
Pending Permits

Comments

25	To be drafted by Northwest Region
10	To be drafted by Willamette Valley Region
21	To be drafted by Southwest Region
5	To be drafted by Central Region
4	To be drafted by Eastern Region
2	To be drafted by Program Planning Division
11	To be drafted by Program Operations
32	Awaiting Next Public Notice
62	Awaiting the end of 30-day Noted Period

12 Technical Assistants
6 A-95s

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Air Quality Division
(Reporting Unit)

April, 1980
(Month and Year)

PERMIT ACTIONS COMPLETED

* County	* Name of Source/Project * /Site and Type of Same	* Date of * Action	* Action	* *
Multnomah	Meadowland Center 770 Spaces File No. 26-7934	04/14/80	Final Permit Issued	*
Clackamas/ Multnomah	Mountain Park Center 539 Spaces File No. 37-8003	04/18/80	Final Permit Issued	*
Washington	Intel Corp. Jones Farm Site 2900 Spaces File No. 34-8004	04/21/80	Final Permit Issued	*

PERMITS ISSUED MONTHLY REPORT

ANUM	COUNTY NAME	SOURCE NAME	CNTY	SRCE	DATE	SCH	ACTION	DESCRIPT	DATE	ACH	RDE8
09	KLAMATH	CUSTOM ROCK & PAVING	18	0012	10/12/79		PERMIT ISSUED		04/08/80	MOD	
06	MULTNOMAH	PAX COMPANY OF UTAH	26	2976	03/25/80		PERMIT ISSUED		03/25/80	MOD	
06	PORT.SOURCE	R.S. BURCH CO	37	0066	03/28/80		PERMIT ISSUED		03/28/80	MOD	

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Water Quality Division
(Reporting Unit)

April 1980
(Month and Year)

SUMMARY OF WATER PERMIT ACTIONS

	Permit Actions Received		Permit Actions Completed		Permit Actions Pending	Sources Under Permits	Sources Reqr'g Permits
	Month	Fis.Yr.	Month	Fis.Yr.			
	* /**	* /**	* /**	* /**	* /**	* /**	* /**
<u>Municipal</u>							
New	0 /0	1 /7	0 /0	1 /11	1 /7		
Existing	0 /0	0 /2	0 /0	0 /0	6 /1		
Renewals	1 /1	27 /5	4 /5	32 /6	33 /2		
Modifications	0 /0	3 /0	0 /0	2 /0	4 /0		
Total	1 /1	31 /14	4 /5	35 /17	44 /10	246/95	253/103
<u>Industrial</u>							
New	0 /1	5 /19	0 /3	4 /9	5 /9		
Existing	0 /0	0 /2	0 /0	5 /3	1 /1		
Renewals	7 /1	82 /19	11 /7	58 /13	73 /8		
Modifications	1 /1	5 /1	2 /0	6 /0	4 /1		
Total	8 /3	92 /41	13 /10	73 /25	87 /19	402/136	408/146
<u>Agricultural (Hatcheries, Dairies, etc.)</u>							
New	0 /0	3 /3	0 /0	1 /5	4 /0		
Existing	0 /0	0 /2	0 /0	0 /1	0 /0		
Renewals	0 /0	35 /0	0 /0	0 /1	35 /0		
Modifications	0 /0	0 /0	0 /0	0 /0	0 /0		
Total	0 /0	38 /5	0 /0	1 /7	39 /0	64/25	68/25
<u>GRAND TOTALS</u>	9 /4	161 /60	17 ² /15 ¹	109/49	170 /29	712/256	729/274

* NPDES Permits
** State Permits

1 / Includes 2 State Permits Cancelled
2 / Includes 4 NPDES Permits Cancelled

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Water Quality Division (Reporting Unit)		April 1980 (Month and Year)	
<u>PERMIT ACTIONS COMPLETED</u>			
* County	* Name of Source/Project * /Site and Type of Same	* Date of * Action	* Action

NPDES PERMITS

Columbia	Crown Zellerbach--St. Helens Columbia City	4/14/80	Permit Renewed
Multnomah	Owens Illinois, Inc.	4/23/80	Permit Renewed
Multnomah	Pacific Carbide & Alloys Co.	4/23/80	Permit Renewed
Multnomah	McCormick & Baxter Creosoting Company	4/23/80	Permit Renewed
Umatilla	City of Weston Domestic Sewage	4/23/80	Permit Renewed
Clatsop	Barbey Packing Port Docks	4/30/80	Permit Cancelled
Curry	Four Ply Inc. Brookings--Veneer	4/30/80	Permit Cancelled
Douglas	Riddle, City of WTP	4/30/80	Permit Cancelled
Jackson	Medford--Veneer Wood Products	4/30/80	Permit Cancelled
Hood River	Duckwall-Pooley Fruit Co. Fresh Fruit Packing	4/30/80	Permit Renewed
Clackamas	Oak Lodge Sanitary District	4/30/80	Permit Renewed
Hood River	Lage Orchards, Inc. Fresh Fruit Packing	4/30/80	Permit Renewed
Benton	Hobin Lumber Company Sawmill	4/30/80	Permit Renewed
Washington	USA--Durham Domestic Sewage	4/30/80	Permit Renewed

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Water Quality Division (Reporting Unit)		April 1980 (Month and Year)			
<u>PERMIT ACTIONS COMPLETED</u>					
* County	* Name of Source/Project * /Site and Type of Same	* Date of * Action	* Action	* Action	* Action

STATE PERMITS

Umatilla	U.S. Army Umatilla Depot--Hermiston	4/14/80	Permit Issued		
Klamath	Circle Five Ranch, Inc. Cottage Grove Lake	4/14/80	Permit Issued		
Clackamas	Clackamas County Rock Crushing--Barton Park	4/14/80	Permit Issued		
Marion	Mt. Angel Meat Co.	4/14/80	Permit Renewed		
Lincoln	Road & Driveway	4/14/80	Permit Renewed		
Linn	Morse Bros.		Cancelled		
Deschutes	Hoch, Axel		Cancelled		
Lane	Murphy Company Springfield	4/30/80	Permit Issued		
Sherman	City of Wasco	4/30/80	Permit Renewed		
Deschutes	Hiatt House Apts.	4/30/80	Permit Renewed		
Marion	Portland 76 Auto Truck Plaza	4/30/80	Permit Renewed		
Multnomah	Pacific Resins & Chemicals	4/30/80	Permit Renewed		
Clackamas	Estacada Rock Products	4/30/80	Permit Renewed		
Multnomah	Western Pacific Construction Materials Co--Ione	4/30/80	Permit Renewed		
Clackamas	Western Pacific Construction Materials Co.--Oregon City	4/30/80	Permit Renewed		

MODIFICATIONS

Douglas	Charles J. Lewis	4/214/80	Addendum No. 1 Issued
Hood River	Champion Bldg. Products--Dee	4/30/80	Addendum No. 1 Issued

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Solid Waste Division
(Reporting Unit)

April, 1980
(Month and Year)

SUMMARY OF SOLID AND HAZARDOUS WASTE PERMIT ACTIONS

	Permit Actions Received		Permit Actions Completed		Permit Actions Pending	Sites Under Permits	Sites Reqr'g Permits
	Month	FY	Month	FY			
<u>General Refuse</u>							
New	-	3	-	5	2		
Existing	-	-	-	1	10		
Renewals	3	26	-	19	26		
Modifications	-	16	3	28	1		
Total	3	45	3	53	39	164	166
<u>Demolition</u>							
New	1	1	1	1	-		
Existing	-	1	-	2	1		
Renewals	3	7	1	3	2		
Modifications	-	-	-	5	2		
Total	4	9	2	11	5	20	21
<u>Industrial</u>							
New	-	4	-	2	4		
Existing	-	-	-	-	-		
Renewals	-	22	1	8	19		
Modifications	-	2	1	2	-		
Total	0	28	2	12	23	98	98
<u>Sludge Disposal</u>							
New	-	-	-	1	-		
Existing	-	2	1	2	1		
Renewals	-	1	-	1	-		
Modifications	-	-	-	-	-		
Total	0	3	1	4	1	14	15
<u>Hazardous Waste</u>							
New	-	-	-	-	-		
Authorizations	14	122	21	139	-		
Renewals	-	-	-	-	-		
Modifications	-	-	-	-	-		
Total	14	122	21	139	0	1	1
<u>GRAND TOTALS</u>	21	207	29	219	68	297	301

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Solid Waste Division	April, 1980
(Reporting Unit)	(Month and Year)

PERMIT ACTIONS COMPLETED

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

Domestic Refuse Facilities (3)

Clatsop	Cannon Beach Disposal Site Existing Facility	04/09/80	Permit Amended
Clatsop	Elsie Disposal Site Existing Facility	04/09/80	Permit Amended
Clatsop	Seaside Disposal Site Existing Facility	04/09/80	Permit Amended

Demolition Waste Facilities (2)

Jackson	Corps of Engineers Existing Landfill	04/02/80	Letter Authorization Renewed
Multnomah	Fir Station Disposal (Nash Pit) New Landfill	04/08/80	Permit Issued

Industrial Waste Facilities (2)

Klamath	Gilchrist Timber Existing Landfill	03/24/80*	Permit Issued
Linn	Eugene Chemical Works (Rendering Plant) Existing Landfill	04/14/80	Letter Authorization Renewed

Sludge Disposal Facilities (1)

Lake	Pettus Sludge Site Existing Facility	04/14/80	Permit Revoked
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*Not reported last month.

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Solid Waste Division
(Reporting Unit)

April, 1980
(Month and Year)

HAZARDOUS WASTE DISPOSAL REQUESTS

CHEM-NUCLEAR SYSTEMS, GILLIAM CO.

WASTE DESCRIPTION

* Date *	Type	Source	Quantity Present	Quantity Future
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Disposal Requests Approved (21)

OREGON-7

3/25	Residue from wood staining	Building material supplier	800 gal.	800 gal/yr
3/26	Unusable polyurethan and polyisocyanate	Manufacture of foam insulation	12 drums	0
4/09	PCB capacitors	City government	41 cu. ft.	0
4/09	Asphalt emulsifier	Oil company	2,000 gal.	0
4/09	Obsolete 2,4D-2,4,5T herbicide mix	Construction company	30 drums	0
4/15	PCB transformers and contaminated materials	Government agency	27,660 gal.	27,000 gal/yr
4/21	Off-spec. fungicide formulation	Pesticide formulator	38 drums	1,000 gal/yr

WASHINGTON-8

3/25	Paint sludge	Aerospace company	30,000 gal.	150,000 gal/yr
3/25	Monoethanolamine reclaimer bottoms	Chemical plant	14 drums	28 drums/yr
3/26	PCB wastes	Electrical service shop	100 cu. ft.	100 cu ft/yr

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Solid Waste Division
(Reporting Unit)

April, 1980
(Month and Year)

HAZARDOUS WASTE DISPOSAL REQUESTS

CHEM-NUCLEAR SYSTEMS, GILLIAM CO.

WASTE DESCRIPTION

* Date *	Type	Source	Quantity	Present	Future
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Disposal Requests Approved (continued)

3/26	Obsolete pesticides	Pesticide dealer	100 cu. ft.	0	
4/09	PCB wastes	Paper mill	60 cu. ft.	60 cu ft/yr	
4/09	Spent trichloroethane	State agency	6 drums	0	
4/09	Potliner	Al smelting plant	--	5,500 tons/yr	
4/14	Caustic tank washing	Bulk transporter	--	20,000 gal/yr	

BRITISH COLUMBIA-6

3/25	Outdated cleaning chemicals	Ship cleaning service	6,545 lb.	0	
3/26	Off-spec. sodium isopropylxanthate	Lab. chemical distributor	16,800 lb.	0	
3/26	Obsolete 2,4D-2,4,5T herbicide mix	Pesticide dealer	75 drums	0	
4/09	PCB capacitors	Chemical plant	400 cu. ft.	0	
4/15	PCB contaminated soil.	Mining co.	4,300 cu. ft.	0	
4/21	PCB contaminated lubricant	Pipelines co.	20,500 gal.	12,000 gal/yr	

MONTHLY ACTIVITY REPORT

Noise Control Program
(Reporting Unit)

April 1980
(Month and Year)

FINAL NOISE CONTROL ACTIONS COMPLETED

* County	* Name of Source and Location	* Date	* Action
Clackamas	Thriftway Store, 82nd & King Portland	4/80	In Compliance
Clatsop	Wild Mouse Seaside	4/80	Stipulated Consent
Linn	Brown Bros. Quarry Lebanon	4/80	Blasting Exception Granted
Marion	Aurora Country Store Aurora	4/80	In Compliance
Multnomah	Groce Auto Parts Portland	4/80	Exception Granted
	Kinco Portland	4/80	In Compliance
Tillamook	Louisiana Pacific Tillamook	4/80	In Compliance
Washington	Oregon School of Arts & Crafts Portland	4/80	In Compliance

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Noise Control Program
(Reporting Unit)

April 1980
(Month and Year)

SUMMARY OF NOISE CONTROL ACTIONS

<u>Source Category</u>	<u>New Actions Initiated</u>		<u>Final Actions Completed</u>		<u>Actions Pending</u>	
	Mo.	FY	Mo.	FY	Mo.	Last Mo.
Industrial/ Commercial	4	N/A	8	N/A	53	57
Airports	1				1	

CIVIL PENALTY ASSESSMENTS

Department of Environmental Quality
1980

CIVIL PENALTIES ASSESSED DURING MONTH OF April, 1980:

<u>Name and Location of Violation</u>	<u>Case No. & Type of Violation</u>	<u>Date Issued</u>	<u>Amount</u>
Elton Disher dba/ Riverview Service Corp. Benton County	WQ-WVR-80-39 Failed to operate chlorination facilities and disinfect treated sewage.	04/04/80	\$ 100
International Paper Co. Douglas County	WQ-SWR-80-47 13 violations of NPDES permit effluent limitations	04/04/80	1,200
C-3 Builders Multnomah County	AQ-NWR-80-47 Fugitive emissions (dust).	04/23/80	50

STATUS OF PAST CIVIL PENALTY ACTIONS TAKEN IN 1980:

<u>Name</u>	<u>Case No.</u>	<u>Date Issued</u>	<u>Amount</u>	<u>Status</u>
Scheler Corporation	AQ-WVR-80-15	01/22/80	\$ 500	Contested 02/08/80 Settlement action.
Lauren Karstens	AQ-WVR-80-03	01/22/80	1,500	Contested 01/28/80 Settlement negoti- ations.
David Taylor	AQ-WVR-80-04	01/22/80	860	Contested 02/07/80
Dennis Glaser dba/ Mid Valley Farms, Inc.	AQ-WVR-80-13	01/22/80	2,200	Contested 02/07/80
City of St. Helens	WQ-NWR-80-02	01/22/80	2,000	Paid 02/12/80
American-Strevell, Inc.	WQ-NWR-80-05	01/22/80	500	Remitted 04/18/80.
Mid-Oregon Crushing Co.	AQ-CR-80-16	02/11/80	600	Default judgment filed.
James Judd dba/ Jim Judd Backhoe Service	SS-SWR-80-18	02/11/80	100	Settlement action.
Robert W. Harper	AQ-WVR-80-14	02/11/80	500	Contested 2/26/80.
George Heidgenkin	WQ-WVR-80-21	02/19/80	1,000	Notice hand delivered on 04/17/80.

STATUS OF PAST CIVIL PENALTY ACTIONS TAKEN IN 1980:

<u>Name</u>	<u>Case No.</u>	<u>Date Issued</u>	<u>Amount</u>	<u>Status</u>
Westbrook Wood Products	AQ-SWR-80-25	02/20/80	3,125	Goal achieved. Settlement action.
Hilton Fuel Supply Co.	AQ-SWR-80-30	02/25/80	200	Contested 3/17/80
Permapost Products Co.	WQ-NWR-80-33	03/07/80	500	Paid 03/11/80
Tom C. Alford et. al. dba/Athena Cattle Feeders	WQ-ER-80-35	03/20/80	500	Defaulted.
Gary Kronberger/dba Hindman's Septic Tank Service	SS-WVR-80-36	03/20/80	50	Paid 04/09/80.
Adrian Van Dyk	SS-WVR-80-27	03/20/80	500	Contested 04/20/80.
David B. Reynolds	SS-SWR-80-11	03/20/80	500	Contested 04/14/80.
J. R. Simplot Co.	WQ-ER-79-27	03/24/80	20,000	Contested 04/15/80.
Burlington Northern	AQ-CR-80-44	03/27/80	200	Paid 04/10/80.

<u>ACTIONS</u>	<u>LAST MONTH</u>	<u>PRESENT MONTH</u>
Preliminary Issues	6	3
Discovery	1	1
Settlement Action	4	5
Hearing to be Scheduled	5	6
Hearing Scheduled	6	6
H0's Decision Due	4	4
Brief	0	0
Inactive	<u>2</u>	<u>2</u>
SUBTOTAL of Active Files	28	28
H0's Decision Out/Option for EQC Appeal .	2	2
Appealed to EQC	1	3
EQC Appeal Complete/Option for Court Review	1	0
Court Review Option Pending or Taken . . .	2	1
Case Closed	<u>2</u>	<u>4</u>
TOTAL Cases	36	38

KEY

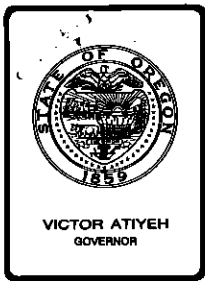
ACD Air Contaminant Discharge Permit
AQ Air Quality
AQ-NWR-76-178 Violation involving Air Quality occurring in Northwest Region in the year 1976; 178th enforcement action during 1976.
CLR Chris Reive, Investigation & Compliance Section
Dec Date Date of either a proposed decision of hearings officer or a decision by Commission
\$ Civil Penalty Amount
ER Eastern Region
Fld Brn Field Burning incident
RLH Robb Haskins, Assistant Attorney General
Hrngs Hearings Section
Hrng Rfrl Date when Investigation & Compliance Section requests Hearings Section to schedule a hearing
Hrng Rqst Date agency receives a request for hearing
JHR John Rowan, Investigation & Compliance Section
VAK Van Kollias, Investigation & Compliance Section
LKZ Linda Zucker, Hearings Officer
LMS Larry Schurr, Investigation & Compliance Section
MWR Midwest Region (now WVR)
NP Noise Pollution
NPDES National Pollutant Discharge Elimination System wastewater discharge permit
NWR Northwest Region
FWO Frank Ostrander, Assistant Attorney General
P At beginning of case number means litigation over permit or its conditions
PR Portland Region (now NWR)
PNCR Portland/North Coast Region (now NWR)
Prtys All parties involved
Rem Order Remedial Action Order
Resp Code Source of next expected activity on case
SNCR Salem/North Coast Region (now WVR)
SSD Subsurface Sewage Disposal
SW Solid Waste
SWR Southwest Region
T At beginning of case number means litigation over tax credit matter
Transcr Transcript being made of case
Underlined Different status or new case since last month contested case log
WVR Willamette Valley Region
WQ Water Quality

April 1980
DEQ/EQC Contested Case Log

Pet/Resp Name	Hrng Rrst	Hrng Rfrl	DEQ Atty	Hrng Date	Resp Code	Case Type & No.	Case Status
FAYDREX, INC.	05/75	05/75	RLH	11/77	Hrnga	03-SS-SWR-75-02 64 SSD Permits	Decision Due
MEAD and JOHNS et al	05/75	05/75	RLH		All	04-SS-SWR-75-03 3 SSD Permits	Awaiting disposition of Faydrex
PGE (Harborton)	02/76	02/76	RPU		Prtys	01-P-AQ-PR-76-01	<u>Hearing request withdrawn by Respondent</u>
MIGNOT, E. W. & Dorothy	11/76	11/76	LMS	02/77		\$400 06-SW-SWR-288-76	Court of Appeals review pending.
MAGNESS, William	07/77	07/77	LMS	11/77	Dept	\$1150 Total 06-SS-SWR-77-142	Department preparing order of dismissal.
GRAVIS PASS IRRIG	09/77	09/77	RLH	04/23/80	Prtys	\$10,000 10-WQ-SWR-77-195	<u>Hrng postponed pending submission of stipulated settlement to EQC.</u>
FLOWELL, Ronald	11/77	11/77	RLH	01/23/80	Resp	\$10,000 Fld Brn 12-AQ-MWR-77-241	Record still open.
HAWKINS, Roy	03/78	03/78	FWD	12/17/79	Hrnga	\$5000 15-AQ-PR-77-315	Decision <u>drafted.</u>
HAWKINS TIMBER	03/78	03/78	FWD			\$5000 15-AQ-PR-77-314	No action pending hearing in companion case.
WAI CHANG	04/78	04/78	RLH		Prtys	16-P-WQ-NVR-2849-J NPDES Permit (Modification)	Preliminary Issues
WAI CHANG	11/78	12/78	RLH		Prtys	08-P-WQ-NVR-78-2012-J	Preliminary Issues
STIMPSON LUMBER CO.	05/78		FWD	07/24/79	Hrnga	Tax Credit Cert. 01-T-AQ-PR-78-010	Draft decision issued to attorneys to refine issues.
VOGT, Eugene & Josephine	06/78	06/78	RLH	11/08/78	Resp	\$250 Civil Penalty 05-SS-SWR-78-70	<u>EQC modified H.O.'s Order;</u> Resp's appeal option expires 05/19/80.
WELCH, Floyd & Virginia, et al	10/78	10/78	RLH		Prtys	07-P-SS-CR-78-134	Hearing deferred pending settlement.
REEVE, Clarence	10/78		RLH		Prtys	06-P-SS-CR-78-132 & 133	Hearing deferred pending settlement
WAI CHANG	02/79	02/79	REH		Hrnga	\$3500 12-WQ-NVR-78-187	<u>Case closed 04/19/80. Civil Penalty mitigated to \$2,000.</u>
DON CHRIST, INC.	07/79	07/79	RLH		Dept	Solid Waste Permit Amendment 07-P-SW-213-NWR-79	<u>Prtys advised hrng to be set absent prompt permit approval.</u>
BARKER, Michael	10/79	10/79	LMS		Resp	12-SS-SWR-79-56 SS Permit revocation	<u>H.O.'s Final Order issued 04/07/80.</u>
PETER, Ernie	10/79	10/79	CLR	12/05/79	Resp	13-AQ-WVR-79-86 Open Field Burning Civil Penalty of \$500	<u>04/07/80 Case closed mitigating civil penalty to \$250. Appealed to EQC. Exceptions due 05/07/80</u>
MALLORY & MALLORY INC.	11/79	11/79	JHR	01/10/80	Hrnga	14-AQ-CR-79-101 Open Burning Civil Penalty	Decision Due. <u>Awaiting transcript.</u>
BREIDENSTINE	11/08/79	11/28/79			Resp	15-SS-SWR-79-60 Permit denied	<u>Case closed by default 04/24/80 No appeal</u>
TIDEWATER BARGE LINES, INC.	12/05/79	12/05/79	RLH	06/12/80	Prtys	16-WQ-ER-79-148 WQ Civil Penalty of \$5,000	<u>Hrng set in Portland at 9 a.m.</u>
M/V TOYOTA MARU No. 10	12/10/79	12/12/79	RLH		Prtys	17-WQ-NWR-79-127 Oil Spill Civil Penalty of \$5,000	Discovery
COLUMBIA SAND & GRAVEL PIT	12/12/79	12/14/79	FWD	05/16/80	Prtys	19-P-SW-329-NWR-79 Permit Denial	<u>Stipulated Order before EQC 05/16/80.</u>
FORRETE, Gary	12/20/79	12/21/79	RLH	06/09/80	Prtys	20-SS-NWR-79-146 Permit Revocation	<u>Hearing set in Portland at 9 a.m.</u>
AMERICAN-STREVELL	02/01/80	02/05/80	EMS	06/12/80	Hrnga	01-WQ-NVR-80-05 Oil Spill Civil Penalty of \$500.	<u>04/18/80 EQC approves stipu- lation. Civil penalty mitigated to \$0.</u>

April 1980
DEQ/EQC Contested Case Log

<u>Pet/Resp Name</u>	<u>Hrng Rpt</u>	<u>Hrng Rfrl</u>	<u>DEQ Atty</u>	<u>Hrng Date</u>	<u>Resp Code</u>	<u>Case Type & No.</u>	<u>Case Status</u>
GLASER, Dennis F. dba MID-VALLEY FARMS, INC.	02/06/80	02/07/80	CLR	<u>06/19/80</u>	Prtys	02-AQ-WVR-80-13 Open Field Burning Civil Penalty of \$2,200	Hearing <u>Re-set</u> in Albany at 10 a.m.
SCHULER CORP.	02/05/80	02/08/80	IMS	05/05/80	<u>Prtys</u>	03-AQ-WVR-80-15 Open Field Burning Civil Penalty of \$500	Hearing Set in Albany at 10 a.m.
TAYLOR, David R.	02/04/80	02/08/80	CLR	<u>06-25-80</u>	<u>Prtys</u>	04-AQ-WVR-80-04 Open Field Burning Civil Penalty of \$860.	Hearing <u>Re-set</u> in Corvallis at 10 a.m.
KARSTEN, Lauren	01/28/80	02/27/80	CLR		Prtys	05-AQ-WVR-80-03 Open Field Burning Civil Penalty of \$1,500	Preliminary Issues
HARPER, Robert W.	02/26/80	02/28/80	IMS	05/13/80	Hrngrs	06-AQ-NWR-80-14 Open Burning Civil Penalty of \$500	Hearing Set in Portland at 9 a.m.
MEDFORD CORPORATION	02/25/80	02/29/80		05/16/80	Resp	07-AQ-SWR-80 Request for Declaratory Ruling	Resp's brief due <u>04/07/80</u> ; Dept's brief due <u>04/25/80</u> . To Be Heard By <u>EQC</u> .
JUDD, James dba JIM JUDD BACKHOE SERVICE	03/01/80	03/11/80	JHR		<u>Prtys</u>	08-SS-SWR-80-18 Subsurface Sewage Civil Penalty of \$100	<u>Stipulated settlement to EQC</u> <u>05/16/80</u> .
HILTON FUEL and SUPPLY CO.	03/08/80	03/17/80	IMS	<u>06-17-80</u>	Hrngrs	09-AQ-SWR-80-30 Open Burning Civil Penalty of \$200	<u>Hearing set in Medford</u> <u>at 10 a.m.</u>
<u>WESTBROOK WOOD</u> <u>PRODUCTS</u>	<u>04/01/80</u>	<u>04/08/80</u>	<u>IMS</u>		<u>Hrngrs</u>	<u>01-AQ-SWR-80-25</u> <u>Civil Penalty of \$3,125</u>	<u>To Be Scheduled</u>
<u>REYNOLDS, David B.</u>	<u>04/11/80</u>	<u>04/14/80</u>	<u>CLR</u>		<u>Hrngrs</u>	<u>11-SS-SWR-80-11</u> <u>Civil Penalty of \$500</u>	<u>To Be Scheduled</u>
<u>J.R. SIMPLOT</u> <u>COMPANY</u>	<u>04/15/80</u>	<u>04/16/80</u>			<u>Hrngrs</u>	<u>12-WQ-ER-80-41</u> <u>Civil Penalty of \$20,000</u>	<u>To Be Scheduled</u>
<u>VAN DYK, Adrian C.</u>	<u>04/20/80</u>	<u>04/25/80</u>	<u>CLR</u>		<u>Hrngrs</u>	<u>13-SS-SWR-80-92</u> <u>Civil Penalty of \$500</u>	<u>To Be Scheduled</u>



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

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

MEMORANDUM

To: Environmental Quality Commission
From: Director
Subject: Agenda Item C, May 16, 1980, EQC Meeting

TAX CREDIT APPLICATIONS

Director's Recommendation

It is recommended that the Commission take the following action:

i. Issue Pollution Control Facility Certificates to the following applicants:

<u>Appl No.</u>	<u>Applicant</u>	<u>Facility</u>
T-1150	Bohemia, Inc.	Sanderdust storage silo; package fire tube boiler; baghouse
T-1155	Georgia-Pacific Corp.	Dry granular media scrubbers
T-1168	Ellingson Lumber Company	Manufacturing facility
T-1173	Bohemia, Inc.	Log yard paving project; bark residue pick-up system
T-1180	The Boeing Company	Cyclones and dust collectors
T-1182	Boise Cascade Corp.	Wet scrubbers and associated equipment
T-1189	Lane Plywood, Inc.	Spark detection and extinguishing system; cyclone; associated equipment
T-1192	Naumes Orchards of Ore., Inc.	Seven wind machines
T-1197	Menasha Corp.	Four weighing microcells and electronics readout on spent liquor tank
T-1202	Crown Zellerbach Corp.	Petroleum products storage building
T-1203	Crown Zellerbach Corp.	Extension of filter backwash discharge line
T-1204	Crown Zellerbach Corp.	System to treat stack scrubber waters
T-1211	Crown Zellerbach Corp.	Spill containment and collection system
T-1214	Crown Zellerbach Corp.	Lining insertion inside pipine of bleach plant effluent system



Contains
Recycled
Materials

2. Reissue Pollution Control Certificates 1030 and 1033 (Publishers Paper, Inc.) because of change in certified facilities (see review report).
3. Reissue Pollution Control Certificates 846 and 949 (Morton Milling Company) because of change in company name (see review report).

A handwritten signature in cursive script that reads "Bill".

WILLIAM H. YOUNG

CASplettstaszer
229-6484
5/2/80
Attachments

PROPOSED MAY 1980 TOTALS

Air Quality	\$ 2,029,460
Water Quality	945,821
Solid Waste	5,313,339
Noise	<u>-0-</u>
	\$ 8,118,620

CALENDAR YEAR TOTALS TO DATE

Air Quality	\$ 1,800,410
Water Quality	7,692,835
Solid Waste	5,027,930
Noise	<u>5,157</u>
	\$14,526,332

Appl T-1150
Date 4-24-80

State of Oregon
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Bohemia Inc.
Particleboard Plant
Box 1819
Eugene, OR 97401

The applicant owns and operates a particleboard plant at Eugene, Oregon.

Application was made for tax credit for a solid waste pollution control facility.

2. Description of Claimed Facility

The facility described in this application consists of a sanderdust storage silo, a package fire tube boiler and a baghouse.

Request for Preliminary Certification for Tax Credit was made on November 16, 1976, and approved on December 3, 1976.

Construction was initiated on the claimed facility in January 1977, completed on December 10, 1979, and the facility was placed into operation on December 10, 1979.

Facility Cost: \$274,314.27 (Accountant's Certification was provided).

3. Evaluation of Application

Completion of this facility has reduced the volume of waste wood material (sanderdust and excess hog fuel) generated at this and other corporate facilities that must be landfilled. In addition, operation of this facility has reduced the consumption of natural gas in the production of particleboard.

4. Summation

- a. Facility was constructed in accordance with the requirements of ORS 468.175, regarding preliminary certification.
- b. Facility was constructed on or after January 1, 1973, as required by ORS 468.165(1)(c).
- c. Facility is designed for and is being operated to a substantial extent for the purpose of preventing, controlling, or reducing solid waste.

- d. The facility is necessary to satisfy the intents and purposes of ORS Chapter 459, and the rules adopted under that chapter.
- e. The cost of the facility allocable to pollution control is 100 percent.

5. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$274,314.27 with 100 percent allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1150.

W. H. Dana:f
(503) 229-5913
April 24, 1980
SF1395

Appl T-1155
Date 3/3/80

State of Oregon
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Georgia-Pacific Corporation
Toledo Division
900 Southwest Fifth Avenue
Portland, Oregon 97204

The applicant owns and operates Kraft pulp and paper mill at Toledo, Oregon.

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

2. Description of Claimed Facility

The facility described in this application is two Combustion Power Company Model No. DS-800 dry granular media scrubbers and associated equipment. The facility cost consists of the following:

Fans	\$232,773
Instrumentation and Electrical	90,388
Breeching and dampers	227,352
Scrubbers	458,305
Screens and media elevator	272,130
Ash handling equipment	80,163
Miscellaneous	67,506
Total	<u>\$1,478,617</u>

Request for Preliminary Certification for Tax Credit was made on November 10, 1975, and approved on January 2, 1976.

Construction was initiated on the claimed facility on September 1, 1976, completed on April, 1977, and the facility was placed into operation on August, 1977.

Facility Cost: \$1,478,617 (Accountant's Certification was provided).

3. Evaluation of Application

The claimed facility was installed to bring the two Georgia-Pacific hog fuel boilers into compliance with the Department's regulations. The facility has been inspected by the Department and is operating satisfactorily. It has reduced particulate by 617 pounds per day. The material collected by the scrubbers does not have any economic value. Therefore, it is concluded that the facility was installed solely for air pollution control and 80 percent or more of the cost is allocable to air pollution control.

4. Summation

- a. Facility was constructed in accordance with the requirements of ORS 468.175, regarding preliminary certification.
- b. Facility was constructed on or after January 1, 1967, as required by ORS 468.165(1)(a).
- c. Facility is designed for and is being operated to a substantial extent for the purpose of preventing, controlling, or reducing air pollution.
- d. The facility was required by the Department and is necessary to satisfy the intents and purposes of ORS Chapter 468, and the rules adopted under that chapter.
- e. The portion of the facility cost that is properly allocable to pollution control is 80 percent or more.

5. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$1,478,617 with 80 percent or more allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1155.

F. A. Skirvin:np
(503) 229-6414
April 4, 1980
AN1263(pd)

Appl T-1173
Date _____

State of Oregon
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

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

The applicant owns and operates a sawmill at Lakeside, Oregon.

Application was made for tax credit for a solid waste pollution control facility.

2. Description of Claimed Facility

The facility described in this application consists of a log yard paving project.

Request for Preliminary Certification for Tax Credit was made on June 19, 1978, and approved on July 26, 1978.

Construction was initiated on the claimed facility in July 1978, completed in January, 1980, and the facility was placed into operation in November, 1979.

Facility Cost: \$363,601.39 (Accountant's Certification was provided).

3. Evaluation of Application

Prior to completion of this project, bark from the log storage and handling areas was contaminated with soil and crushed rock, rendering it unfit for use as a fuel. An estimated thirteen to twenty-four units of wood waste were landfilled per week prior to completion of this log yard paving project. This material is now recovered and transported to Saginaw (by a backhaul) for use as hogged fuel.

4. Summation

- a. Facility was constructed in accordance with the requirements of ORS 468.175, regarding preliminary certification.
- b. Facility was constructed on or after January 1, 1973, as required by ORS 468.165(1)(c).
- c. Facility is designed for and is being operated to a substantial extent for the purpose of preventing, controlling, or reducing solid waste.

- d. The facility is necessary to satisfy the intents and purposes of ORS Chapter 459, and the rules adopted under that chapter.
- e. The cost of the facility allocable to pollution control is 100 percent.

5. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$363,601.39 with 100 percent allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1173.

W. H. Dana:b
(503) 229-5913
April 22, 1980
SB1378

State of Oregon
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

The Boeing Company
Box 20487
Portland, OR 97220

The applicant owns and operates a facility for machining and surface conditioning of aircraft parts and assemblies in Portland.

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

2. Description of Claimed Facility

The facility described in this application consists of one Torit Model 44 cyclone and dust collector, one Torit Model 36 cyclone and dust collector, and one Torit mist collector Model MC6000. Also included in the application were the hoods and ductwork.

Request for Preliminary Certification for Tax Credit was made on July 15, 1977, and approved on August 1, 1977.

Construction was initiated on the claimed facility on July 27, 1977, completed on November 4, 1977, and the facility was placed into operation on November 4, 1977.

Facility Cost: \$101,263.23 (Accountant's Certification was provided).

3. Evaluation of Application

Prior to installation of this dust control system, the exhaust from tool grinders was controlled by bag-type dust collectors which exhausted back into the tool room. Because of problems with OSHA and complaints from employees, the company proposed installation of the current system which exhausts to the outside air. In order to comply with DEQ limits on emissions to the atmosphere, the subject control system was installed. The current system complies with all Department regulations. The collected material is disposed of in an appropriate manner. There is no economic benefit to the company from the installation or operation of this equipment.

The system was designed and installed as a turn-key operation by an independent contractor. The total cost of the facility included the cost of hoods and ductwork to remove dust from the work areas. The Department does not consider these hoods and ductwork to be pollution control facilities because they are required for plant operation.

Boeing's engineering staff estimated the cost of this ductwork at \$18,000. After subtracting the cost of the non-complying ductwork, the cost of the project is \$83,263.23. Therefore, 80 percent or more of the revised cost of this facility is allocable to pollution control.

4. Summation

- a. Facility was constructed in accordance with the requirements of ORS 468.175, regarding preliminary certification.
- b. Facility was constructed on or after January 1, 1967, as required by ORS 468.165(1)(a).
- c. Facility is designed for and is being operated to a substantial extent for the purpose of preventing, controlling, or reducing air pollution.
- d. The facility was required by the Department of Environmental Quality and is necessary to satisfy the intents and purposes of ORS Chapter 468, and the rules adopted under that chapter.
- e. The portion of the facility cost that is properly allocable to pollution control is 80 percent or more of the revised cost.

5. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$83,263.23 with 80 percent or more allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1180.

F. A. Skirvin:ne
(503) 229-4818
May 8, 1980

AN8028

State of Oregon
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Boise Cascade Corporation
Northeast Oregon Region
Box 50
Boise, Idaho 83728

The applicant owns and operates a sawmill and plywood plant at Elgin, Oregon.

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

2. Description of Claimed Facility

The facility described in this application consists of two Bumstead-Wolford Company Doyle type wet scrubbers, associated foundations and duct work.

Request for Preliminary Certification for Tax Credit was made on 3/16/78, and approved on 4/20/78.

Construction was initiated on the claimed facility in May 1978, completed in October 1978, and the facility was placed into operation in October 1978.

Facility Cost: \$203,259.29 (Accountant's Certification was provided).

3. Evaluation of Application

The two boilers at this plant were previously controlled by Multiclones. These Multiclones were replaced by wet scrubbers in order to meet the Department's particulate emission limits. The emissions have been tested since the installation of the scrubbers and compliance has been demonstrated. The material collected is discarded. There is no economic benefit for the company from the installation of this equipment. The primary purpose is air pollution control. Therefore 80 percent or more of the cost of this facility is allocable to pollution control.

4. Summation

a. Facility was constructed in accordance with the requirements of ORS 468.175, regarding preliminary certification.

b. Facility was constructed on or after January 1, 1967, as required by ORS 468.165(1) (a).

- c. Facility is designed for and is being operated to a substantial extent for the purpose of preventing, controlling, or reducing air pollution.
- d. The facility was required by Department of Environmental Quality and is necessary to satisfy the intents and purposes of ORS Chapter 468, and the rules adopted under that chapter.
- e. The portion of the facility cost that is properly allocable to pollution control is 80 percent or more.

5. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$203,259.29 with 80 percent or more allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1182.

F. A. Skirvin:ld
AL4417
(503) 229-6414
4/18/80

Appl T-1189
Date 4/15/80

State of Oregon
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Lane Plywood, Inc.
65 North Bertelsen Road
Eugene, OR 97402

The applicant owns and operates a plywood manufacturing plant in Eugene.

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

2. Description of Claimed Facility

The facility described in this application consists of a Grecon spark detection and extinguishing system, one new cyclone, additional ducts, rotary air locks and back draft dampers to isolate the existing emission control systems.

Request for Preliminary Certification for Tax Credit was made on January 10, 1979, and approved on February 20, 1979.

Construction was initiated on the claimed facility on February 5, 1979, and completed on June 20, 1979, and the facility was placed into operation on June 20, 1979.

Facility Cost: \$127,321 (Accountant's Certification was provided).

3. Evaluation of Application

The company had installed three baghouses to control emissions from cyclones 1, 2, and 3. Collected material from baghouses 1 and 2 was ducted together and routed back to cyclone 2. Collected material from the three cyclones was ducted to the storage bin. This system adequately controlled emissions when operating. However, because all the cyclones and baghouses were interconnected, a fire in one system rapidly spread to the other systems. There were several fires and long periods of uncontrolled emissions while waiting for replacement parts. During these periods the cyclones were in violation of the LRAPA emission limits.

Modifications were made to the three systems to isolate each unit and a fire detection and suppression system was installed. Since this installation, there has been no fire damage and down time has been minimized. These cyclones and baghouses have maintained continuous compliance and are expected to continue to do so. The substantial

purpose of this project is air pollution control. There is no apparent economic benefit to the company; therefore 80 percent or more of the cost is allocable to pollution control.

4. Summation

- a. Facility was constructed in accordance with the requirements of ORS 468.175, regarding preliminary certification.
- b. Facility was constructed on or after January 1, 1967, as required by ORS 468.165(1) (a).
- c. Facility is designed for and is being operated to a substantial extent for the purpose of preventing, controlling, or reducing air pollution.
- d. The facility was required by Lane Regional Air Pollution Authority and is necessary to satisfy the intents and purposes of ORS Chapter 468, and the rules adopted under that chapter.
- e. The portion of the facility cost that is properly allocable to pollution control is 80 percent or more.

5. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$127,321 with 80 percent or more allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1189.

F. A. Skirvin
(503) 229-6414
EW:b
April 22, 1980

AB1351

Appl T-1192
Date 4/22/80

State of Oregon
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Naumes Orchards of Oregon, Inc.
Box 996
Medford, OR 97501

The applicant owns and operates a pear orchard at Medford, Oregon.

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

2. Description of Claimed Facility

The facility described in this application is 7 Orchard Rite wind machines for frost protection. Tower Serial Nos.: GPT 004, 80024, 80025, 80008, 60008, 79231, and 79230.

Request for Preliminary Certification for Tax Credit was made on December 3, 1979, and approved on January 16, 1980.

Construction was initiated on the claimed facility on February 15, 1980, completed on February 29, 1980, and the facility was placed into operation on February 29, 1980.

Facility Cost: \$119,000 (Accountant's Certification was provided).

3. Evaluation of Application

There is no law limiting the use of fuel oil fired heaters to control frost damage to fruit trees, even though the heaters produce a significant smoke and soot air pollution problem in the Medford Air Quality Maintenance Area. The orchard farmers desire a secure long-range solution to frost control that includes the reduction or elimination of the smoke and soot nuisance. Frost control is needed on an average of 50 hours per year, of which one-third is considered heavy frost conditions using all heaters and two-thirds is light frost conditions using half the heaters.

In 1972, an orchard fan was installed in the Medford area and its performance was evaluated by the OSU Agricultural Experiment Station, which published a favorable report in July, 1978. Ten orchard fans were installed in the Medford area in 1978, and 16 in 1979.

The operating cost of a typical orchard fan is slightly greater than the savings in the cost of fuel oil. The operating cost consists of the fuel cost using the fan, depreciation over seven years, and no salvage value plus the average interest at 14 percent on the undepreciated balance.

4. Summation

- a. Facility was constructed in accordance with the requirements of ORS 468.175, regarding preliminary certification.
- b. Facility was constructed on or after January 1, 1967, as required by ORS 468.165(1) (a).
- c. Facility is designed for and is being operated to a substantial extent for the purpose of preventing, controlling, or reducing air pollution.
- d. The facility is necessary to satisfy the intents and purposes of ORS Chapter 468, and the rules adopted under that chapter.
- e. The portion of the facility cost that is properly allocable to pollution control is 80 percent or more.

5. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$119,000 with 80 percent or more allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1192.

F. A. Skirvin:e
(503) 229-6414
April 24, 1980
AN8905.A

Appl T-1197
Date _____

State of Oregon
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Menasha Corporation
Paperboard Division
P.O. Box 329
North Bend, OR 97459

The applicant owns and operates a pulp and paperboard mill manufacturing corrugating medium from hardwood chips and recycled container board at North Bend, Oregon.

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

2. Description of Claimed Facility

The facility described in this application is the installation of four Kistler-Morse weighing microcells and model 925 electronics readout on the spent liquor incinerator product (salt cake) tank.

Request for Preliminary Certification for Tax Credit was made 8/6/79, and approved 10/3/79. Construction was initiated on the claimed facility in September, 1979, (equipment ordered) completed 10/30/79, and the facility was placed into operation 10/31/79.

Facility Cost: \$3,195 (Accountant's Certification was provided).

3. Evaluation of Application

The system improves quantitative accounting of salt cake produced and delivered to rail cars there-by upgrading the process of incineration of spent liquor. Staff has inspected the claimed facility and reports that it is operating as intended.

Applicant claims that 100 percent of the cost of the claimed facility is properly allocable to pollution control.

4. Summation

- a. Facility was constructed in accordance with the requirements of ORS 468.175, regarding preliminary certification.
- b. Facility was constructed on or after January 1, 1967, as required by ORS 468.165(1)(a).

- c. Facility is designed for and is being operated to a substantial extent for the purpose of preventing, controlling, or reducing water pollution.
- d. The facility was required by the Department of Environmental Quality and is necessary to satisfy the intents and purposes of ORS Chapter 468 and the rules adopted under that chapter.
- e. The portion of the facility cost that is properly allocable to pollution control is 100 percent.

5. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$3,195 with 80% or more allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1197.

CKA:b

WB1457

(503) 229-5325

April 29, 1980

State of Oregon
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Crown Zellerbach Corp.
Tillamook Managed Forest
904 Drake Street
Camas, WA 98607

The applicant owns and operates a log sorting operation at Tillamook, Oregon.

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

2. Description of Claimed Facility

The facility described in this application is a bulk petroleum products storage building for containment of petroleum products.

Request for Preliminary Certification for Tax Credit was made October 13, 1978, and approved November 9, 1978. Construction was initiated on the claimed facility August 1, 1979, completed and placed into operation August 6, 1979.

Facility Cost: \$10,193 (Accountant's Certification was provided).

3. Evaluation of Application

Prior to construction of the claimed facility oil was stored in 25 drums adjacent to the shop in the open. Transfer of oil resulted in some accidental spilling which contaminated storm run off. The problem has been virtually eliminated. No visible evidence or oil sheen is seen in storm run off.

Applicant claims that 100 percent of the cost of the claimed facility is properly allocable to pollution control.

4. Summation

- a. Facility was constructed in accordance with the requirements of ORS 468.175, regarding preliminary certification.
- b. Facility was constructed on or after January 1, 1967, as required by ORS 468.165(1) (a).

- c. Facility is designed for and is being operated to a substantial extent for the purpose of preventing, controlling, or reducing water pollution.
- d. The facility was required by the Department of Environmental Quality and is necessary to satisfy the intents and purposes of ORS Chapter 468 and the rules adopted under that chapter.
- e. The portion of the facility cost that is properly allocable to pollution control is 100 percent.

5. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$10,193 with 80% or more allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1202.

CKA:b
(503) 229-5325
April 30, 1980
WB1469

State of Oregon
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Crown Zellerbach Corp.
West Linn Division
904 Drake Street
Camas, WA 98607

The applicant owns and operates a pulp and paper mill at West Linn, Oregon.

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

2. Description of Claimed Facility

The facility described in this application is a 14 inch diameter pipe extension of the existing filter backwash discharge line to a point in the Willamette River, 185 feet from the shoreline (160 feet concrete cylinder pipe) including flow meter and recorder.

Request for Preliminary Certification for Tax Credit was made 6/14/77, and approved 6/29/77. Construction was initiated on the claimed facility February, 1978, completed and placed into operation in October, 1979.

Facility Cost: \$67,101 (Accountant's Certification was provided).

3. Evaluation of Application

This project was undertaken at the request of the DEQ. The purpose was to minimize the effects of the discharge at low flow and to improve mixing of the effluent with the river. The facility is operating as intended.

Applicant claims that 100 percent of the cost of the claimed facility is properly allocable to pollution control.

4. Summation

- a. Facility was constructed in accordance with the requirements of ORS 468.175, regarding preliminary certification.
- b. Facility was constructed on or after January 1, 1967, as required by ORS 468.165(1) (a).

- c. Facility is designed for and is being operated to a substantial extent for the purpose of preventing, controlling, or reducing water pollution.
- d. The facility was required by the Department of Environmental Quality and is necessary to satisfy the intents and purposes of ORS Chapter 468 and the rules adopted under that chapter.
- e. The portion of the facility cost that is properly allocable to pollution control is 100 percent.

5. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$67,101 with 80% or more allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1203.

CKD:b
(503) 229-5325
April 29, 1980
WB1458

State of Oregon
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Crown Zellerbach Corp.
West Linn Division
904 Drake Street
Camas, WA 98607

The applicant owns and operates a pulp and paper mill at West Linn, Oregon.

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

2. Description of Claimed Facility

The facility described in this application is a system to treat stack scrubber waters and consists of:

- a. Scrubber water sump
- b. Transfer pump and piping
- c. Side hill type screens
- d. Cinder clarifier
- e. Pump to primary and secondary treatment
- f. Cinder disposal - landfill

Request for Preliminary Certification for Tax Credit was made October 17, 1977, and approved April 17, 1978. Construction was initiated on the claimed facility November, 1977, completed and was placed into operation in October, 1979.

Facility Cost: \$246,440 (Accountant's Certification was provided).

3. Evaluation of Application

The facility was required by DEQ NPDES permit condition and has eliminated this discharge which had gone directly to the Willamette River.

Applicant claims that 100 percent of the cost of the claimed facility is properly allocable to pollution control.

4. Summation

- a. Facility was constructed in accordance with the requirements of ORS 468.175, regarding preliminary certification.

- b. Facility was constructed on or after January 1, 1967, as required by ORS 468.165(1) (a).
- c. Facility is designed for and is being operated to a substantial extent for the purpose of preventing, controlling, or reducing water pollution.
- d. The facility was required by the Department of Environmental Quality and is necessary to satisfy the intents and purposes of ORS Chapter 468 and the rules adopted under that chapter.
- e. The portion of the facility cost that is properly allocable to pollution control is 100 percent.

5. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$246,440 with 80% or more allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1204.

CKA:b

(503) 229-5325

April 29, 1980

WB1459

Appl T-1211
Date _____

State of Oregon
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Crown Zellerbach Corp.
Wauna Division
904 Drake Street
Camas, WA 98607

The applicant owns and operates a integrated pulp and paper mill at Clatskanie, Oregon.

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

2. Description of Claimed Facility

The facility described in this application is a spill containment and collection system in the caustic liquor area and consists of:

- a. concrete retaining walls
- b. sump
- c. drains to reroute spills to the treatment system

Request for Preliminary Certification for Tax Credit was made May 14, 1979, and approved July 27, 1979. Construction was initiated on the claimed facility June 1, 1979, completed and placed into operation September 28, 1979.

Facility Cost: \$34,879 (Accountant's Certification was provided).

3. Evaluation of Application

Accidental liquor spills overrunning the sewer have reached the Columbia in the past. If any spills occur in the future, the applicant claims that they would be contained.

Applicant claims that 100 percent of the cost of the claimed facility if properly allocable to pollution control.

4. Summation

- a. Facility was constructed in accordance with the requirements of ORS 468.175, regarding preliminary certification.
- b. Facility was constructed on or after January 1, 1967, as required by ORS 468.165 (1) (a).

- c. Facility is designed for and is being operated to a substantial extent for the purpose of preventing, controlling, or reducing water pollution.
- d. The facility was required by the Department of Environmental Quality and is necessary to satisfy the intents and purposes of ORS Chapter 468 and the rules adopted under that chapter.
- e. The portion of the facility cost that is properly allocable to pollution control is 100 percent.

5. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$34,879 with 80% or more allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1211.

CKA:b
(503) 229-5325
April 30, 1980
WB1468

State of Oregon
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Crown Zellerbach Corp.
Wauna Division
904 Northwest Drake Street
Camas, WA 98607

The applicant owns and operates a integrated pulp and paper mill at Clatskanie, Oregon.

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

2. Description of Claimed Facility

The facility described in this application is a polyethylene and fiberglass lining insertion inside the vitrified clay piping of the bleach plant effluent system. The installation involves 1,900 feet of 36 inch diameter polyethylene pipe.

Request for Preliminary Certification for Tax Credit was made May 14, 1979, and approved July 27, 1979. Construction was initiated on the claimed facility June 5, 1979, completed and placed into operation September 25, 1979.

Facility Cost: \$484,013 (Accountant's Certification was provided).

3. Evaluation of Application

The claimed facility was recommended by staff to upgrade the clay bleach effluent line which was causing discharge of untreated effluent into Crawford Creek. (The existing clay line had not received tax credit.)

The claimed facility has eliminated all leaks to Crawford Creek.

Applicant claims that 100 percent of the cost of the claimed facility if properly allocable to pollution control.

4. Summation

a. Facility was constructed in accordance with the requirements of ORS 468.175, regarding preliminary certification.

b. Facility was constructed on or after January 1, 1967, as required by ORS 468.165(1) (a).

- c. Facility is designed for and is being operated to a substantial extent for the purpose of preventing, controlling, or reducing water pollution.
- d. The facility was required by the Department of Environmental Quality and is necessary to satisfy the intents and purposes of ORS Chapter 468 and the rules adopted under that chapter.
- e. The portion of the facility cost that is properly allocable to pollution control is 100 percent.

5. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$484,013 with 80% or more allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1214.

CKA:b
(503) 229-5325
April 30, 1980
WB1467

STATE OF OREGON - DEPARTMENT OF ENVIRONMENTAL QUALITY

Reissuance of Pollution Control Facility Certificates

1. Certificates Issued to:

Publishers Paper Company
419 Main Street
Oregon City, Oregon 97045

The Certificates were issued for water pollution control facilities.

2. Description

On December 12, 1979, the Commission issued Pollution Control Facility Certificates 1030 and 1033 to Publishers Paper Company mills in Oregon City and Newberg respectively. Certificate 1030 was issued in the amount of \$970,996.00 for expansion and upgrading of an existing newsprint deinking facility. Certificate 1033 was issued in the amount of \$8,785,186.00 for a 100 ton per day newsprint deinking plant.

By letter of March 27, 1980, Publishers Paper Company informed the Department that they were withdrawing certain items of equipment from service which were certified in Pollution Control Facility Certificates 1030 and 1033, thus making a change in certified costs (see letter attached).

3. Director's Recommendation

Pursuant to ORS 317.072(10), it is recommended that Pollution Control Facility Certificate 1030 in the amount of \$970,966.00 be reissued to reflect the lower cost of \$875,372.00 and that Pollution Control Facility Certificate 1033 in the amount of \$8,785,186.00 be reissued in the amount of \$8,638,973.00. The Certificates are being reissued because certain portions of the originally certified facilities were taken out of service.

CASplettstaszer
229-6484
5/2/80
Attachments



Copy

RECEIVED
March 27, 1980
MAR 28 1980

DEPARTMENT OF ENVIRONMENTAL QUALITY

Oregon Department of Environmental
Quality
P. O. Box 1760
Portland, Oregon 97207

Gentlemen:

Publishers Paper Co. has decided to withdraw certain items of equipment from service which were portions of two pollution control facility certifications. The items of equipment being withdrawn are the Krofta Clarifier and Spray Filter Systems in use at both the Oregon City De-ink plant and Newberg De-ink plant. The certified cost of the facilities being withdrawn from service at the Oregon City mill site aggregate \$95,624. This is a portion of Pollution Control Facility Certificate No. 1030. The original total certified cost of Certificate No. 1030 was \$970,996. The withdraw of the Krofta Clarifier and Spray Filters results in a revised certified cost of \$875,372.

The cost of the Newberg assets being withdrawn from service totals \$146,213. The original certified cost of Certificate No. 1033 aggregated \$8,785,186. The reduction caused by the withdrawal of the equipment from service results in a revised certified cost of \$8,638,973.

The decision to withdraw the equipment from service was made in January 1980. Therefore the reduction in tax credits will commence in 1980.

Yours very truly,

James R. Murray
James R. Murray
Corporate Tax Manager

cc: Mr. Steve Downs
Mr. Chuck Clinton

hrm



OREGON C.U.P. AWARD
Publishers Paper Co. was named in 1972 as the first recipient of the Oregon C.U.P. (Cleaning Up Pollution) Award for outstanding achievements in protecting the environment.

419 MAIN ST., OREGON CITY, OREGON 97045, TELEPHONE (503) 656-5211

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Certificate No. 1030

Date of Issue 12/14/79

Application No. T-1111

POLLUTION CONTROL FACILITY CERTIFICATE

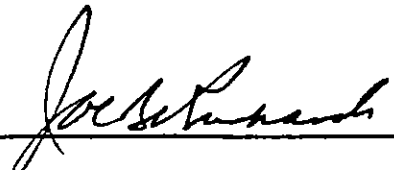
Issued To: Publishers Paper Company 419 Main Street Oregon City, Oregon 97045		Location of Pollution Control Facility: Oregon City Mill Oregon City, Oregon	
As: <input type="checkbox"/> Lessee <input checked="" type="checkbox"/> Owner			
Description of Pollution Control Facility: <p style="text-align: center;">Expansion and upgrading of an existing newsprint deinking facility.</p>			
Type of Pollution Control Facility: <input type="checkbox"/> Air <input type="checkbox"/> Noise <input type="checkbox"/> Water <input checked="" type="checkbox"/> Solid Waste <input type="checkbox"/> Hazardous Waste <input type="checkbox"/> Used Oil			
Date Pollution Control Facility was completed: <u>9/11/79</u>		Placed into operation: <u>9/11/79</u>	
Actual Cost of Pollution Control Facility: \$ <u>970,996.00</u>			
Percent of actual cost properly allocable to pollution control: <p style="text-align: center;">100%</p>			

Based upon the information contained in the application referenced above, the Environmental Quality Commission certifies that the facility described herein was erected, constructed or installed in accordance with the requirements of ORS 468.175 and subsection (1) of ORS 468.165, and is designed for, and is being operated or will operate to a substantial extent for the purpose of preventing, controlling or reducing air, water or noise pollution or solid waste, hazardous wastes or used oil, and that it is necessary to satisfy the intents and purposes of ORS Chapters 454, 459, 467 and 468 and rules adopted thereunder.

Therefore, this Pollution Control Facility Certificate is issued this date subject to compliance with the statutes of the State of Oregon, the regulations of the Department of Environmental Quality and the following special conditions:

1. The facility shall be continuously operated at maximum efficiency for the designed purpose of preventing, controlling, and reducing the type of pollution as indicated above.
2. The Department of Environmental Quality shall be immediately notified of any proposed change in use or method of operation of the facility and if, for any reason, the facility ceases to operate for its intended pollution control purpose.
3. Any reports or monitoring data requested by the Department of Environmental Quality shall be promptly provided.

NOTE - The facility described herein is not eligible to receive tax credit certification as an Energy Conservation Facility under the provisions of Chapter 512, Oregon Law 1979, if the person issued the Certificate elects to take the tax credit relief under ORS 316.097 or 317.072.

Signed 
 Title Joe B. Richards, Chairman

Approved by the Environmental Quality Commission on
 the 14th day of December, 19 79

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Certificate No. 1055
Date of Issue 12/14/79
Application No. T-1113

POLLUTION CONTROL FACILITY CERTIFICATE

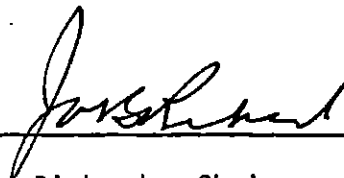
Issued To: Publishers Paper Company 419 Main Street Oregon City, Oregon 97045	Location of Pollution Control Facility: Wynooski Road Newberg, Oregon
As: <input type="checkbox"/> Lessee <input checked="" type="checkbox"/> Owner	
Description of Pollution Control Facility: <p style="text-align: center;">A 100 ton per day newsprint deinking plant.</p>	
Type of Pollution Control Facility: <input type="checkbox"/> Air <input type="checkbox"/> Noise <input type="checkbox"/> Water <input checked="" type="checkbox"/> Solid Waste <input type="checkbox"/> Hazardous Waste <input type="checkbox"/> Used Oil	
Date Pollution Control Facility was completed: <u>6/15/79</u> Placed into operation: <u>6/15/79</u>	
Actual Cost of Pollution Control Facility: \$ <u>8,785,186.00</u>	
Percent of actual cost properly allocable to pollution control: <p style="text-align: center;">100%</p>	

Based upon the information contained in the application referenced above, the Environmental Quality Commission certifies that the facility described herein was erected, constructed or installed in accordance with the requirements of ORS 468.175 and subsection (1) of ORS 468.165, and is designed for, and is being operated or will operate to a substantial extent for the purpose of preventing, controlling or reducing air, water or noise pollution or solid waste, hazardous wastes or used oil, and that it is necessary to satisfy the intents and purposes of ORS Chapters 454, 459, 467 and 468 and rules adopted thereunder.

Therefore, this Pollution Control Facility Certificate is issued this date subject to compliance with the statutes of the State of Oregon, the regulations of the Department of Environmental Quality and the following special conditions:

1. The facility shall be continuously operated at maximum efficiency for the designed purpose of preventing, controlling, and reducing the type of pollution as indicated above.
2. The Department of Environmental Quality shall be immediately notified of any proposed change in use or method of operation of the facility and if, for any reason, the facility ceases to operate for its intended pollution control purpose.
3. Any reports or monitoring data requested by the Department of Environmental Quality shall be promptly provided.

NOTE - The facility described herein is not eligible to receive tax credit certification as an Energy Conservation Facility under the provisions of Chapter 512, Oregon Law 1979, if the person issued the Certificate elects to take the tax credit relief under ORS 316.097 or 317.072.

Signed 
 Title Joe B. Richards, Chairman

Approved by the Environmental Quality Commission on
 the 14th day of December, 1979

STATE OF OREGON - DEPARTMENT OF ENVIRONMENTAL QUALITY

Reissuance of Pollution Control Facility Certificates

1. Certificates Issued To:

Morton Milling Company
500 Rossanley Drive
Medford, Oregon 97501

The certificates were issued for air pollution control facilities.

2. Description

On November 18, 1977, the Environmental Quality Commission issued Pollution Control Facility Certificate 846 to Morton Milling Company in the amount of \$16,008.00 for a slab model grinder with bale buster. On December 15, 1978, Pollution Control Facility Certificate 949 was issued to Morton Milling Company in the amount of \$22,066.00 for a baghouse.

By letter of March 10, 1980, the Department was informed that the Company had incorporated and wished Pollution Control Facility Certificates 846 and 949 to be reissued to the Corporation (see attached letter).

3. Director's Recommendation

Pursuant to ORS 316.097(10), it is recommended that Pollution Control Facility Certificates 846 and 949 issued to Morton Milling Company, be revoked and reissued to Morton Milling Company, Inc.

CASplettstaszer
229-6484
5/2/80
Attachments

KOSMATKA, DONNELLY & RYERSON
CERTIFIED PUBLIC ACCOUNTANTS

1005 EAST MAIN STREET, SUITE 2
MEDFORD, OREGON 97501
(503) 773-6633

March 10, 1980

Carol A. Splettstaszer
Department of Environmental Quality
Management Service Division
P.O. Box 1760
Portland, Oregon 97207

Re: Morton Milling Co., Inc.
Pollution Control Facility Certificates

Dear Sirs:

In response to your letter dated February 26, 1980, copy enclosed, Morton Milling Company, a partnership has been Incorporated. Therefore, the partners have elected to transfer Certificate 949 issued December 15, 1978, and Certificate 846 issued November 18, 1977 to Morton Milling Co., Inc.

If you have any questions, please contact us.

Yours truly,



Daniel A. Kosmatka

Enclosure

cc: David Simpson

Management Services Div.
Dept. of Environmental Quality
RECEIVED
MAR 13 1980

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Certificate No. 949
Date of Issue 12/15/78
Application No. T-1030

POLLUTION CONTROL FACILITY CERTIFICATE

Issued To: Morton Milling Company 500 Rossanley Drive Medford, Oregon 97501	Location of Pollution Control Facility: 500 Rossanley Drive Medford, Oregon 97501
As: <input type="checkbox"/> Lessee <input checked="" type="checkbox"/> Owner	
Description of Pollution Control Facility: Jemco Baghouse Dust Collector installed on airlift cyclone exhaust.	
Type of Pollution Control Facility: <input checked="" type="checkbox"/> Air <input type="checkbox"/> Noise <input type="checkbox"/> Water <input type="checkbox"/> Solid Waste	
Date Pollution Control Facility was completed: <u>March 22, 1978</u>	Placed into operation: <u>March 22, 1978</u>
Actual Cost of Pollution Control Facility: <u>\$ 22,066.00</u>	
Percent of actual cost properly allocable to pollution control: <u>80% or more allocable to pollution control.</u>	

In accordance with the provisions of ORS 468.155 et seq., it is hereby certified that the facility described herein and in the application referenced above is a "Pollution Control Facility" within the definition of ORS 468.155 and that the air or water facility was constructed on or after January 1, 1967, the solid waste facility was under construction on or after January 1, 1973, or the noise facility was constructed on or after January 1, 1977, and the facility is designed for, and is being operated or will operate to a substantial extent for the purpose of preventing, controlling or reducing air, water, noise or solid waste pollution, and that the facility is necessary to satisfy the intents and purposes of ORS Chapter 459, 467 or 468 and the regulations adopted thereunder.

Therefore, this Pollution Control Facility Certificate is issued this date subject to compliance with the statutes of the State of Oregon, the regulations of the Department of Environmental Quality and the following special conditions:

1. The facility shall be continuously operated at maximum efficiency for the designed purpose of preventing, controlling, and reducing the type of pollution as indicated above.
2. The Department of Environmental Quality shall be immediately notified of any proposed change in use or method of operation of the facility and if, for any reason, the facility ceases to operate for its intended pollution control purpose.
3. Any reports or monitoring data requested by the Department of Environmental Quality shall be promptly provided.

Signed 

Title Joe B. Richards, Chairman

Approved by the Environmental Quality Commission on
the 15th day of December, 19 78

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Certificate No. 846
Date of Issue 11/18/77
Application No. T-919


POLLUTION CONTROL FACILITY CERTIFICATE

Issued To: Morton Milling Company 500 Rossanley Drive Medford, Oregon 97501	Location of Pollution Control Facility: 500 Rossanley Drive Medford, Oregon 97501
As: <input type="checkbox"/> Lessee <input checked="" type="checkbox"/> Owner	
Description of Pollution Control Facility: A TECO 42 inch slab model grinder with bale buster.	
Type of Pollution Control Facility: <input checked="" type="checkbox"/> Air <input type="checkbox"/> Noise <input type="checkbox"/> Water <input type="checkbox"/> Solid Waste	
Date Pollution Control Facility was completed: <u>Feb. 25, 1977</u> Placed into operation: <u>Feb. 25, 1977</u>	
Actual Cost of Pollution Control Facility: \$ <u>16,008.00</u>	
Percent of actual cost properly allocable to pollution control: 80% or more	

In accordance with the provisions of ORS 468.155 et seq., it is hereby certified that the facility described herein and in the application referenced above is a "Pollution Control Facility" within the definition of ORS 468.155 and that the air or water facility was constructed on or after January 1, 1967, the solid waste facility was under construction on or after January 1, 1973, or the noise facility was constructed on or after January 1, 1977, and the facility is designed for, and is being operated or will operate to a substantial extent for the purpose of preventing, controlling or reducing air, water, noise or solid waste pollution, and that the facility is necessary to satisfy the intents and purposes of ORS Chapter 459, 467 or 468 and the regulations adopted thereunder.

Therefore, this Pollution Control Facility Certificate is issued this date subject to compliance with the statutes of the State of Oregon, the regulations of the Department of Environmental Quality and the following special conditions:

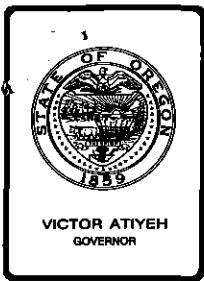
1. The facility shall be continuously operated at maximum efficiency for the designed purpose of preventing, controlling, and reducing the type of pollution as indicated above.
2. The Department of Environmental Quality shall be immediately notified of any proposed change in use or method of operation of the facility and if, for any reason, the facility ceases to operate for its intended pollution control purpose.
3. Any reports or monitoring data requested by the Department of Environmental Quality shall be promptly provided.

Signed 

Title Joe B. Richards, Chairman

Approved by the Environmental Quality Commission on
the 18th day of November, 19 77

NOTE: This staff report was received after the deadline and did not receive the review of the Director or the Attorney General's Office.



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

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

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. H, May 16, 1980, EQC Meeting

Request for Authorization to Conduct a Public Hearing to Consider Water Quality Rules Governing Approval or Rejection of Construction Plans

Background

ORS 468.742 requires that plans and specification for the construction, installation or modification of disposal systems, treatment works and sewerage systems be submitted to the Department for review. In addition, our approval or rejection must be in accordance with rules of the Commission.

Plans have been submitted routinely by engineers, cities, industries, etc., over the years, and the Department has been reviewing and approving such plans without benefit of Commission rules. Various printed Department instructions have been used, however, in lieu of specific rules.

Legislation (SB 136) submitted at the request of the Department to the 1979 Oregon Legislative Assembly, amended ORS 468.742. This authorizes the Commission to exempt from submittal and Department review, "class or classes of disposal systems, treatment works and sewerage systems for which the Commission finds plan submittal and approval unnecessary or impractical."

Evaluation

The proposed rules are primarily procedural and describe what information and documents constitute a complete submittal for Department review for types of projects.



Contains
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Materials

Criteria for approval as well as criteria for rejection of plans are stated. Emphasis is placed upon achievement of permit requirements, public health preservation, nuisances prevention, and compliance with rules of the Department such as the Water Quality Management Plan.

Exemption from submittal of plans to the Department is permitted where a municipality and the Department can agree to a locally operated equivalent program for review on gravity sewer construction projects. These exemptions should reduce the growing volume of plans received and reviewed by the Department each year. Other exemptions would also be permitted.

These proposed rules include an implementation procedure for our coordination agreement with LCDC whereby our construction plan approval actions--being site specific--will occur only with evidence of land use compatibility as required under ORS Chapter 197.

Emphasis is placed upon execution of a project beyond our 'paper' review and approval whereby the local sewage works owner, generally a municipality, must follow through with the prime responsibility of assuring compliance with project plans approved under proposed rules.

Technical rules or 'measurable standards' have been largely avoided except for two appendices on sewerage systems and raw sewage lift stations. These are divided into requirements and guidelines sections. Voluminous 'criteria' written in mandatory language were felt to be unnecessary and unduly restrictive for use by both the Department and a designer. These rules would be applicable to both municipal sewerage projects and industrial waste projects.

Summation

1. Rules for review of plans and specifications are required by ORS 468.742 and the Commission has authority to adopt such rules.
2. Exemptions from plan submittal are authorized by this same statute and to implement exemptions, rules are required.
3. The rules establish the basis for approval or rejection of plans.
4. The rules will implement our responsibility under ORS 197 in making site specific land use related decisions.

Director's Recommendation

Based upon the Summation, it is recommended that the Commission authorize public hearings to take testimony on proposed water quality rule for review of plans and specifications (Division 52) with the understanding that prior to the public notice the currently drafted rules may undergo some minor revisions as a result of additional staff and legal counsel input.

William H. Young

Attachments: (4)

Appendix A, Draft Rules
Appendix B, Draft Statement of Need for Rulemaking
Appendix C, Draft Fiscal Impact Statement
Appendix D, Draft Hearing Notice

James L. Van Domelen:1

229-5310

May 5, 1980

WL1470

Division 52

REVIEW OF PLANS AND SPECIFICATIONS

Statutory Authority: 468.742, 468.035, and 468.700 thru 468.725

Purpose

340-52-005 The purpose of these rules is to prescribe requirements and procedures to obtain approval of plans and specifications as required by ORS 468.742 for the construction, installation or modification of disposal systems, treatment works and sewerage systems.

Definitions

340-52-010 As used in these rules unless otherwise required by context:

() "Common Sewer" is a part of a sewerage system which either initially or ultimately will serve two or more tax lots, parcels, or ownerships which may or may not be owned or controlled by a municipality either initially or ultimately.

Exception: Does not include for purposes of these rules common sewers within a Unit Ownership (Condominium) development described in ORS 91.500 to 91.671 and 91.990.

() "Construct" or "Construction" includes installation, repair, and major modification or addition.

() "Department" means the Department of Environmental Quality.

() "Developer" means project sponsor, subdivider, or person causing construction of waste water works to occur, generally other than the waste water works owner.

() "Disposal system" means a system for disposing of wastes, either by surface or underground methods, and includes municipal sewerage systems, domestic sewerage systems, treatment works, disposal wells and other systems, per ORS 468.700(1)

() "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, per ORS 468.700(2).

() "Municipality" means any county, city, special service district or other governmental entity having authority to dispose of or treat or collect sewage, industrial wastes or other wastes, or any combination of two or more of the foregoing acting jointly, per ORS 454.010(3).

() "Permit" means a National Pollutant Discharge Elimination System (NPDES) permit or a Water Pollution Control Facilities permit as defined in Division 45 of OAR Chapter 340.

() "Plans" refer to plans (drawings) and specifications which together are initially bidding documents and ultimately contract documents.

() "Sewage" means the water-carried human or animal waste from residences, buildings, industrial establishments, or other places together with such groundwater infiltration and surface water as may be present. The admixture with sewage of wastes or industrial wastes shall also be considered "sewage" within the meaning of this division, per ORS 468.700(4).

() "Waste Water Works Owner" or "Owner" is the recipient of completed waste water works construction and has operation and maintenance responsibility for waste water works either wholly or in part and may also have a permit issued by the Department.

() "Waste Water Treatment Plant" includes treatment works and disposal system.

() "Sewage Works" is a comprehensive term for facilities for collecting, pumping, treating and disposing of sewage; the sewerage system and the treatment works.

() "Sewerage System" mean pipelines or conduits, pumping stations, and force mains, and all other structures, devices, appurtenances, and facilities used for collecting or conducting wastes to an ultimate point for treatment or disposal, per ORS 468.700(5). Generally limited to "common sewers."

() "Statewide Water Quality Management Plan" refers to Division 4 of OAR Chapter 340.

() "Treatment Works" means any plant or other works used for the purpose of treating, stabilizing or holding wastes, per ORS 468.700(6).

() "Wastes" means sewage, industrial wastes, and all other liquid, gaseous, solid, radioactive, or other substances which will or may cause pollution or tend to cause pollution of any water of the state, per ORS 468.700(7).

() "Waste Water" is synonymous with sewage or industrial waste, depending upon context of use.

Submittal of Plans

340-52-015 Except where exempted under section 340-52-035 of these rules, all plans and specifications along with other submittal data for proposed construction, installation, or modification of disposal systems, treatment works, sewerage systems and common sewers shall first be submitted to the Department for review. Approval or rejection of such plans by the Department shall be in writing. No construction, installation or modification shall be commenced until the plans and specifications submitted to the Department are approved.

(1) Plans and other information to be submitted shall constitute a complete, descriptive proposal and shall include at least the following:

(a) For all projects -

(1) The name of person or firm submitting the project

(2) Project location by county and nearest city

(3) The name of the project and/or project developer

(4) The name of the waste water works owner who will own, operate and maintain the completed project. For sewage projects, a statement by the owner (if applicable) that said owner agrees to provide sewer service to the project and has sewerage system and treatment capacity to do so. Projects submitted by the owner shall be deemed a statement of agreement and capacity adequacy.

(5) At least two sets of plans and specifications (stamped and signed by the design engineer in accordance with ORS 672 as applicable). Three sets of final bid documents shall be submitted for a project to receive an EPA grant assistance. Plans and specifications shall be complete to the extent that a contractor qualified in the type of work could be reasonably expected to construct it with minimal direction by the engineer.

(6) An affirmative written statement from the appropriate jurisdiction(s) that the proposed project is compatible with the L.C.D.C. acknowledged local comprehensive plan, ordinances and zoning requirements or L.C.D.C. statewide planning goals under ORS, Chapter 197.

(a) Where the jurisdiction submitting a proposed project to the Department for approval under these rules is the sole jurisdiction that is responsible for the affirmative statement a compatibility, the Department will not require the written statement. Submittal of construction plans to Department shall be deemed evidence that the jurisdiction is in compliance with its own requirements or L.C.D.C. goals.

(b) Where more than one local jurisdiction has planning authority over the specific project statements of compatibility from each of these jurisdictions (e.g., city, county, and regional planning jurisdictions) shall be submitted to the Department.

(c) The Department may petition L.C.D.C. for a compatibility determination and statement where:

(1) a city or county negative compatibility determination and statement or no statement at all has been issued on the project needed to meet DEQ program requirements (e.g., sewage treatment plant modifications) or where a negative determination by a local jurisdiction is in a goal area under DEQ jurisdiction by statute;

(2) A proposal appears to have major impact requiring a state determination of compatibility in addition to the local statement.

(7) Realistic long-term management and financial plans for continuous maintenance, operation, and replacement of facilities upon request of the Department for sewage facilities only.

(b) Additionally, for treatment works and similar facilities, domestic and industrial, the following shall be submitted:

(1) The design flows, design population or production, and design effluent parameters shall be stated in the plans and be in accordance with either (a) a permit issued under ORS

468.740, or (b) approved facility plan or engineering report, or (c) the Statewide Water Quality Management Plan, or (d) a combination of the above.

(2) A hydraulic profile shall be provided.

(3) Unit detention times, volumes, sizes, hydraulic loadings, organic loadings, solids loadings, chemical loadings, expected removal efficiencies, as appropriate, shall be provided.

(4) A schematic of the complete treatment works shall be provided.

(5) An estimate of the personnel requirements to operate and maintain the completed waste water works shall be submitted.

(c) Additionally, for sewerage systems, the following shall be submitted:

(1) Drawings for sewers shall provide complete plan and profile views which adequately describe the service conditions for the completed work.

(2) For sewers larger than eight (8) inches in diameter, appropriate design flow shall be indicated in the plans or separately submitted. Population to be served, gallons of sewage per person per day, and infiltration allowance shall be submitted to support the design flow when requested by the Department.

Performance Requirements and Guidelines for Technical Review

340-52-020 (1) The Department may use as guidelines any and all available and pertinent technical sources in reviewing plans including but not limited to, published journals of such organizations as the Water Pollution Control Federation (W.P.C.F.), and the American Society of Civil Engineers (A.S.C.E.), etc., technical reports, like type plant performance data, pilot plant performance data, textbooks on waste water treatment and the Recommended Standard for Sewage Works of the Great Lakes--Upper Mississippi River Board of State Sanitary Engineers.

(2) The Department shall evaluate the degree of reliability and flexibility the system may have to operate as designed, considering component breakdown likelihood, waste water quantity and strength variations, alternate modes of operation, permit requirements, and water quality objectives in the statewide Water Quality Management Plan.

(3) Sewerage systems shall be technically evaluated in conformance with minimum Requirements and Guidelines of Appendix A and B for sewers and pump station respectively. The requirements are mandatory. The guidelines side of these appendices contain minimum design recommendations or criteria and are intended to supplement and/or implement the requirements side.

Meaning of Approval

340-52-025 Approval of plans means that the Department has determined and agrees that the estimates, assumptions and the design presented in the specific project plans are reasonable and practical and the project may, if operated and maintained as proposed (1) achieve or maintain the required permit conditions, (2) protect the public health and welfare, (3) prevent public nuisances and (4) meet the rules of the Department including water, air, noise, and solid waste and (5) not violate the statewide Water Quality Management Plan. Plan approval by the Department does not warranty that the facility will meet expectations. Plan approval does not negate the responsibility of the owner to provide additional facilities should the completed work fail to achieve design effluent parameters, unforeseen water quality violations occur, other operational problems develop, or treatment standards or requirements change.

Review of nonprocess related aspects of the plans, including but not limited to structural and electrical, if at all, will be cursory. Review and approval of plans by the Department is not meant to assure adequacy of nonprocess related aspects of the design.

Rejection of Plans

340-52-030 The Department may reject plans for any one of the following causes:

- (1) Submittal data is incomplete.
- (2) Performance Requirements and Guidelines of section 52-020 of these rules are not reasonably adhered to.
- (3) The plans fail to provide for such flexibility and reliability as to (a) preclude violation of either a permit or water quality standards, or (b) provide reasonable assurance that the system can be operated on a continuous basis.
- (4) The projects includes a planned discharge of raw or inadequately treated waste which reasonably can be prevented.
- (5) Roof, surface, foundation, footing or other groundwater drains are to be connected to the sewerage system.
- (6) The plans are determined to be inadequate to correct a water, air, noise, solid waste, or public health problem.
- (7) The financing plan for sewerage facilities does not provide reasonable assurance of adequate funding for continuing maintenance, operation, and replacement.
- (8) Affirmative statement of land use compatibility determination is not made.

The objectionable features of plans rejected shall be presented in writing by the Department.

Responsibility of Treatment Works Owners, Designs Engineers and Developers After Approval of Plans

340-52-035 (1) Construction of all projects shall be in strict conformance to the approved plans. No changes or

deviations shall be made without the prior written approval of the Department of Environmental Quality.

(2) Inspection and Certification of sewage works
Construction except for on-site industrial waste projects.

(a) The construction of sewage works shall be under the supervision of and shall be thoroughly inspected by the design engineer or his authorized representative, unless relieved under (b) below, who at the completion of the project shall certify in writing to the owner and/or Department that such construction was inspected by him and found to comply with the approved plans and specifications. Nothing in the foregoing exempts an owner from monitoring the project for conformance to requirements and performing complimentary inspections or prevents an owner's qualified staff from assuming responsibility for inspection and certification.

(b) If the design engineer is to have no further involvement or limited involvement with the project after obtaining Department approval of plans, he must so notify the Department, the sewage works owner, and the developer upon submittal of plans or immediately upon being disassociated or limited in control over materials and/or workmanship within the project. Thereupon, the sewer system owner shall assume necessary responsibility for satisfactory construction of the project in accordance with the approved plans and shall employ or apply such construction engineering/supervision services as appropriate for the project.

(c) Complete sewage system integrity and water tightness is the sewage system owner's ultimate responsibility and, as such, the owner shall monitor and/or control all private and common construction in its sewage system to the extent necessary to this end.

(3) Approval of Plans by Sewage Works Owner except for on-site industrial waste projects.

The sewage works owner as recipient of any construction work on its system has a vested responsibility to review and approve project plans--especially sewerage system addition--prior to the start of construction. Department approval of plans under these rules does not preclude the right and responsibility of review and approval by the sewage works owner. The owner may adopt more stringent construction standards and impose special conditions for sewer use, service connection, etc. Department approval of plans in all cases is, therefore, contingent upon similar approval by the owner.

(4) Operation and Maintenance Manual Required except for on-site industrial waste projects.

An appropriate operation and maintenance manual, acceptable to the Department and the owner, shall be prepared and submitted to the owner by the design engineer for all treatment works, disposal systems, and pump stations prior to start up of such facilities.

Exemption from Plan Submittal

340-52-040 The Department may exempt gravity sewer projects from submittal to the Department on an owner-by-owner basis subject to provisions it may find necessary including, but not limited to, all of the following:

- (1) The owner requests such exemption.
- (2) The owner is a municipality.
- (3) The owner has adequate professional staff including a registered professional engineer.
- (4) The owner submits a copy of all specifications and standards by which sewerage system construction will comply.
- (5) The owner submits a current master plan for sewer service.
- (6) The owner agrees to approve and construct sewerage systems in conformance with rules of the Department, owners published standards, and terms of their permit.
- (7) The owner executes a written agreement with the Department which is cancellable for cause or change in circumstances.
- (8) The owner will submit to the Department any project proposed to be EPA grant funded.

The Department may exempt other facilities where it has been determined that adequate review is conducted by another state agency and the Department's review would be redundant.

**Treatment Works and Sewerage Systems Utilizing New or Unproven
Technology**

340-52-040 The Department encourages the development of new technology and will approve plans of such provided adequate documentation is submitted. The burden of proof for demonstrating new processes, treatment systems, and technologies lies with the design engineer. Documented case histories where any such new application has been successfully and similarly demonstrated or operated on a full scale basis shall be submitted. For all such proposals, contingency plans shall be presented which will assure that in event of failure, public health and water quality would be protected.

WS1052.A(p)

I. MINIMUM REQUIREMENTS FOR
SEWERAGE SYSTEMS

A. Capacity:

Sewers shall be of such diameter as to pass without overflow, bypass, or back flow onto property of a user the design peak flow including sewage and infiltration. Inflow from roof, surface, footing, foundation, or other groundwater or surface water sources shall be excluded from capacity allowance.

B. Velocity:

Sewers shall be designed to have a velocity to "self clean" or transport constituent solids to the treatment facility or the owner shall periodically service sewers to flush, transport, or remove solids from sewers with minimal velocities.

II. GUIDELINES FOR SEWERAGE SYSTEMS

A. Capacity:

1. Collection sewers should be designed for the ultimate development of the tributary areas as determined by master sewerage plans of the owner.
2. The design of sewers should be based upon initial and ultimate flows. Flows should be broken down into domestic, industrial, and infiltration/inflow fractions. A peaking factor should be applied to domestic and industrial fractions.
3. Domestic flows should be between 50 and 100 gallons per capita per day (gpcd). Peaking factors should be between 1.8 and 4.0. Infiltration allowance should be no greater than 1,000 gallons per acre per day. Inflow allowance should be zero.
4. The minimum diameter of sewers should be 8 inches for maintenance purposes. Short nonextendable 6 inch sections of up to 250 feet are permissible.

B. Velocity:

1. Sewers shall be laid on a grade which will produce a mean velocity, when flowing full or half full, of at least (2) two feet per second, based upon the Manning formula with "n", the coefficient of roughness, valued at not less than 0.013.
2. Sewers with minimal flow such as upper reaches of laterals or those sewers serving few dwellings should be steepened and/or reduced in diameter to approach a (2) two feet per second selfcleaning velocity. Actual flows during initial years of use should be carefully evaluated in this regard.

I. MINIMUM REQUIREMENTS FOR SEWERAGE SYSTEMS

II. GUIDELINES FOR SEWERAGE SYSTEMS

3. Force mains and inverted siphons should be designed for (3) three feet per second at average flows.
4. The minimum grade for 8 inch sewers should be no less than 0.4 percent regardless of pipe material.
5. The flow channel(s) through manhole bases should be smooth and conform to the shape and slope of the inlet sewer(s).
6. Intersecting sewers, sewer connections, etc., should be made without causing backup into the smaller sewer. For intersecting unequal sized sewers in manholes, the elevation at 0.8 of full depth of flow in each sewer should match.

C. Watertightness:

Completed sewer construction shall result in limited infiltration/exfiltration through pipe walls, joints, fittings, and connection fittings, etc., and no inflow. The limit shall be consistent with the pipe and manhole materials and with what is obtainable at the time by the construction industry on representative jobs for the same type of construction using high quality materials and state-of-the-art methods of workmanship. All completed sewer lines in new work shall be tested for watertightness using either recognized air or water testing requirements and procedures.

C. Watertightness:

1. Watertightness begins with good material and finally depends upon sound field practices. All manholes should be subjected to field testing using either water exfiltration/infiltration. Sewer tests should be supplemented with television inspection after trench backfilling is complete. Since many defects do not appear initially, an eleventh month final acceptance television inspection should be performed where that capability is available and determined necessary to obtain acceptable in-place work.
2. Exfiltration/infiltration testing or the low pressure air test should be at a greater pressure than the groundwater conditions which the sewer will be subject to during service. If groundwater conditions are unknown, seven feet of water should be used.
3. Pipe materials, joints, fittings, and appurtenances should be selected for their watertight capabilities.

I. MINIMUM REQUIREMENTS FOR
SEWERAGE SYSTEMS

II. GUIDELINES FOR SEWERAGE SYSTEMS

4. Acceptance or performance standards should not necessarily be uniform for all pipe materials since average testing results with good workmanship for work will vary depending upon pipe materials. The range of allowable exfiltration/infiltration for work acceptance should be between 50 and 200 gallons per day per inch-of-diameter per mile (gpdidm). The air test LOW PRESSURE AIR TEST FOR SANITARY SEWERS when used on nonporous (non-air-permeable) pipe should sustain pressure for twice the computed time for the same one pound per square inch (psi) air pressure drop.
5. The water tightness of all building sewers should conform to the State Plumbing Code for watertightness and be tested without exception.
6. Manholes should be water tested for exfiltration during construction and/or visual inspected during first wet weather season after construction for leaks. Leaks should be promptly repaired.
7. Curved sewers should be as watertight as other sewers and be tested. While not recommended, horizontal/vertical curves at times may be justifiable but should be limited in use. When used, the minimum radius of curvature should be not less than 200 feet and the maximum computed joint opening no more than 3/8 inch. Complete and accurate records should be kept of the exact location of such curved sewers for future reference. Reasonable field control should be exercised to not compound joint deflections and compromise watertightness.

D. Structural Strength:

The completed installation including the excavated trench, the pipe, the bedding, and the pipe zone materials shall resist imposed loads from backfill, impact, and live loads (construction and design) without pipe failure through crushing,

D. Structural Strength:

1. Bedding material should be placed full trench width from at least 4 inches under to spring line of all pipe for a leveling course and proper pipe support. Hand shaping of the native trench bottom is not recommended but may be allowed, if appropriate, and uniform pipe support can be obtained and grade/alignment can be maintained.

I. MINIMUM REQUIREMENTS FOR
SEWERAGE SYSTEMS

loss of watertightness, settlement,
or significant capacity loss.

E. Ability to Pass Solids:

Sewer systems shall be free of
depressions, sharp edges,
roughness, side sewer projections,
obstructions, restrictions,
displaced "O" rings, etc., which
can cause solids to accumulate
or deposit.

F. Durability:

1. The materials and details of
construction shall provide
an in-place sewerage system
which will resist corrosion
of the pipe and manhole

II. GUIDELINES FOR SEWERAGE SYSTEMS

2. Cantilevering of nonreinforced rigid pipe
at manholes should be limited to the least
distance practicable to make a flexible
connection. A flexible joint should be within
12 inches of manhole for smaller pipe sizes.
3. Where cover from top of pipe to finished grade
is less than 36 inches, special design and/or
construction requirements should be considered
including raising finish grade, increasing
class of pipe, and/or pipe bedding use of
ductile iron, concrete encasement, restriction
of construction equipment from travel over
partially backfilled trench or a combination
of the above.

E. Ability to Pass Solids:

1. New sewers should be thoroughly flushed and
visually inspected for accumulated debris
etc. prior to use.
2. Building sewer connections should be made
only with approved fittings, which prevent
the building sewer from projecting into the
main sewer. The main sewer should not be
cracked, crushed, or otherwise damaged in
making taps. All taps should be water tight.
3. A tolerance for vertical deviation from true
grade line should be plus or minus 0.01 feet
to avoid depressions for solids deposition.
Similarly, the horizontal tolerance for
deviation from line should be 3/8 inch.
4. Drop manhole piping should be easily
maintained, self cleaning or able to
"overflow" into the manhole. Pressure sewer
piping connections, flow measuring devices,
etc., in manholes should be designed to not
obstruct flow.

F. Durability:

1. Sewers should be constructed of materials
resistant to or protected from biological
degradation, acid and alkaline solutions,
normal sewer temperature variations, abrasion
and industrial wastes (where applicable),

I. MINIMUM REQUIREMENTS FOR SEWERAGE SYSTEMS

II. GUIDELINES FOR SEWERAGE SYSTEMS

materials caused by any source or condition. Any corrosive effect shall be consistent with the design life of the sewer.

or other harmful service conditions which may exist in the sewerage system.

The owner should have a user ordinance which restricts discharge of harmful substances into the sewerage system.

2. Resistance to erosion of surfaces by grit, high velocity flow, etc., shall be addressed if appropriate.

2. Velocities over 15 feet per second in sewers should have special consideration for erosion control.

3. Temperature effect upon thermoplastic materials shall be addressed if appropriate.

G. Stability:

G. Stability:

1. Line and Grade: Horizontal alignment and vertical grade of in-place sewers upon construction completion and construction acceptance shall be relatively stable.

1. Appropriate foundation stabilization or piling should be employed in unstable soils. Back fill should be in small lifts and compacted uniformly to specified density along and around the pipe.

Design considerations, construction specifications, inspections, etc., shall preclude pipe settlement, shifting, or flotation such that capacity, watertightness, structural integrity, ability to pass solids, maintainability etc., are not compromised either at construction or any later time.

2. The Soil Class and density for bedding and pipe zone materials for flexible and semiflexible pipe should be carefully selected and then compacted in the field to the required in-place density.

Flexible pipe should be deflection tested upon construction completion prior to acceptance with an approved go-no-go gauge for roundness. Initial deflection at construction completion should be no more than 5 percent of the inside diameter to assure a "long term" deflection pipe of no more than 7.5 percent.

2. Diameter: Rigid, flexible and semiflexible pipes tend to lose minimum inside diameter if not designed and/or installed properly. Design considerations, construction specifications, field inspections, etc., shall preclude diameter loss such

3. Sewers on slopes over 25 percent should be evaluated for slippage or pipe bedding erosion depending upon soil type, groundwater presence, construction conditions, etc. Appropriate anchors should be provided if necessary.

**I. MINIMUM REQUIREMENTS FOR
SEWERAGE SYSTEMS**

that capacity, watertightness, structural integrity, ability to pass solids, maintainability, etc., are not compromised either at construction or any later time.

H. Operation, Maintenance and Safety:

Sewer systems require periodic and unscheduled maintenance for sustained operation. Designs shall conform to requirements of the sewage works owner for manhole construction, spacing, size, details and easements. All parts of the sewerage system shall be readily accessible.

II. GUIDELINES FOR SEWERAGE SYSTEMS

H. Operation, Maintenance, and Safety:

1. Access to the sewer by the sewer owner is essential to perform maintenance tasks. Easements should be granted along the sewer line to the system owner for any common sewer for emergency repairs. Manholes and cleanouts are necessary for routine access. Permanent structures should not be located over sewers.
2. Owners should review own procedures, equipment, construction standards, etc., for sewer maintenance. Requirements of the owner should be obtained upon start of sewer design since the owner must assume all future maintenance.
3. General Manhole/Cleanout Standards for Common Sewers
 - a. The minimum inside bottom diameter should be no less than 48 inches. This may be reduced to no less than 38 inches where an integral inside drop is acceptable. No more than one inside drop should be installed in a manhole.
 - b. Minimum cover opening diameter should be 22 inches.
 - c. Manholes should be located at:
 - (1) Every change in grade or alignment of sewer.
 - (2) Every point of change in size or elevation of sewer.
 - (3) Each intersection or junction of sewers.
 - (4) Upper end of a lateral sewer.

I. MINIMUM REQUIREMENTS FOR SEWERAGE SYSTEMS

II. GUIDELINES FOR SEWERAGE SYSTEMS

(5) At intervals of 500 feet or less except for 24 inch and larger sewers.

d. Cleanouts should not be substituted for manholes except at the upper end of lateral sewers 250 feet or less in length.

e. The inside bottom of manholes should slope 1 in 12 from formed channels in base to manhole wall. Channel width and depth should be equal to sewer pipe diameter.

f. Access to manholes may be by portable ladder. Manhole rungs and in-place ladders which are subject to considerable corrosion and sliming are not recommended.

g. Where free fall of sewage into a manhole exceeds 24 inches from inlet pipe invert to manhole invert, an approved drop manhole should be used.

4. Inverted Siphons.

Inverted siphons should include at least two pipe lines of such size and hydraulic gradient as to maintain a velocity of at least 3 feet per second in one pipe under conditions of average dry weather flow. Control manholes must be provided at both ends of the inverted siphon line. The inlet and outlet details shall be so arranged that the normal flow is diverted to either barrel so that the other barrel may be removed from service for maintenance.

I. Separation of Water and Sewer Lines.

Sanitary sewers and appurtenances thereto shall not physically connect to a public or private potable water supply system so

I. Separation of Water and Sewer Lines.

Greater or lesser protection of the water supply may be prudent depending upon individual site conditions. Exceptions should be resolved jointly with the water purveyor and the State Health Division by the sewer design engineer.

I. MINIMUM REQUIREMENTS FOR
SEWERAGE SYSTEMS

as to permit the passage of any sewage or polluted water into the potable supply.

Sewer construction shall not disturb, degrade, or decrease the watertightness of any water supply

II. GUIDELINES FOR SEWERAGE SYSTEMS

A. Horizontal Separation of Parallel Water and Sewer Lines:

1. Ten (10) foot edge-to-edge separation for concurrent design of sewer and water lines with sewer at or below waterline elevation.
2. A minimum of six (6) foot edge-to-edge separation for other construction with sewer at least 1.5 feet below waterline up to ten (10) feet of horizontal separation.
3. Common trench construction and horizontal separation less than six (6) feet should not be used.

B. Vertical Separation at Crossings of Water and Sewer Lines:

No special precautions should be necessary where top of sewer line at least 1.5 feet below bottom of waterline and adequate structural protection for each line is provided.

C. Exceptions; Use of Special Sewer Pipe Materials:

1. Where the above horizontal or vertical separations cannot be maintained, the following special sewer pipe materials should be used as a minimum:
 - a. Ductile iron pipe, class 50, ANSI Standard A21.51 (AWWA C-151) with either Push-on or mechanical rubber gasket joints in accordance with ANSI Standard A21.11 (AWWA-C111).
 - b. PVC pressure pipe, ASTM D-2241, SDR 32.5, (125 psi) with rubber-gasket joint in accordance with UNI-Bell Plastic Pipe Association recommended Standard Specification UNI-B1 for a pressure-joint assembly.

I. MINIMUM REQUIREMENTS FOR SEWERAGE SYSTEMS

II. GUIDELINES FOR SEWERAGE SYSTEMS

- c. Asbestos-Cement pressure pipe, class 100, ASTM C296 (AWWA C-400) with rubber-ring gaskets in accordance with ASTM D-1869.
- d. High density polyethylene pipe (Driscopipe 1000) PE 3406, minimum SDR 32.5, with butt fused joints.
- e. Other materials approved by the State Health Division.

2. At crossings requiring special sewer pipe materials the following should apply with one standard length of special sewer pipe centered on the waterline in all cases:

<u>Pipe Material</u>	<u>Standard Pipe Length</u>	<u>Minimum Laying Length Each Side of Waterline Crossing</u>
Ductile Iron	18 feet	18 feet
PVC	20 feet	20 feet
Asbestos-Cement	13 feet	19 feet
High-Density Polyethylene	38 feet	19 feet

D. Soil Restoration at Crossings

Soil removed in sewer line trench construction at waterline crossings where sewer crosses over water should be replaced in all areas to as near natural Standard densities as possible through Pipe mechanical compaction to restore any natural resistance to groundwater movement which did exist prior to construction. Soil should include no rock fragments over 1 1/2 inch in the pipe zone.

I. MINIMUM REQUIREMENTS OF
SEWERAGE SYSTEMS

II. GUIDELINES FOR SEWERAGE SYSTEMS

E. Well Protection

Special sewer pipe materials should be used to protect wells where minimum setbacks are not obtainable or where additional protection is required as determined by the State Health Division. No sewer pipe should be laid less than 10 feet from any well without specific Health Division approval.

F. Pipe Testing

Whenever a special pipe material is used for any of the above purposes of water/sewer separation, an appropriate pressure test should be conducted to confirm watertightness. Test pressures should be no less than 15 psig for gravity sewer pipelines and higher for pressure sewer force mains.

DRAFT RULES
APPENDIX B

RAW SEWAGE LIFT STATIONS

I. Minimum Requirements for
Lift Stations:

A. Capacity:

Stations shall pass peak hourly flow including domestic, industrial and infiltration allowances.

B. Solids Handling

Pumping equipment shall pass at least 2 1/2 inch spheres. Valves, fittings etc. shall be capable of passing at least 3 inch spheres. Minimum force main size shall be 4 inches.

C. Reliability

1. Mechanical reliability shall be achieved by redundant lift units such that the peak hourly flow can be passed with the largest unit out of service. Redundancy shall include check and gate valves and other 'common mode' failure sensitive items such as vacuum pumps or compressors on control systems.
2. a. Electrical failure result in no raw sewage discharges or bypasses to waters of the state based upon a predictable maximum period of power outage which will occur from year-to-year. Where such reliability does not exist, facilities and/or procedures must be provided to prevent the discharge or bypass.

II. Guidelines for Lift Stations

A. Capacity:

Lift stations should be sized for the immediate flow requirement and expandable to the long-range (ultimate) requirement.

B. Solids Handling

All equipment should be sized to handle at least a 3-inch sphere.

C. Reliability

1. (Future)
2. a. In lieu of specific records a four (4) hour electrical power outage should be used.

- b. A discharge or bypass in a sensitive area shall be prevented at all times.
Example: Raw Sewage discharge across residential property.
- b. Events which should be excluded from design considerations are those which are rare, unusual, and cataclysmic in nature.
- c. Means to prevent discharge or bypass may include one or more of the following as appropriate:
 - (1) Electric generator
 - Stationary or portable
 - Automatically or manually started.
 - (2) Auxiliary fuel fired pump
 - Stationary or portable.
 - (3) Storage
 - Sewer lines and manholes
 - Wet well
 - External basin
 - (4) Water supply reduction.
- 3. Failure of prudent O&M procedures shall not be considered a valid reason for a station failure and resultant discharge or bypass.
- 3. (Future)
- 4. a. Alarms shall be provided to all stations to announce at least high wet well conditions.
- 4. a. Alarm signals should be relayed to the sewer system owner in an effective manner.
- b. Telemetering to location with a 24-hour attendant shall be required in sensitive areas.
- b. Alarm should be actuated independently of the station control system. Example: If pumps are controlled by pneumatic system, then separate float actuated alarm should be provided.

c. Alarm power shall have a battery powered backup electrical source.

D. O&M

1. Lift equipment shall be easily removable. Screwed fittings shall not be used for equipment removal.
2. Lifting eyes or hoists should be provided for equipment removal as appropriate.
3. a. A means to wash down wet wells shall be provided.

b. Potable water piped into wells or dry wells shall be equipped with a reduced pressure backflow prevention device.
4. Wet wells shall have 'hopper bottoms' at a slope of no flatter than one to one (1:1), and flat bottom area shall be minimized to prevent deposition of solids.

E. Safety

1. Wet and dry wells of all lift stations shall be considered manholes which will be entered by the owner's personnel.
2. Each dry well shall have permanently installed ladder, lights, and forced fresh air supply to the bottom of the well. Air supply shall be activated with light switch.

D. O&M

1. Flanged or bolted compression fittings should be used for pump removal.
2. - - - - -
3. Frequent wet well washdown should be assumed for all stations. A source of high volume wash water thru a nozzle should be provided for this purpose at or on finish grade.
4. - - - - -

E. Safety

1. No amount of safety equipment should replace basic safety procedures, knowledge, training, and precautions.
2. a. Designers should follow appropriate safety codes.

b. Air supply should be sized for at least _____ air changes per _____ where installed.

3. Wet wells including single well lift stations, shall have either installed or portable equipment for access, lighting, ventilation, etc., to be used when entered.

3. a. Frequently entered wet wells should have permanently installed equipment for access, lighting, ventilation, etc.

b. Infrequently entered wet wells may be served with portable equipment.

JLV:1
WLL

APPENDIX B

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
OF THE STATE OF OREGON

In the Matter of the Adoption of an)
Addition to the Water Quality) STATEMENT OF NEED
Control Rules, OAR Chapter 340,)

The Environmental Quality Commission intends to adopt an additional section to the Water Quality Control Rules, OAR Chapter 340, Section 45-063.

- A. Legal Authority ORS 468.742
- B. Need for Rule.

The proposed rule is needed to establish procedures, requirements and guidelines for the approval or rejection by the Department of plans and specifications for construction, installation, or modifications of disposal systems, treatment works, and sewerage systems.

- C. Documents relied upon.
 - 1. ORS 468.700 to 468.742
 - 2. ORS Chapter 197
 - 3. Oregon Administrative Rules, Chapter 340.
 - 4. DEQ Sewer Design Criteria, November 1971

WL4136.B(p)

APPENDIX C

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
OF THE STATE OF OREGON

In the Matter of the Adoption of an)
Addition to the Water Quality) FISCAL IMPACT STATEMENT
Control Rules, OAR Chapter 340)

The Environmental Quality Commission intends to adopt an additional section to the Water Quality Control Rules, OAR Chapter 340.

Agency costs in implementing these rules will not significantly change from current levels of expenditures for plan review. Plan review has been an ongoing program within the Department for a number of years. In anticipation of SB136--whereby a reduction of reviews was anticipated where plan submittal and approval would be unnecessary or impractical--one FTE position was eliminated from the plan review program of the Source Control Section in the current Water Quality Division's Budget beginning on July 1, 1979.

Those who will be submitting plans--design engineers, developers, industries, municipalities, etc. --are currently submitting plans. The new requirements concern better and more complete submittal information and in some cases may cause a slight increase in design cost in preparing a submittal. However, because submittal requirements are stated in rule form, there will also be less time required in gaining Department approval for projects since supplemental information may not need to be requested by the Department.

The exemptions portion of the rules will accelerate the total government review process so certain proposals will realize a time savings to gain plan approval where such exemptions are implemented.

WL4136.C(p)

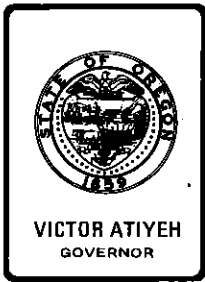
STATE OF OREGON
ROUTE SLIP

TO: ^{Date} Carol Spletts taszer

FROM: Jx Van Domeleyn

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| <input type="checkbox"/> Approval | <input type="checkbox"/> Investigate |
| <input type="checkbox"/> Necessary Action | <input type="checkbox"/> Confer |
| <input type="checkbox"/> Prepare Reply | <input type="checkbox"/> Per Telephone Conversation |
| <input type="checkbox"/> For My Signature | <input type="checkbox"/> For Your Information |
| <input type="checkbox"/> Your Signature | <input type="checkbox"/> As Requested |
| <input type="checkbox"/> Comment | <input type="checkbox"/> Note and File |
| <input type="checkbox"/> Initial and Return | <input type="checkbox"/> Return With More Details |

COMMENTS: This came from your file
Appendix D to
item H of
May 16, 1980
EQC meeting



Department of Environmental Quality

522 SOUTHWEST 5TH AVE. PORTLAND, OREGON

MAILING ADDRESS: P.O. BOX 1760, PORTLAND, OREGON 97207

*
* NOTICE OF PUBLIC HEARING *
*

Distributed: 5/19/80
Hearing: 6/17,
6/18,
& 6/19/80

A CHANCE TO BE HEARD ABOUT ADDITIONS TO WATER POLLUTION CONTROL RULES

The Department of Environmental Quality is proposing to add a section on Review of Plans and Specifications to the Water Pollution Control Rules. The proposed rules are necessary in order for the Department to approve or reject proposals for construction, installation or modification of disposal systems, treatment works and sewerage systems as required by Oregon statutes.

What is DEQ Proposing?

The proposed rule establishes procedures and required submittal information for various types of municipal and industrial wastewater facilities. Requirements and guidelines for approval and rejection of plans are presented. The meaning of approval and performance requirements for facilities are detailed. Exemption from submittal for certain class or classes of projects would be allowed. Criteria for new technologies would be established. Responsibilities of and requirements for sewerage system and sewage treatment works owners receiving additions to their systems are expanded in scope or clarified.

Who is Affected by this Proposal?

Those affected will be cities, industries, sanitary districts, sanitary authorities, home owners associations, individuals, other governmental agencies, and their design engineers who propose facilities involving wastewater or sewage.

How to Provide Your Information:

Written comments should be sent to the Department of Environmental Quality, Water Quality Division, Box 1760, Portland, Oregon, 97207, and should be received by June 26, 1980. Oral and written comments may be offered at the following public hearings:

City: Eugene
Time: 1:00 p.m.
Date: June 17, 1980
Location: Lane County Court House
Public Service Building
125 East Eighth (Eighth and Oak)
Harris Hall (South Room)

City: Bend
Time: 1:00 p.m.
Date: June 18, 1980
Location: Deschutes County
Justice Building
1100 Northwest Bond
1st Floor Conference Room

City: Portland
Time: 1:00 p.m.
Date: June 19, 1980
Location: Oregon Fish and Wildlife Office
506 Southwest Mill
Commission Room

Where to Obtain a Copy:

Call Water Quality Division of DEQ in Portland at (503) 229-5308 and have a copy mailed to you or pick one up at their office in the Yeon Building at 522 Southwest Fifth Avenue in downtown Portland, or request one by mail: D.E.Q., Water Quality Division, P.O. Box 1760, Portland, OR 97207.

Where to Obtain Additional Information:

Information about the proposed rules may be obtained from James L. Van Domelen at (503) 229-5310 or Larry D. Patterson at (503) 229-5374.

Need for Rule:

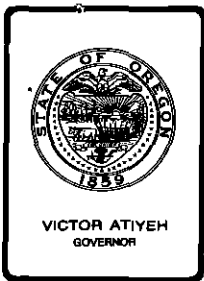
The rule will establish standard submittal and design requirements. They will require submittals to be more uniform in character which will aid the reviewer. Requirements for design of facilities will provide protection of waters of the state and protection of Public Health by preventing bypasses of raw or inadequately treated wastewater and providing reliable components.

Fiscal Impact:

These rules will impact wastewater system owners, those proposing construction of new wastewater systems, and those designing these facilities. The impacts will be various, both positive and negative. The impact in larger cities where an established public works department exists will be to save time and money in implementing sewerage system projects. In smaller municipalities, greater effort and money may be necessary to conform to these rules in design and constructing a similar type project. Most industrial projects should not be impacted because of these rules.

Further Proceedings:

After public hearing, the Environmental Quality Commission may adopt the rule identical to the proposed rule, adopt a modified rule on the same subject matter, or decline to act. The Commission's deliberation should come in July as part of the agenda of a regularly scheduled Commission meeting.



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

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

MEMORANDUM

To: Environmental Quality Commission
From: Director
Subject: Agenda Item No. I, May 16, 1980, EQC Meeting

Request for Authorization to Conduct Public Hearings on Proposed Rules for "Capping Fill" Alternative Sewage Disposal Systems, OAR 340-71-039.

Background and Problem Statement

OAR 340-71-030 prohibits installation of subsurface sewage disposal systems on sites where restrictive soil layers are within 30 inches of the surface and/or temporarily perched water is within 24 inches of the surface. Whenever a standard system is denied the applicant has the option of applying for a variance. In the application the applicant is required to propose a method or construction technique that would overcome the specific site limitations. Since enactment of ORS 454.657 (variances) the most common proposal to overcome the restrictive layer and perched water table limitations has been the "capping fill" method. During the period 1975 to present, approximately 350 capping fill systems have been approved under the variance rules. Reinspection of a large percentage of installed systems leads staff to the conclusion that the capping fill is a workable system which should be moved from the variance category to alternative systems.

Alternatives and Evaluation

Alternatives are:

- (1) Continue to allow capping fill systems to be installed under the variance program; or
- (2) Adopt specific rules for capping fill systems which would make them alternative systems.



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In evaluating these two alternatives the latter appears most appropriate, for a number of reasons. Capping fills appear to be a viable system that could have specific rules to govern design and installation; applicants would not have to go through the more cumbersome variance process; a lower fee is required and the applications could be processed locally rather than through headquarters, as is now required for variances.

The proposed rule would provide minimum site criteria, construction standards and required inspections for capping fill systems. In addition, OAR 340-71-030(8), Geographic Region Rule A, which has been incorporated into this rule, would be rescinded.

Summation

1. Existing information supports transfer of capping fill systems from variances to alternative systems.
2. Specific alternative system rules to control capping fill systems appears to be the most acceptable alternative.

Director's Recommendation

Based upon the Summation, it is recommended that the Commission authorize public hearings to take testimony on the question of adopting rules for capping fill sewage disposal systems, OAR 340-71-039.

Bill

WILLIAM H. YOUNG

T. Jack Osborne

229-6218

April 8, 1980

Attachments: A. Draft Statement of Need For Rulemaking
B. Land Use Consistency Statement
C. Draft Hearing Notice
D. Draft Rule, OAR 340-71-039

XF1290 (f)

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
OF THE STATE OF OREGON

3	IN THE MATTER OF THE ADOPTION OF RULE)	STATUTORY AUTHORITY,
4	340-71-039, SETTING OF STANDARDS FOR)	STATEMENT OF NEED,
5	"CAPPING FILL" ALTERNATIVE SEWAGE)	PRINCIPAL DOCUMENTS RELIED
6	SYSTEM)	UPON, AND STATEMENT OF FISCAL
7))	IMPACT

1. Citation of Statutory Authority: ORS 454.625 which authorizes the Environmental Commission to adopt rules governing subsurface and alternative sewage disposal.

2. Need for the Rule: The need for rulemaking is based upon the fact that capping fill disposal systems have been installed under the variance rules with good success. Adequate evidence exists to support transfer of these systems from the variance category to alternative systems.

3. Documents, reports and studies relied upon in proposing the rule: None.

4. Fiscal and economic impact: Fiscal and economic impact will fall principally upon the Department of Environmental Quality and its contract county agents; however, it is expected that any workload will be absorbed within existing staff allocations and within existing budget limitations. Applications are expected to be processed in a similar manner to that for existing alternative systems. As alternative systems, application procedures will be simpler and the fee to applicants less.

Dated April 30, 1980

William H. Young, Director
Department of Environmental Quality

LAND USE CONSISTENCY STATEMENT

for

Proposed Rules for Capping Fill Alternative Sewage Systems

The proposal described herein appears to be consistent with statewide planning goals. This proposal appears to conform with Goal No. 6 (Air, Water, and Land Resources Quality) and Goal No. 11 (Public Facilities and Services). There is apparently no conflict with other goals.

With regard to Goal 6, the proposal would revise state rules and standards to provide another option for safe subsurface disposal of sewage. This by definition in the goal complies with Goal 6. The goal requires waste discharges from future and existing developments not to violate state standards.

With regard to Goal 11, the proposal provides standards for additional facilities for "urban and rural development," in the language of the goal. Though not usually "public" in size, rural or suburban subsurface systems may be approved as the facilities to serve the sewage disposal needs of multiple families. When used in suburban situations, these systems may be the transition to future public sewers when the area becomes sufficiently developed. This is consistent with "timely" arrangement of services required by the goal. This rule would provide a new alternative sewage disposal system which could alleviate existing health hazards or allow additional land to be developed.

Public comment on these proposals is invited.

It is requested that local, state, and federal agencies review the proposed action and comment on possible conflicts with their programs affecting land use and with statewide planning goals within their expertise and jurisdiction.

The Department of Environmental Quality intends to ask the Department of Land Conservation and Development to mediate any apparent conflicts brought to our attention by local, state, or federal authorities.

TJO:f
XF1290.A

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

3 IN THE MATTER OF THE ADOPTION OF RULE) NOTICE OF PROPOSED
 4 340-71-039,) ADOPTION OF RULE 340-71-039
 5 SETTING STANDARDS FOR "CAPPING FILL") (CAPPING FILL SEWAGE SYSTEMS)
 ALTERNATIVE SEWAGE SYSTEM.)

6 1. On June 3, 1980, at 10 a.m., public hearings will be held at
 7 the following locations, to consider the adoption by the Environmental
 8 Quality Commission of a proposed rule 340-71-039, Setting Standards for
 9 "Capping Fill" Alternative Sewage systems.

- 10 a. Oregon City, Clackamas County Department of Environmental
 11 Services, 902 Abernathey Road, Conference Room B.
 12 b. Albany, Armory, George Miller Conference Room A, 104 Fourth St.
 13 c. Grants Pass, Josephine County Courthouse, Room 156.
 14 d. Bend, Courthouse Annex, Conference Room A.

15 2. The proposed rule 340-71-039 provides as follows:
 16 Site criteria for approval and standards for construction, installation
 17 and inspection of capping fill alternative sewage systems.

18 3. The main issues to be considered at the hearing are whether
 19 capping fill systems should become a standard alternative rather than a
 20 variance system, and whether the proposed rule is in a form that provides
 21 for effective administration.

22 4. Interested persons may provide oral or written testimony at the
 23 hearings or written testimony to Mark Ronayne, Department of Environmental
 24 Quality, Box 1760, Portland, OR 97207 by June 3, 1980.

25 ///

26 ///

1 5. Citation of statutory authority, statement of need, principal
2 documents relied upon, statement of fiscal impact, and land use consistency
3 statement are attached to and made a part of this notice.

4 6. Department of Environmental Quality staff will be designated
5 to preside over and conduct the hearings.

6 Dated April 30, 1980

7 William H. Young, Director
8 Department of Environmental Quality

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340-71-039 Capping Fills

For the purposes of this rule, "Capping Fill" means a system where the disposal trench effective sidewall is installed a minimum of twelve (12) inches into natural soil below a soil cap of specified depth and texture.

(1) General Conditions for Approval.

Subsurface sewage system construction permits may be issued by the Director or his authorized representative, for capping fill systems on specific sites provided:

- (a) Slope does not exceed twelve (12) percent.
- (b) Temporarily perched water table is not closer than eighteen (18) inches to the surface at anytime during the year. Water levels may be predicted during periods of dry weather using criteria under 71-030, subsection (1)(c)(A), (B), and (C). A six (6) inch minimum separation must be maintained between the bottom of the disposal trench and the water table.
- (c) Where permanent water table is present, a minimum four (4) feet separation can be maintained between the bottom of the disposal trench and the water table. Water levels may be predicted during periods of dry weather using criteria under 71-030, subsections (1)(c)(A), (B), and (C).
- (d) Where coarse grained material is present, a minimum eighteen (18) inch separation can be maintained between the bottom of the disposal trench and coarse grained material.
- (e) A claypan, duripan, saprolite, or bedrock is eighteen (18) inches or more below the natural soil surface.
- (f) Soil texture from the ground surface to the layer described in 71-039(1)(e) is no finer than silty clay loam (as defined in OAR 340-71-010 and as classified in the soil texture classification chart (Table 2)).
- (g) A minimum six (6) inch separation can be maintained between the bottom of the disposal trench and the layer described in 71-039(1)(e).
- (h) The system can be sized according to thirty (30) inches to a restrictive layer, in Table 5 of OAR 340-71-030.
- (i) The site contains enough area for a full-sized initial system and a full-sized replacement system.

(2) Construction Requirements.

The cap shall be constructed pursuant to permit requirements. Unless otherwise required by the Director or his authorized representative, construction sequence shall be as follows:

- (a) The texture of the soil used for the cap must be of the same textural class, or of one textural class finer, as the natural topsoil. The soil must be examined and approved by the Director or his authorized representative prior to placement.
- (b) Construction of capping fills west of the Cascade Mountains must occur between June 1 and October 1 unless otherwise allowed by the Director or his authorized representative. The upper twenty-four (24) inches of soil must not be saturated or at a moisture content which causes loss of soil structure and porosity when worked.
- (c) The drainfield site and the borrow site shall be scarified to destroy the vegetative mat.
- (d) Apply fill to the fill site and work in (rototill) so that the two contact layers (native soil and fill) are incorporated. Evenly grade fill material to a final depth of sixteen (16) inches.
- (e) Install drainfield as specified in construction permit. There shall be a minimum ten (10) feet of separation between the edge of the fill and the nearest trench sidewall.
- (f) The site shall be landscaped with grass and protected from livestock, automotive traffic or other activity that would damage the system.
- (g) Serial distribution systems shall be used on sites with slopes with three (3) to twelve (12) percent. The Director or his authorized representative may require a low pressure distribution system.

(3) Required Inspections.

The following minimum inspections shall be performed for each capping fill installed:

- (a) Both the drainfield site and borrow material must be inspected for scarification, soil texture, and moisture content, prior to cap construction.
- (b) After cap is placed, to determine that there is good contact between fill material and native soil (no obvious contact zone visible), adequate depth of material, and uniform distribution of fill material.

- (c) Pre-cover inspection of the installed drainfield.
- (d) Final inspection, after cover, grading, and planting. A Certificate of Satisfactory Completion may be issued at this point.

NOTE: Rescind OAR 340-71-030(8), Geographic Region Rule "A", in its entirety.

XS0818 (pn)



Environmental Quality Commission

POST OFFICE BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission
From: Director
Subject: Agenda Item No. K, May 16, 1980, EQC Meeting

Request Issuance of Hazardous Waste Disposal Site License No. HW-1
to Chem-Security Systems, Inc., for Arlington Pollution Control Center

Background

This matter was originally scheduled as Agenda Item "L" for the April 18, 1980 EQC meeting. Attachment 2 is the staff report prepared for that meeting.

Two items unresolved as of April 18, 1980, were the amount and type of a revised closure and post-closure monitoring cash/surety bond and a "guarantee of performance" by Chem-Nuclear Systems, Inc. Both items have been resolved. In addition, Chem-Nuclear/Chem-Security have agreed to the addition of a new condition C9 which provides that the Commission may reconsider and terminate the license if, at any time, it finds there is substantial doubt that the licensee has the financial or technical management ability to continue to operate the site in accordance with the provisions of the license and the statutes and rules of the state.

Lastly, the update of Exhibit A to Appendix 1 (original site and site improvement cost data) has been completed (see Attachment 3).

Evaluation

The following important changes should be noted when reviewing the closure and post-closure monitoring conditions C1 and C2 (also see Attachment 4 for further details of assumptions used to arrive at first year (1980) total bond requirement of \$219,000):

1. The total bond shall be made up of three components: cash bond, interest on cash bond and surety bond. The total bond requirement for 1980 of \$219,000 is up from \$75,000 in the current license.
2. The total bond requirement shall be adjusted annually for inflation at a rate of 9%.
3. If, for any reason, the license is terminated, the total amount of the surety bond at that time shall be forfeited to the state to be included in the cash bond.



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4. The annual cash bond contribution shall be \$25,000, which is up from \$5,625 in the current license, and will be paid in equal monthly instalments.
5. All interest earnings shall remain in the cash bond account.

A new condition C9 has been added to the license which gives the Commission the right to reconsider and terminate the license if, at any time, there is substantial doubt that the licensee has the financial or technical management ability to continue to operate the site in accordance with the provisions of the license and the statutes and rules of the state.

Exhibit A of Appendix 1 has been updated to reflect the additions of burial trenches 6 and 8; evaporation ponds 5, 6, and 8; biofarm and biofarm storage ponds; and two PCB Storage buildings.

Summation

1. On March 12, 1980, Chem-Security Systems, Inc., a wholly owned subsidiary of Chem-Nuclear Systems, Inc., applied for a license modification to allow it to operate the Arlington Pollution Control Center authorized under Hazardous Waste Disposal site License HW-1.
2. Chem-Nuclear Systems, Inc. is proposing to transfer the existing employees and physical assets of the Arlington Pollution Control Center to Chem-Security System, Inc. upon Commission issuance of a modified license.
3. Chem-Nuclear Systems, Inc. is prepared to guarantee the performance of its wholly owned subsidiary (see attachment 5).
4. Major amendments to the license include a substantial increase in the closure and post-closure monitoring cash/surety bond; a new condition providing the EQC with authority to revise and terminate the license if more than 100 capital stock shares of Chem-Security are issued; and a new condition providing the EQC with authority to revise and terminate the license if there is substantial doubt about the licensees' financial or technical management ability.
5. If the proposed license is issued, we do not see any immediate change in the site operation that would be adverse to the State's current interest, in fact, additional protection to the State has been agreed on.

Director's Recommendation

Based upon the summation, it is recommended that the Commission issue a license for the Arlington Pollution Control Center to Chem-Security Systems, Inc. The Director shall establish and insert an effective date in the modified license

upon a showing that:

1. The transfer of the Oregon property from Chem-Nuclear Systems, Inc. to Chem-Security Systems, Inc. has occurred, and
2. Chem-Security Systems, Inc. is in current compliance with Conditions C1 and C2 of the license.

Bill

William H. Young

Richard Reiter:mg
229-5913
May 2, 1980

Attachments: 5

1. Recommended License
2. Agenda Item L - April 18, 1980 EQC Meeting
3. Revised Exhibit A to Appendix 1
4. Assumptions for calculating total bond Requirement
5. Guarantee of Performance

**HAZARDOUS WASTE
DISPOSAL SITE LICENSE**

Department of Environmental Quality
522 Southwest Fifth, Portland, OR 97204
Mailing Address: Box 1760, Portland, OR 97207
Telephone: (503) 229-5913

Issued in accordance with the provisions of ORS Chapter 459

ISSUED TO:

Licensee:

Chem-Security Systems, Inc.
Box 1866
Bellevue, WA 98009

REFERENCE INFORMATION:

Facility Name:

Arlington Pollution Control Center
County: Gilliam

SITE LOCATION AND DESCRIPTION:

S1/2 of NE1/4, SE1/4, of Sec. 25
and NE1/2 of NE1/4 of Sec. 36,
T 2 N, R 20 E, W.M.; and 3.74 acres
between the site and county roads in the
NW1/4 of the NW1/4 of Sec. 31, T2N, R21E,
W.M.

Operator: Chem-Security Systems, Inc
Box 1866
Bellevue, WA 98009

ISSUED BY ENVIRONMENTAL QUALITY COMMISSION

JOE B. RICHARDS, Chairman

WILLIAM H. YOUNG, Director

Effective Date

Until such time as this license expires or is modified or revoked, Chem-Security Systems, Inc., is herewith authorized to establish and operate a site for the treatment, storage, and disposal of hazardous wastes as now or hereafter defined by ORS 459.410 and rules of the Department of Environmental Quality. Such activities must be carried out in conformance with the conditions which follow. This license is personal to the licensee and nontransferable.

A. GENERAL CONDITIONS

- A1. Authorized representatives of the Department of Environmental Quality (hereinafter referred to as the Department) shall have access to the site at all reasonable times for the purpose of inspecting the site, the records which are required by this license, or environmental monitoring.
- A2. The Department, its officers, agents and employees shall not have any liability on account of the issuance of this license or on account of the operation permitted by this license.
- A3. The issuance of this license does not convey any property right or exclusive privilege nor does it authorize any injury to private property or any invasion of personal rights, nor any violation of federal, state or local laws or regulations.
- A4. The Department may revise any of the conditions of this license or may amend the license on its own motion in accordance with applicable rules of the Department.
- A5. Transportation of wastes to the site by or for the licensee and on-site handling, storage, treatment and disposal shall comply with rules of the Public Utility Commissioner of Oregon, the Worker's Compensation Department, the State Health Division and any other local, state or federal agency having jurisdiction.
- A6. A complete copy of this license, approved facility plans and approved operating manual procedures shall be maintained at the site at all times.
- A7. The licensee shall not conduct, or allow to be conducted, any activities that are not directly associated with the construction, operation or maintenance of the waste management facilities at the site as authorized by this license, without prior written approval from the Department for such other activities.
- A8. The licensee shall not mortgage, sell or otherwise dispose of any portion of the site without prior written approval from the Department. This condition shall survive the expiration, revocation, suspension or termination of the license for any reason other than those specified in Condition C7 for a period of two years during which time the Department shall have exclusive right and option to purchase all of the site and improvements thereon, not theretofore deeded to the State. Purchase from licensee shall be in accordance with Appendix I to this license which sets forth the basis and conditions for such purchase.
- A9. Within 30 days of any license changes, the licensee shall have a memo of such changes recorded in the deed records of Gilliam County.

B SPECIAL CONDITIONS

Management of the site, including all activities related to treatment, storage and disposal of wastes at the site, construction and maintenance of facilities at the site, and monitoring and maintenance of records concerning operation of the site shall conform with the following conditions:

- B1. No construction activities related to waste management at the site may be undertaken by the licensee until the Department has approved in writing final plans for facilities proposed by the licensee. Plan approvals shall be valid for only one year from date of the Department's written approval unless otherwise specified by the Department.
- B2. No waste management facility may be used by the licensee until the Department has inspected the site and certified in writing that the facility is satisfactory and complies with the approved final detailed engineering plans.
- B3. Operation of the site shall not be discontinued without the approval of the Department, except for temporary work suspension caused by conditions beyond the control of the licensee such as, but not limited to, labor disputes, weather conditions, equipment failure, shortages of materials or unavailability of qualified personnel. In the case of a temporary discontinuance of disposal activities which exceed 5 working days, the licensee shall notify the Department in writing, giving the reason for the shut down and the estimated duration of the temporary closure. During any temporary discontinuance of disposal activities, the licensee shall maintain the security and integrity of the site.
- B4. Waste handling, storage, disposal, treatment, monitoring and other waste management activities at the site shall comply with procedures and plans approved by the Department and other conditions of this license.
- B5. The licensee shall assume all liability for containment, clean-up and rectifying of the the conditions caused by any spill, fire, accident, emergency or other unusual condition that may occur:
 - a. At the site;
 - b. During the transportation of waste by the licensee to the site;
 - c. During the authorized transportation of waste by others to the site, if:
 - (1) The licensee is made aware of the incident; and,
 - (2) The incident occurs on the following access routes to the site:
 - (i) State 19 from Olex to its junction with I-80. (including all of Arlington south of I-80 but excluding the flood diversion canal or the Columbia River)
 - (ii) Blalock Canyon Road
 - (iii) Cedar Spring Road from Rock Creek to its junction with State 19

Special Conditions (cont.)

- B6. Before use of the site is terminated, the licensee shall restore the site to a condition approved by the Department. No less than one year prior to intended closure of the site the licensee shall submit detailed plans for the Department's approval. No action toward closure shall be taken without prior written approval from the Department.
- B7. Before use of a storage, treatment or disposal facility is terminated, the licensee shall decommission the facility according to a plan approved by the Department. No less than three (3) months prior to decommissioning a facility, the licensee shall submit detailed plans for the Department's approval. No action toward decommissioning shall be taken without prior written approval from the Department.
- NOTE: Upon completion of each burial trench, a granite or concrete marker shall be erected at the end of the trench. To such trench markers shall be attached a bronze or stainless steel plate which shall contain the following information: a trench identification number; dimension of the trench and its location relative to the marker; volume of waste buried; and dates of beginning and completion of burial operations.
- B8. The licensee is authorized to accept and dispose at the site only those wastes for which specific treatment and disposal procedures or research programs have received prior approval by the Department. This authorization may be revoked if the Department finds the acceptance or disposal of such wastes to constitute a threat to the public health, welfare, or environment; may lead to a license or plan approval violation; or the Environmental Quality Commission finds that preferred alternate management technology is available. The storage, treatment or disposal of wastes at the site shall be conducted only in facilities approved by the Department.
- B9. Except as provided in Condition B10, the licensee shall submit a Disposal Request, and receive approval of the same, for all wastes proposed to be brought to the site. This Disposal Request must be submitted in writing to the Department and include the following information (if applicable):
- a. Name, location and business of the waste generator and contact person at the generator.
 - b. Process in which waste was generated and marketable products arising from that process.
 - c. Volume, chemical and physical nature of the waste.
 - d. Manner in which waste is packaged for shipment.
 - e. Proposed treatment and disposal procedure.

Special Conditions (cont.)

- The Disposal request shall contain written confirmation of a. to d. from the waste generator. A separate request must be made for each waste type by generator. The Department will submit a written response to the licensee no later than 14 days following receipt of a request, however, a request is not complete until the Department has received all information necessary to arrive at an informed decision.
- B10. The Department may give verbal approval for the treatment, storage or disposal of certain wastes including, but not limited to, the following:
- a. Wastes resulting from an accident or spill for which storage may not be feasible or may pose an unusual hazard.
 - b. Wastes that have been given prior approval, but are received in a different form or package or for which a different but equivalent disposal procedure is requested.
- B11. If the Department determines that any specific waste originating in Oregon should be disposed at the site, based on unavailability or infeasibility of alternative disposal methods or other factors, the licensee shall provide disposal for such waste under treatment or disposal procedures directed by the Department utilizing existing site facilities and equipment. In the event that treatment or disposal procedures directed by the Department require additional facilities or equipment, the obligation of the licensee shall depend upon financial commitments by the waste generator satisfactory to licensee.
- B12. The licensee shall designate a site superintendent and shall advise the Department of the name and qualifications of the superintendent. The superintendent shall be in charge of all activities at the site within his qualifications. The licensee shall also advise the Department of the individual to be contacted on any problem not within the site superintendent's qualifications. The licensee shall immediately notify the Department if any change is made in this designated individual.
- B13. The licensee shall not open burn any wastes or materials at the site, except for uncontaminated refuse and scrap and in compliance with State and local open burning rules, without prior written approval by the Department.
- B14. As provided in agreements between the licensee, the Department, and other persons, ownership may be retained by other persons over certain wastes disposed at the site by the licensee. Such agreements shall further provide that the Department shall not be liable for any expenses associated with future recovery or re-disposal of such wastes and that following any future recovery or re-disposal operations, the site shall be returned to a condition satisfactory to the Department.

Special Conditions (cont.)

- B15. Wastes shall be managed on the site in a manner so as to prevent the reaction of incompatible materials which may cause a fire or explosion, the release of noxious gases, or otherwise endanger public health or the environment.
- B16. Wastes shall be consigned to treatment or disposal as rapidly as practicable.
- B17. The licensee shall designate a specific area(s) for the storage of wastes. Wastes shall not be stored in other than a storage area.
- B18. All containers of waste on site shall be identified sufficiently to assure rapid positive identification of their contents.
- B19. All hazardous wastes delivered to the site shall be accompanied by a manifest unless otherwise authorized or exempted by the Department. Once wastes are treated or disposed of, one copy of a completed manifest shall be returned to the generator.
- B20. Whenever, in the judgment of the Department from the results of monitoring or surveillance of the site operation, there is reasonable cause to believe that a clear and immediate danger to the public health and safety exists from the continued operation of the site, without hearing or prior notice, the Department may order the operation of the site halted by service of the order on the site superintendent. The licensee shall be obliged to rectify the dangerous conditions immediately, subject to such direction as the Department may give. If the licensee fails to act when directed, the Department may immediately come on the premises and take action as is necessary to rectify the dangerous conditions. The licensee shall be responsible for all expenses incurred in carrying out the action including reasonable charges for services performed and equipment and materials used.

C. FINANCIAL

- C1. The licensee shall meet the total bond requirement. In addition to the annual cash payment required in Condition C2, the total bond requirement may be met through a surety bond, additional cash payments in lieu of a surety bond, plus accrued interest on all cash bonds posted. The total bond requirement shall be \$219,000 for 1980. Thereafter, the total bond requirement shall be inflated at 9% per year as shown in the following table:

<u>Year</u>	<u>Total Bond (Thousands)</u>	<u>Year</u>	<u>Total Bond (Thousands)</u>
1981	\$232	1986	\$358
1982	253	1987	390
1983	276	1988	425
1984	301	1989	463
1985	328	1990	505

Financial (cont.)

The licensee may post a surety bond executed in the favor of the State of Oregon in the amount of \$183,000 for a term ending May 1, 1981. Each year thereafter for 10 years the surety bond may be renewed or a new surety bond filed with the State of Oregon in the amount necessary to meet the total bond requirement. The surety bond shall be forfeited to the State of Oregon by a failure of the licensee to perform as required by this license to the extent necessary to secure compliance with the requirements of this license. Upon termination of this license for any reason, the total amount of the surety bond at that time shall be forfeited to the State of Oregon to be included by it in the cash bond provided for in Condition C2. The bonding company shall not be liable beyond the term of the bond.

- C2. Each year the licensee shall post a cash bond, as provided by ORS 459.590(2)(f), with the Department in the amount of \$25,000, to be paid in equal monthly installments, beginning with May, 1980. Bills, certificates, notes, bonds or other obligations of the United States or its agencies shall be eligible securities deemed equivalent to cash. The cash value at the time of posting shall not be less than the required bond amount. Interest earnings on the cash bond shall be retained in the bond account.

If authorized by the Department to perform services for closure and post-closure monitoring, the licensee shall be reimbursed by the Department from the cash bond account for licensee's costs specified in the Department's authorization. Any funds remaining in the cash bond account after post-closure monitoring shall revert to the licensee.

- C3. The licensee shall pay the Department an annual license fee within 30 days after July 1 each year. The amount of such fee shall not exceed the cost incurred by the Department to meet its monitoring, surveillance and review activities of this license; and will be determined by the Department as part of its biennial budgeting process.
- C4. Prior to disposal, treatment or permanent storage of any wastes thereon, the licensee shall deed land used specifically for such purpose to the State. Within 60 days after completion of any new on-site roads, the licensee shall deed such roads to the state. Within 30 days after deeding of these properties to the state, a lease between the licensee and the Department for these properties shall be executed. The lease shall be maintained for the duration of this license.
- C5. The licensee shall maintain ordinary liability insurance for operation of the site, with respect to all types of wastes, in the amount of not less than \$1 million. Such insurance shall also be maintained by the licensee in the amount of not less than \$1 million, to cover transportation by the licensee of all types of wastes to the site. The licensee shall notify the Department by a Certificate of Insurance within 7 days of any new policy or policy change and shall provide a certified copy of such policy or change within 90 days. All such insurance policies shall provide that such insurance shall not be cancelled or released except upon 30 days prior written notice to the Department. Environmental impairment liability insurance in a like amount shall be required when the Department determines that it is practicably available.

Financial (cont.)

- C6. The licensee shall submit copies of Chem-Nuclear System, Inc's audited annual reports; Chem-Nuclear System, Inc's Form 10-K reports to the S.E.C.; and Chem-Nuclear Systems, Inc's and licensee's unaudited quarterly management reports for the Arlington Pollution Control Center within 30 days after completion by the licensee. These reports and, except as specifically provided in this license, other reports required by the license or requested by the Department shall be treated as confidential to the extent permitted by Oregon laws and rules.
- C7. The licensee shall convey title for the entire site to the state, in unencumbered fee title without compensation, except for those portions previously owned by the state, in the event of any one of the following circumstances:
- a. Expiration of the license due to failure of the licensee to seek renewal.
 - b. Termination or expiration of the license due to utilization of the site to its full capacity, as determined by the Department.
 - c. Default by the licensee of any provision of this license that remains uncorrected after 30 days written notice.

If, at the end of said 30 days, the Department determines that such fault remains uncorrected, it shall notify the licensee of the continued default and of its intent to enforce this license condition.

If the licensee contests the enforcement action, within 10 days after the notification both parties shall appoint an arbitrator and the two arbitrators so appointed shall, within 5 days after their appointment, choose a third arbitrator. The written decision of a majority of the arbitrators shall be final and binding upon both parties, except that, in the event of a decision favorable to the Department, the licensee shall have an additional 30 days to correct the fault. (The Department or the arbitrators may extend this period if the fault cannot be reasonably corrected within 30 days). At the end of this period, the Department may accept the licensee's efforts or again remand the dispute to arbitration. The written decision of a majority of the arbitrators at this second arbitration shall be final and binding upon both parties.

In the event that either party shall fail to choose a third arbitrator within the 5 day period allotted to them, then either party may request the presiding judge of the Circuit Court of the State of Oregon for Multnomah County to choose the required arbitrator.

The arbitrators, at their discretion, shall assess either or both parties for payment of the cost of arbitration.

This condition shall survive the expiration or termination of the license.

Financial (cont.)

- C8. The Commission reserves the right to reconsider and terminate this license if there is any further distribution of common stock shares (initial distribution of 100 shares to Chem-Nuclear Systems, Inc. on November 16, 1979) of Chem-Security Systems, Inc. without the prior written approval of the Department.
- C9. The Commission reserves the right to reconsider and terminate this license if at any time the Commission finds there is substantial doubt that the licensee has the financial or technical management ability to continue to operate the site in accordance with the provisions of the license and the statutes and rules of the state.

D. RECORDKEEPING AND REPORTING

- D1. The licensee shall maintain records and submit monthly reports to the Department including but not limited to: quantity and type of waste received; generator; manifest number; request number; date of waste receipt; name of transporter; and the applicable of: storage location; pond number; burial trench number, and location coordinates in trench.

Every shipment of waste received must be clearly traceable from its time of receipt to its placement in a pond or a burial trench.

The licensee shall also submit a monthly public information report on a form approved by the Department which will be available for public inspection.

- D2. All site records pertaining to the receipt, treatment, storage, and disposal of wastes are to be kept for at least 3 years. If licensee chooses to dispose of such records the Department shall be given an opportunity to retain them as Department records. Such records shall be treated as confidential to the extent permitted by Oregon laws and rules.
- D3. The licensee shall maintain survey records for each burial trench, referenced to the nearest U.S. Coast Guard bench mark, to define the exact location and boundaries of each trench. Within 60 days after completion of a trench, the licensee shall forward the required marker information and a copy of the survey records to the Department.

E. ENVIRONMENTAL MONITORING

The licensee shall conduct chemical and biological environmental monitoring in accordance with a program designed jointly with the Department. This program will be reviewed annually by both parties and is to include at least the following:

- E1. On-site deep wells (Nos. B-1, B-2, B-3, B-4, B-5, and B-6) will be checked for the presence of water annually about June 1. A water sample will be obtained by a mutually agreed procedure from each well in which water is observed.
- E2. Monitoring wells in the pond and burial area will be checked as required by the annual monitoring program for the presence of water. A water sample will be obtained by a mutually agreed procedure from each well in which water is observed.

- E3. A sampling of the resident vertebrate population and of vegetation will be performed annually.
- E4. All samples required above will be analyzed in accordance with the jointly designed program and for wastes relative to those that were disposed. Such analysis may include but not be limited to total organic carbon, pH, specific conductance, heavy metals, chlorinated hydrocarbons, phenolics, cyanide, or other chemical species.
- E5. The monitoring program in effect at any time preceding or during the period of this license shall remain in effect until a new program has been jointly agreed upon.
- E6. All findings and results from the licensee's environmental monitoring program shall be reported to the Department within 15 days of their availability.
- E7. The Department may require special monitoring when it is deemed that conditions may exist to threaten the public health or welfare or the environment. The cost of such monitoring shall be determined by both parties on a case-by-case basis.

LICENSE HW-1

APPENDIX 1

CONDITIONS FOR PURCHASE OF CHEM-SECURITY SYSTEM, INC'S
ARLINGTON POLLUTION CONTROL CENTER

Pursuant to license HW-1 Condition A8, the following specifies the basis and conditions under which the Department may purchase Chem-Security System, Inc's Arlington Pollution Control Center:

1. In the event of expiration, revocation, suspension or termination of License HW-1 issued by the Department for Chem-Security's Arlington Pollution Control Center except for reason specified in License Condition C7, the Department shall have exclusive right and option to purchase from Chem-Security all of the site and improvements thereon not theretofor deeded to the state.
2. "Site," hereunder shall include all real property within the legal description noted on License HW-1.
3. "Improvements," hereunder shall include trenches, ponds, fencing, signs, roads, water supply, monitoring wells and devices, and any other items specially designated in Exhibit A attached hereto and hereby made a part hereof. Improvements shall not include any rented or leased equipment, furniture, tools, mobile firefighting equipment, vehicles, tractors, graders, dozers, loaders, forklift trucks, trucks and other mobile equipment and their accessories.
4. Purchase of said site and improvements shall be at the adjusted price shown in Exhibit A attached hereto. Full cash payment shall be due on closing. Closing costs shall be shared equally, except that Chem-Security shall not pay in excess of \$2,000 of such costs.
5. If the Department determines that it will not purchase the site and improvements, it shall advise Chem-Security in writing as soon as possible of such determination and shall release Chem-Security from the Department's exclusive right and option under License HW-1 Condition A8.
6. Additions to, or deletions from, the foregoing and Exhibit A attached hereto may be made at any time for the purpose of adding new facilities or deleting obsolete or retired facilities or for other mutually agreeable purpose. Said addition or deletion shall be executed by submission of a written response from the other party agreeing to the requested change. Said additions or deletions may be executed only by the President of Chem-Security and the Director of the Department.
7. The foregoing provisions and conditions shall survive the expiration, revocation, suspension, or termination of License HW-1 for a period of two years.

EXHIBIT A to APPENDIX 1 of LICENSE HW-1

<u>Item</u>	<u>Description</u>	<u>Base Cost (C), \$</u>	<u>Base Year</u>	<u>Purchase Price, \$</u>
<u>REAL PROPERTY AND SITE DEVELOPMENT</u>				
Property	Lease/Option	1,800	1970	C x F1 x F3
	Land	58,000	1972	C x F1 x F3
	Land	7,500	1978	C x F1 x F3
	Mineral rights, etc.	5,924	1972	C x F1 x F3
Development	Site studies, capitalized	93,080	1970	C x F1 x F3
	salaries, legal services,	81,943	1971	C x F1 x F3
	engineering, consultants, etc.	65,434	1972	C x F1 x F3
		4,389	1973	C x F1 x F3
		6,628	1976	C x F1 x F3
		2,100	1978	C x F1 x F3
<u>SITE IMPROVEMENTS</u>				
Trenches	No. 1-Const.	27,183	1976	C x F1 x F2a x F3
	No. 3-Const.	39,433	1976	C x F1 x F2a x F3
	No. 5-Const.	46,000	1976	C x F1 x F2a x F3
	No. 6-Const.	106,515	1979	C x F1 x F2a x F3
	No. 8-Const.			
Ponds	No. 1-Const.	5,500	1976	C x F1 x F2b x F3
	-Liner	7,458	1976	C x F1 x F2c x F3
	No. 2-Const.	3,000	1976	C x F1 x F2b x F3
	-Liner	8,917	1976	C x F1 x F2c x F3
	No. 3-Const.	6,500	1979	C x F1 x F2b x F3
	-Liner	7,536	1979	C x F1 x F2c x F3
	No. 4-Const.	6,000	1979	C x F1 x F2b x F3
	-Liner	7,725	1979	C x F1 x F2c x F3
	No. 5-Const.	11,000	1979	C x F1 x F2b x F3
	-Liner		1979	C x F1 x F2c x F3
	No. 6-Const.	10,858	1979	C x F1 x F2b x F3
	-Liner	24,858	1979	C x F1 x F2c x F3
	No. 7-Const.		1980	C x F1 x F2b x F3
	-Liner		1980	C x F1 x F2c x F3
	No. 8-Const.		1980	C x F1 x F2b x F3
	-Liner		1980	C x F1 x F2c x F3
	No. 9-Const.		1980	C x F1 x F2b x F3
	-Liner		1980	C x F1 x F2c x F3

Exhibit A (cont.)

<u>Item</u>	<u>Description</u>	<u>Base Cost (C), \$</u>	<u>Base Year</u>	<u>Purchase Price, \$</u>
Fencing, Signs & Roads	Construction, chain link, etc.	3,720 4,430 2,844 60,854 7,528 42,511	1970 1972 1973 1976 1978 1979	C x F1 x F3 C x F1 x F3 C x F1 x F3 C x F1 x F3 C x F1 x F3 C x F1 x F3
Water Wells & Systems	Construction, pumps, etc.	1,693 110 2,622 4,908	1972 1973 1975 1976	C x F1 x F2b x F3 C x F1 x F2b x F3 C x F1 x F2b x F3 C x F1 x F2b x F3
Septic Systems		1,320 1,068	1975 1976	C x F1 x F2d x F3 C x F1 x F2d x F3
Monitoring Devices		299	1976	C x F1 x F2d x F3
Miscellaneous		388 3,665	1975 1976	C x F1 x F3 C x F1 x F3

Adjustment Factor

F1 = The consumer price index for the purchase agreement month divided by the consumer price index for the base year. Consumer price indexes to be used are those for urban wage earners and clerical workers in Portland, Oregon.

F2 = A variable factor as follows:

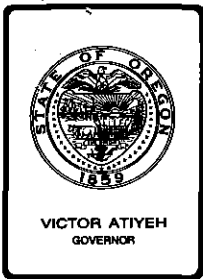
F2a = Fraction of capacity unused

F2b = 1 if serviceable; 0 if not

F2c = $1 - (\text{years in use} \div 5)$ if serviceable; 0 if not

F2d = $1 - (\text{years in use} \div 10)$ if serviceable; 0 if not

F3 = Fraction of land not deeded to Oregon



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

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

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. L, April 18, 1980, EQC Meeting

Request Issuance of Hazardous Waste Disposal Site License No. HW-1 to Chem-Security Systems, Inc., for Arlington Pollution Control Center

Background

On March 2, 1976, Chem-Nuclear Systems, Inc., was issued a license to operate a hazardous waste disposal site near Arlington, Oregon. On August 25, 1978, the Department requested permission to modify the license to strengthen the Department's authority over site operations and management. A modified license was issued on January 29, 1979.

On January 3, 1980, Chem-Nuclear notified the Department of its intent to form a wholly owned subsidiary to be known as Chem-Security Systems, Inc., to take over all current chemical (non-nuclear) waste management activities of Chem-Nuclear. In an application to modify the license dated March 12, 1980, two major reasons were cited for proposing this corporate change:

1. To remove "nuclear" from the name of the chemical company because of adverse public reaction.
2. To bring one or more highly qualified academicians into the board of directors of the new corporation to provide more technical direction and perspective to the new company.

During discussions of the 3rd, Chem-Nuclear indicated its willingness to guarantee the performance of its wholly owned subsidiary if that would alleviate any department concern over the financial stability of the new company (see Attachment III).

Oregon revised statutes 459.580(2) stipulates that the Environmental Quality Commission shall decide whether or not to issue a hazardous waste disposal site license. Oregon Administrative Rules 340-62-040 stipulates



Contains
Recycled
Materials

the administrative procedures to be followed in issuing a modified hazardous waste disposal site license.

In addition to this public hearing, a public notice was mailed to some 337 people on the Department's general and solid waste mailing lists. Furthermore, specific public notices were mailed to the Gilliam County Commissioners, Mayor and City Council of Arlington, State Health Division, Public Utility Commissioner, State Fish and Wildlife Commission, Water Resources Director, Gilliam--Wheeler Times Journal (Arlington and Condon), Chronicle (The Dalles), Herald (Hermiston), East Oregonian (Pendleton), The Oregonian, and Oregon Journal.

Based on the March 12, 1980 application, the Department has prepared a proposed license. In addition to accommodating Chem-Nuclear/Chem-Security needs, the license also contains additions, modifications, or deletions determined necessary by the Department to reflect current conditions. These additions, modifications, or deletions are more fully described below.

Evaluation

In considering this matter, several alternative actions are possible:

1. Deny Chem-Security's application to operate the Arlington Pollution Control Center. At that point, Chem-Nuclear would have to decide if they wanted to continue to operate the site under the license issued January 29, 1979. If they continue to operate the site, no changes are expected. If they decide to terminate the license, the State would be in the position of having to locate a new site operator.

The Department would have to decide if it wanted to modify Chem-Nuclear's existing license, on its own motion, to incorporate proposed additions, modifications, or deletions initiated as part of the proposed license modification.

2. Further modify the conditions in the proposed license prepared by the Department. Chem-Security would have to decide if they would want to operate the site under the terms of the issued license. If Chem-Security decides not to operate the site, then the consequences described in 1 above would again come into play.
3. Issue the license as proposed by the Department. Likely result will be for Chem-Security to assume management control of the site. Since the proposed license contains several new or modified conditions proposed by the Department, the Department's management of the site will be improved.

The proposed license contains the following additions/major revisions (Condition Numbers refer to recommended license--see Attachment I).

1. The expiration date is extended from February 20, 1981 to March 31, 1985. Considering the license improvements made with the 1978/79 modifications, and the changes proposed here, we believe a five year review period reasonable. Please note that as a result of federal regulations, this license may have to be reconsidered some time within the next two years.
2. The title page has been changed to incorporate signatures of the Chairman of the EQC (issuing authority) and the Director of the Department (establishes effective date). An additional three (3) acres of land is also included under site location and description.
3. A6--revised to include approved operating manual procedures as one document that must be available at the site.
4. A9--revised to require any license changes to be recorded in deed record of Gilliam County.
5. B1--new language to limit plan approvals to one year. If construction is not underway or completed, Department would have opportunity to revise plans to incorporate new technology.
6. B6--language revised to require restoration of the site to a condition approved by the Department, rather than to its original condition.
7. B7--new condition requiring that before use of a storage treatment or disposal facility is terminated, the licensee shall decommission the facility according to a plan approved by the Department.
8. B8--revised to include additional reasons for revoking disposal authorizations specifically: a) license or plan approval violation, b) EQC finds that preferred alternate management technology is available.
9. B19--revised language to reflect site operator responsibilities relative to State's hazardous waste manifest program.
10. C1--revised language to require increase in amount of closure and post-closure monitoring security bond. (Bond amount still being determined at this time.)
11. C2--revised language to require increase in amount of annual contributions to closure and post-closure monitoring cash bond (annual contribution still being determined at this time).
12. C6--since Chem-Security will not be preparing an annual report or S.E.C. report, revised language to require Chem-Nuclear's annual report, S.E.C. report, and quarterly unaudited report, and Chem-Security's quarterly unaudited report.

13. C8--a new condition providing opportunity for the Commission to reconsider and terminate license if there is a further distribution of outstanding common stock shares in Chem-Security Systems, Inc. (100 shares now owned by Chem-Nuclear /5,000 shares authorized).
14. Exhibit A to Appendix 1 has been updated to include all constructed facilities. (Exhibit A still being prepared at this time).

The license as recommended contains the following deletions (condition numbers refer to existing license--see Attachment II:

1. A9--as well as being identified in the original license, these plan approvals also exist in separate form as letter approvals by the Department.
2. B2--replaced with language limiting plan approvals to one year. (see new B1-Attachment I)
3. B5--considered to be superfluous language.
4. B9--has become a NOTE to new conditions B7.
5. B10--it goes without saying, licensee should have opportunity to modify operations with Department's approval.
6. B12--deleted requirement requiring separate approval request for each waste whose annual volume increases by more than 50 percent over that receiving prior approval by the Department. Because of the number of new requests being evaluated each year, and the total volume of waste currently being handled at the site, the impact of any one generator is significantly reduced. We now believe it is more important to be tracking total volumes being managed at the site, plus spending staff time identifying and promoting waste reduction techniques at the waste source.
7. B13a--condition now covered in Collection Site License S-3, issued August 6, 1979.
8. B15--report has been submitted as required. Report concluded that insufficient volumes of combustible wastes are being received at the site at this time to justify installation of an incinerator. Both Chem-Nuclear and the Department believe it necessary to reconsider this matter periodically.

At the Environmental Quality Commission breakfast meeting of February 22, 1980, the question was raised as to whether or not the state should own the entire site (approximately 320 acres) rather than that portion of the site currently being used for hazardous waste management activities (approximately 40 acres). Having reviewed ORS 459.590(1) and existing license conditions A8, B24, C7 and Appendix 1 (proposed conditions A8, B20, C7 and Appendix 1), the Department has concluded that adequate

controls over the entire site already exist and no real benefits would accrue to the state from owning the remaining unused portions of the site at this time.

Summation

1. On March 12, 1980, Chem-Security Systems, Inc., a wholly owned subsidiary of Chem-Nuclear Systems, Inc., applied for a license modification to allow it to operate the Arlington Pollution Control Center authorized under Hazardous Waste Disposal Site License HW-1.
2. Chem-Nuclear Systems, Inc., is proposing to transfer the existing employees and physical assets of the Arlington Pollution Control Center to Chem-Security Systems, Inc., upon commission issuance of a modified license.
3. Chem-Nuclear Systems, Inc., is prepared to guarantee the performance of its wholly owned subsidiary (see Attachment III).
4. Major amendments to the license include an increase in the closure and post-closure monitoring cash/security bond and a new condition providing the EQC with authority to revise and terminate the license if more than 100 shares of Chem-Security are distributed.
5. If the proposed license is issued, we do not see any immediate change in the site operation that would be adverse to the State's current interest, in fact, additional protection to the State has been agreed on.

Director's Recommendation

Based upon the summation, it is recommended that the Commission issue a license for the Arlington Pollution Control Center to Chem-Security Systems, Inc., said license to become effective upon completion of the transfer of the Oregon property from Chem-Nuclear Systems, Inc., to Chem-Security Systems, Inc., as determined by the director who shall insert the effective date in the modified license.



W. H. Young

Richard Reiter
229-5913
March 27, 1980
SB2241

Attachments: 3

- Attachment I - Recommended License
- Attachment II - Present License
- Attachment III - Guarantee of Performance

HAZARDOUS WASTE
DISPOSAL SITE LICENSE

Department of Environmental Quality
522 Southwest Fifth, Portland, OR 97204
Mailing Address: Box 1760, Portland, OR 97207
Telephone: (503) 229-5913

Issued in accordance with the provisions of ORS Chapter 459

ISSUED TO:

Licensee:

Chem-Security Systems, Inc.
Box 1866
Bellevue, WA 98009

REFERENCE INFORMATION:

Facility Name:

Arlington Pollution Control Center
County: Gilliam

SITE LOCATION AND DESCRIPTION:

S1/2 of NE1/4, SE1/4, of Sec. 25
and N1/2 of NE1/4 of Sec. 36,
T 2 N, R 20 E, W.M.; and 3.74 acres
between the site and county roads in the
NW1/4 of the NW1/4 of Sec. 31, T2N, R21E,
W.M.

Operator: Chem-Security Systems, Inc
Box 1866
Bellevue, WA 98009

ISSUED BY ENVIRONMENTAL QUALITY COMMISSION

JOE B. RICHARDS, Chairman

WILLIAM H. YOUNG, Director

Effective Date

Until such time as this license expires or is modified or revoked, Chem-Security Systems, Inc., is herewith authorized to establish and operate a site for the treatment, storage, and disposal of hazardous wastes as now or hereafter defined by ORS 459.410 and rules of the Department of Environmental Quality. Such activities must be carried out in conformance with the conditions which follow. This license is personal to the licensee and nontransferable.

A. GENERAL CONDITIONS

- A1. Authorized representatives of the Department of Environmental Quality (hereinafter referred to as the Department) shall have access to the site at all reasonable times for the purpose of inspecting the site, the records which are required by this license, or environmental monitoring.
- A2. The Department, its officers, agents and employees shall not have any liability on account of the issuance of this license or on account of the operation permitted by this license.
- A3. The issuance of this license does not convey any property right or exclusive privilege nor does it authorize any injury to private property or any invasion of personal rights, nor any violation of federal, state or local laws or regulations.
- A4. The Department may revise any of the conditions of this license or may amend the license on its own motion in accordance with applicable rules of the Department.
- A5. Transportation of wastes to the site by or for the licensee and on-site handling, storage, treatment and disposal shall comply with rules of the Public Utility Commissioner of Oregon, the Worker's Compensation Department, the State Health Division and any other local, state or federal agency having jurisdiction.
- A6. A complete copy of this license, approved facility plans and approved operating manual procedures shall be maintained at the site at all times.
- A7. The licensee shall not conduct, or allow to be conducted, any activities that are not directly associated with the construction, operation or maintenance of the waste management facilities at the site as authorized by this license, without prior written approval from the Department for such other activities.
- A8. The licensee shall not mortgage, sell or otherwise dispose of any portion of the site without prior written approval from the Department. This condition shall survive the expiration, revocation, suspension or termination of the license for any reason other than those specified in Condition C7 for a period of two years during which time the Department shall have exclusive right and option to purchase all of the site and improvements thereon, not theretofore deeded to the State. Purchase from licensee shall be in accordance with Appendix I to this license which sets forth the basis and conditions for such purchase.
- A9. Within 30 days of any license changes, the licensee shall have a memo of such changes recorded in the deed records of Gilliam County.

B SPECIAL CONDITIONS

Management of the site, including all activities related to treatment, storage and disposal of wastes at the site, construction and maintenance of facilities at the site, and monitoring and maintenance of records concerning operation of the site shall conform with the following conditions:

- B1. No construction activities related to waste management at the site may be undertaken by the licensee until the Department has approved in writing final plans for facilities proposed by the licensee. Plan approvals shall be valid for only one year from date of the Department's written approval unless otherwise specified by the Department.
- B2. No waste management facility may be used by the licensee until the Department has inspected the site and certified in writing that the facility is satisfactory and complies with the approved final detailed engineering plans.
- B3. Operation of the site shall not be discontinued without the approval of the Department, except for temporary work suspension caused by conditions beyond the control of the licensee such as, but not limited to, labor disputes, weather conditions, equipment failure, shortages of materials or unavailability of qualified personnel. In the case of a temporary discontinuance of disposal activities which exceed 5 working days, the licensee shall notify the Department in writing, giving the reason for the shut down and the estimated duration of the temporary closure. During any temporary discontinuance of disposal activities, the licensee shall maintain the security and integrity of the site.
- B4. Waste handling, storage, disposal, treatment, monitoring and other waste management activities at the site shall comply with procedures and plans approved by the Department and other conditions of this license.
- B5. The licensee shall assume all liability for containment, clean-up and rectifying of the the conditions caused by any spill, fire, accident, emergency or other unusual condition that may occur:
 - a. At the site;
 - b. During the transportation of waste by the licensee to the site;
 - c. During the authorized transportation of waste by others to the site, if:
 - (1) The licensee is made aware of the incident; and,
 - (2) The incident occurs on the following access routes to the site:
 - (i) State 19 from Olex to its junction with I-80. (including all of Arlington south of I-80 but excluding the flood diversion canal or the Columbia River)
 - (ii) Blalock Canyon Road
 - (iii) Cedar Spring Road from Rock Creek to its junction with State 19

Special Conditions (cont.)

- B6. Before use of the site is terminated, the licensee shall restore the site to a condition approved by the Department. No less than one year prior to intended closure of the site the licensee shall submit detailed plans for the Department's approval. No action toward closure shall be taken without prior written approval from the Department.
- B7. Before use of a storage, treatment or disposal facility is terminated, the licensee shall decommission the facility according to a plan approved by the Department. No less than three (3) months prior to decommissioning a facility, the licensee shall submit detailed plans for the Department's approval. No action toward decommissioning shall be taken without prior written approval from the Department.

NOTE: Upon completion of each burial trench, a granite or concrete marker shall be erected at the end of the trench. To such trench markers shall be attached a bronze or stainless steel plate which shall contain the following information: a trench identification number; dimension of the trench and its location relative to the marker; volume of waste buried; and dates of beginning and completion of burial operations.

- B8. The licensee is authorized to accept and dispose at the site only those wastes for which specific treatment and disposal procedures or research programs have received prior approval by the Department. This authorization may be revoked if the Department finds the acceptance or disposal of such wastes to constitute a threat to the public health, welfare, or environment; may lead to a license or plan approval violation; or the Environmental Quality Commission finds that preferred alternate management technology is available. The storage, treatment or disposal of wastes at the site shall be conducted only in facilities approved by the Department.
- B9. Except as provided in Condition B10, the licensee shall submit a Disposal Request, and receive approval of the same, for all wastes proposed to be brought to the site. This Disposal Request must be submitted in writing to the Department and include the following information (if applicable):
- a. Name, location and business of the waste generator and contact person at the generator.
 - b. Process in which waste was generated and marketable products arising from that process.
 - c. Volume, chemical and physical nature of the waste.
 - d. Manner in which waste is packaged for shipment.
 - e. Proposed treatment and disposal procedure.

Special Conditions (cont.)

The Disposal request shall contain written confirmation of a. to d. from the waste generator. A separate request must be made for each waste type by generator. The Department will submit a written response to the licensee no later than 14 days following receipt of a request, however, a request is not complete until the Department has received all information necessary to arrive at an informed decision.

- B10. The Department may give verbal approval for the treatment, storage or disposal of certain wastes including, but not limited to, the following:
- a. Wastes resulting from an accident or spill for which storage may not be feasible or may pose an unusual hazard.
 - b. Wastes that have been given prior approval, but are received in a different form or package or for which a different but equivalent disposal procedure is requested.
- B11. If the Department determines that any specific waste originating in Oregon should be disposed at the site, based on unavailability or infeasibility of alternative disposal methods or other factors, the licensee shall provide disposal for such waste under treatment or disposal procedures directed by the Department utilizing existing site facilities and equipment. In the event that treatment or disposal procedures directed by the Department require additional facilities or equipment, the obligation of the licensee shall depend upon financial commitments by the waste generator satisfactory to licensee.
- B12. The licensee shall designate a site superintendent and shall advise the Department of the name and qualifications of the superintendent. The superintendent shall be in charge of all activities at the site within his qualifications. The licensee shall also advise the Department of the individual to be contacted on any problem not within the site superintendent's qualifications. The licensee shall immediately notify the Department if any change is made in this designated individual.
- B13. The licensee shall not open burn any wastes or materials at the site, except for uncontaminated refuse and scrap and in compliance with State and local open burning rules, without prior written approval by the Department.
- B14. As provided in agreements between the licensee, the Department, and other persons, ownership may be retained by other persons over certain wastes disposed at the site by the licensee. Such agreements shall further provide that the Department shall not be liable for any expenses associated with future recovery or re-disposal of such wastes and that following any future recovery or re-disposal operations, the site shall be returned to a condition satisfactory to the Department.

N O T E

CONDITIONS C1 and C2--

As of this mailing, the Department and Chem-Nuclear had not agreed on final form and amount of surety and cash bond for closure and post-closure monitoring. While agreeing that the current amounts are inadequate (\$75,000 total bond--\$5,625 annual cash contribution), Chem-Nuclear and the Department are examining alternate ways of indemnifying the state's interests.

As soon as form and amount are decided, information will be forwarded.

Richard P. Reiter
4-04-80

Special Conditions (cont.)

- B15. Wastes shall be managed on the site in a manner so as to prevent the reaction of incompatible materials which may cause a fire or explosion, the release of noxious gases, or otherwise endanger public health or the environment.
- B16. Wastes shall be consigned to treatment or disposal as rapidly as practicable.
- B17. The licensee shall designate a specific area(s) for the storage of wastes. Wastes shall not be stored in other than a storage area.
- B18. All containers of waste on site shall be identified sufficiently to assure rapid positive identification of their contents.
- B19. All hazardous wastes delivered to the site shall be accompanied by a manifest unless otherwise authorized or exempted by the Department. Once wastes are treated or disposed of, one copy of a completed manifest shall be returned to the generator.
- B20. Whenever, in the judgment of the Department from the results of monitoring or surveillance of the site operation, there is reasonable cause to believe that a clear and immediate danger to the public health and safety exists from the continued operation of the site, without hearing or prior notice, the Department may order the operation of the site halted by service of the order on the site superintendent. The licensee shall be obliged to rectify the dangerous conditions immediately, subject to such direction as the Department may give. If the licensee fails to act when directed, the Department may immediately come on the premises and take action as is necessary to rectify the dangerous conditions. The licensee shall be responsible for all expenses incurred in carrying out the action including reasonable charges for services performed and equipment and materials used.

C. FINANCIAL

- C1. The licensee shall post and maintain a surety bond executed in favor of the State of Oregon in the amount of \$ for a term ending April 15, 1981. Each year thereafter, for 22 years on or before April 15, the surety bond shall be renewed or a new surety bond filed with the State of Oregon and maintained in the amount of \$ less the amount of the cash bond posted with the Department (Condition C2). Each such surety bond shall be posted and maintained concurrently with the cash bond.

The surety bond shall be forfeited to the State of Oregon upon a failure of the licensee to perform as required by this license, and shall indemnify the State of Oregon for any cost of closing the site and monitoring it and providing for its security after closure.

Financial (cont.)

- C2. The licensee shall post and maintain a cash bond, as provided by ORS 459.590(2)(f), with the Department in the amount of \$ _____ initially. Annual additions to the cash bond shall be posted and maintained by the licensee in the amount of \$ _____, for 22 years on or before April 15, commencing with April 15, 1981. Bills, certificates, notes, bonds or other obligations of the United States or its agencies shall be eligible securities deemed equivalent to cash. The cash value at the time of posting shall not be less than the required bond amount. Interest earnings on the cash bond shall be retained by the Department to augment the cash bond for the purpose of offsetting inflationary increases in monitoring, security and other costs to be funded by the cash bond.
- C3. The licensee shall pay the Department an annual license fee within 30 days after July 1 each year. The amount of such fee shall not exceed the cost incurred by the Department to meet its monitoring, surveillance and review activities of this license; and will be determined by the Department as part of its biennial budgeting process.
- C4. Prior to disposal, treatment or permanent storage of any wastes thereon, the licensee shall deed land used specifically for such purpose to the State. Within 60 days after completion of any new on-site roads, the licensee shall deed such roads to the state. Within 30 days after deeding of these properties to the state, a lease between the licensee and the Department for these properties shall be executed. The lease shall be maintained for the duration of this license.
- C5. The licensee shall maintain ordinary liability insurance for operation of the site, with respect to all types of wastes, in the amount of not less than \$1 million. Such insurance shall also be maintained by the licensee in the amount of not less than \$1 million, to cover transportation by the licensee of all types of wastes to the site. The licensee shall notify the Department by a Certificate of Insurance within 7 days of any new policy or policy change and shall provide a certified copy of such policy or change within 90 days. All such insurance policies shall provide that such insurance shall not be cancelled or released except upon 30 days prior written notice to the Department. Environmental impairment liability insurance in a like amount shall be required when the Department determines that it is practicably available.
- C6. The licensee shall submit copies of Chem-Nuclear System, Inc's audited annual reports; Chem-Nuclear System, Inc's Form 10-K reports to the S.E.C.; and Chem-Nuclear Systems, Inc's and licensee's unaudited quarterly management reports for the Arlington Pollution Control Center within 30 days after completion by the licensee. These reports and, except as specifically provided in this license, other reports required by the license or requested by the Department shall be treated as confidential to the extent permitted by Oregon laws and rules.

Financial (cont.)

- C7. The licensee shall convey title for the entire site to the state, in unencumbered fee title without compensation, except for those portions previously owned by the state, in the event of any one of the following circumstances:
- a. Expiration of the license due to failure of the licensee to seek renewal.
 - b. Termination or expiration of the license due to utilization of the site to its full capacity, as determined by the Department.
 - c. Default by the licensee of any provision of this license that remains uncorrected after 30 days written notice.

If, at the end of said 30 days, the Department determines that such fault remains uncorrected, it shall notify the licensee of the continued default and of its intent to enforce this license condition.

If the licensee contests the enforcement action, within 10 days after the notification both parties shall appoint an arbitrator and the two arbitrators so appointed shall, within 5 days after their appointment, choose a third arbitrator. The written decision of a majority of the arbitrators shall be final and binding upon both parties, except that, in the event of a decision favorable to the Department, the licensee shall have an additional 30 days to correct the fault. (The Department or the arbitrators may extend this period if the fault cannot be reasonably corrected within 30 days). At the end of this period, the Department may accept the licensee's efforts or again remand the dispute to arbitration. The written decision of a majority of the arbitrators at this second arbitration shall be final and binding upon both parties.

In the event that either party shall fail to choose a third arbitrator within the 5 day period allotted to them, then either party may request the presiding judge of the Circuit Court of the State of Oregon for Multnomah County to choose the required arbitrator.

The arbitrators, at their discretion, shall assess either or both parties for payment of the cost of arbitration.

This condition shall survive the expiration or termination of the license.

- C8. The Commission reserves the right to reconsider and terminate this license if there is any further distribution of common stock shares (initial distribution of 100 shares to Chem-Nuclear Systems, Inc. on November 16, 1979) of Chem-Security Systems, Inc. without the prior written approval of the Department.

D. RECORDKEEPING AND REPORTING

- D1. The licensee shall maintain records and submit monthly reports to the Department including but not limited to: quantity and type of waste received; generator; manifest number; request number; date of waste receipt; name of transporter; and the applicable of: storage location; pond number; burial trench number, and location coordinates in trench.

Every shipment of waste received must be clearly traceable from its time of receipt to its placement in a pond or a burial trench.

The licensee shall also submit a monthly public information report on a form approved by the Department which will be available for public inspection.

- D2. All site records pertaining to the receipt, treatment, storage, and disposal of wastes are to be kept for at least 3 years. If licensee chooses to dispose of such records the Department shall be given an opportunity to retain them as Department records. Such records shall be treated as confidential to the extent permitted by Oregon laws and rules.
- D3. The licensee shall maintain survey records for each burial trench, referenced to the nearest U.S. Coast Guard bench mark, to define the exact location and boundaries of each trench. Within 60 days after completion of a trench, the licensee shall forward the required marker information and a copy of the survey records to the Department.

E. ENVIRONMENTAL MONITORING

The licensee shall conduct chemical and biological environmental monitoring in accordance with a program designed jointly with the Department. This program will be reviewed annually by both parties and is to include at least the following:

- E1. On-site deep wells (Nos. B-1, B-2, B-3, B-4, B-5, and B-6) will be checked for the presence of water annually about June 1. A water sample will be obtained by a mutually agreed procedure from each well in which water is observed.
- E2. Monitoring wells in the pond and burial area will be checked as required by the annual monitoring program for the presence of water. A water sample will be obtained by a mutually agreed procedure from each well in which water is observed.
- E3. A sampling of the resident vertebrate population and of vegetation will be performed annually.
- E4. All samples required above will be analyzed in accordance with the jointly designed program and for wastes relative to those that were disposed. Such analysis may include but not be limited to total organic carbon, pH, specific conductance, heavy metals, chlorinated hydrocarbons, phenolics, cyanide, or other chemical species.

- E5. The monitoring program in effect at any time preceding or during the period of this license shall remain in effect until a new program has been jointly agreed upon.
- E6. All findings and results from the licensee's environmental monitoring program shall be reported to the Department within 15 days of their availability.
- E7. The Department may require special monitoring when it is deemed that conditions may exist to threaten the public health or welfare or the environment. The cost of such monitoring shall be determined by both parties on a case-by-case basis.

HW1112 (wp)

LICENSE HW-1

APPENDIX 1

CONDITIONS FOR PURCHASE OF CHEM-SECURITY SYSTEM, INC'S
ARLINGTON POLLUTION CONTROL CENTER

Pursuant to license HW-1 Condition A8, the following specifies the basis and conditions under which the Department may purchase Chem-Security System, Inc's Arlington Pollution Control Center:

1. In the event of expiration, revocation, suspension or termination of License HW-1 issued by the Department for Chem-Security's Arlington Pollution Control Center except for reason specified in license Condition C7, the Department shall have exclusive right and option to purchase from Chem-Security all of the site and improvements thereon not theretofor deeded to the state.
2. "Site," hereunder shall include all real property within the legal description noted on License HW-1.
3. "Improvements," hereunder shall include trenches, ponds, fencing, signs, roads, water supply, monitoring wells and devices, and any other items specially designated in Exhibit A attached hereto and hereby made a part hereof. Improvements shall not include any rented or leased equipment, furniture, tools, mobile firefighting equipment, vehicles, tractors, graders, dozers, loaders, forklift trucks, trucks and other mobile equipment and their accessories.
4. Purchase of said site and improvements shall be at the adjusted price shown in Exhibit A attached hereto. Full cash payment shall be due on closing. Closing costs shall be shared equally, except that Chem-Security shall not pay in excess of \$2,000 of such costs.
5. If the Department determines that it will not purchase the site and improvements, it shall advise Chem-Security in writing as soon as possible of such determination and shall release Chem-Security from the Department's exclusive right and option under License HW-1 Condition A8.
6. Additions to, or deletions from, the foregoing and Exhibit A attached hereto may be made at any time for the purpose of adding new facilities or deleting obsolete or retired facilities or for other mutually agreeable purpose. Said addition or deletion shall be executed by submission of a written response from the other party agreeing to the requested change. Said additions or deletions may be executed only by the President of Chem-Security and the Director of the Department.
7. The foregoing provisions and conditions shall survive the expiration, revocation, suspension, or termination of License HW-1 for a period of two years.

HW1112.A

NOTE: Exhibit "A" is currently being updated to include recently constructed facilities.

As soon as is updated, information will be forwarded

EXHIBIT A to APPENDIX 1 of LICENSE HW-1

Rich Reiter
4-4-80

<u>Category</u>	<u>Item</u>	<u>Base Cost (C), \$</u>	<u>Base Year</u>	<u>Adjusted Price, \$</u>
Site	Site Real	1,300	1970	C x F1 x F3
	Property	63,924	1972	C x F1 x F3
	Site	93,080	1970	C x F1 x F3
	Development	81,943	1971	C x F1 x F3
		65,348	1972	C x F1 x F3
		10,953	1973	C x F1 x F3
		13,291	1974	C x F1 x F3
		6,628	1976	C x F1 x F3
Improvements	Burial Trenches	112,616	1976	C x F1 x F2a x F3
	Evaporation Ponds	8,500	1976	C x F1 x F2b x F3
	Evaporation Ponds Liners	16,374	1976	C x F1 x F2c x F3
	Fencing,	3,721	1970	C x F1 x F3
	Signs & Roads	4,430	1972	C x F1 x F3
		2,844	1973	C x F1 x F3
		60,854	1976	C x F1 x F3
		7,528	1978	C x F1 x F3
	Water Wells & Systems	1,693	1972	C x F1 x F2b x F3
		2,622	1975	C x F1 x F2b x F3
		4,908	1976	C x F1 x F2b x F3
	Septic Systems	1,320	1975	C x F1 x F2d x F3
		1,068	1976	C x F1 x F2d x F3
	Monitoring Devices	299	1976	C x F1 x F2d x F3
	1,026	1977	C x F1 x F2d x F3	
Miscellaneous	388	1975	C x F1 x F3	
	3,665	1976	C x F1 x F3	

Adjustment Factor

F1 = The consumer price index for the purchase agreement month divided by the consumer price index for the base year. Consumer price indexes to be used are those for urban wage earners and clerical workers in Portland, Oregon.

F2 = A variable factor as follows:

F2a = Fraction of capacity unused

F2b = 1 if serviceable; 0 if not

F2c = 1-(years in use ÷ 5) if serviceable; 0 if not

F2d = 1-(years in use ÷ 10) if serviceable; 0 if not

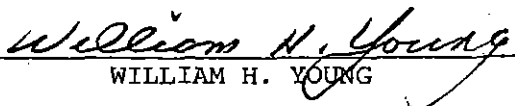
F3 = Fraction of land not deeded to Orean

HAZARDOUS WASTE DISPOSAL SITE LICENSE

Department of Environmental Quality
522 S.W. 5th Ave. P.O. Box 1760
Portland, Oregon 97207
Telephone: (503) 229-5913

Issued in Accordance with the Provisions of

ORS CHAPTER 459

ISSUED TO:	REFERENCE INFORMATION
(licensee) Chem-Nuclear Systems, Inc. P.O. Box 1866 Bellevue, Washington 98009	Facility Name: <u>Oregon Pollution Control Center and Hazardous Waste Repository</u>
LOCATION: (PROPERTY DESCRIPTION) S1/2 of NE1/4, SE1/4, of Section 25 and N1/2 of NE1/4 of Section 36, T2N, R20E, W.M.	County: <u>Gilliam</u>
ISSUED BY THE ENVIRONMENTAL QUALITY COMMISSION	Operator: <u>Chem-Nuclear Systems, Inc. P. O. Box 1866 Bellevue, Washington 98009</u>
 WILLIAM H. YOUNG	<u>Jan 29 '79</u>
Director, Department of Environmental Quality	Effective Date

Until such time as this license expires or is modified or revoked, Chem-Nuclear Systems, Inc. is herewith authorized to establish and operate a site for the treatment, storage, and disposal of hazardous wastes as now or hereafter defined by ORS 459.410 and rules of the Department of Environmental Quality. Such activities must be carried out in conformance with the conditions which follow. This license is personal to the licensee and non-transferable.

L I C E N S E C O N D I T I O N S

A. GENERAL CONDITIONS

- A1. Authorized representatives of the Department of Environmental Quality (hereinafter referred to as the Department) shall have access to the site at all reasonable times for the purpose of inspecting the site and its facilities, the records which are required by this license, or environmental monitoring.
- A2. The Department, its officers, agents and employees shall not have any liability on account of the issuance of this license or on account of the construction, operation or maintenance of facilities permitted by this license.
- A3. The issuance of this license does not convey any property right or exclusive privilege, except pursuant to the lease for the State owned portion of the site, nor does it authorize any injury to private property or any invasion of personal rights, nor any violation of Federal, State or local laws or regulations.
- A4. The Department may revise any of the conditions of this license or may amend the license on its own motion in accordance with applicable rules of the Department.
- A5. Transportation of wastes to the site by or for the licensee shall comply with rules of the Public Utility Commissioner of Oregon, the State Health Division and any other local, State or Federal agency having jurisdiction.
- A6. A complete copy of this license and approved plans and procedures shall be maintained at the site at all times.
- A7. The licensee shall not conduct, or allow to be conducted, any activities that are not directly associated with the construction, operation or maintenance of the waste management facilities at the site as authorized by this license, without prior written approval from the Department for such other activities.
- A8. The licensee shall not mortgage, sell or otherwise dispose of any portion of the site without prior written approval from the Department. This condition shall survive the expiration, revocation, suspension or termination of the license for any reason other than those specified in condition C7 for a period of two years during which time the Department shall have exclusive right and option to purchase all of the site and improvements thereon, not theretofore deeded to the State. Purchase from licensee shall be in accordance with Appendix I to this license which sets forth the basis and conditions for such purchase.
- A9. The plans and procedures approved under Section F of the superseded license (dated March 2, 1976) are hereby approved.
- A10. Within 30 days of the issuance of this license, the licensee shall have a memo of this license recorded in the deed records of Gilliam County.

L I C E N S E C O N D I T I O N S

B. SPECIAL CONDITIONS

Management of the site, including all activities related to treatment, storage and disposal of wastes at the site, construction and maintenance of facilities at the site, and monitoring and maintenance of records concerning operation of the site shall conform with the following conditions:

- B1. No construction activities related to waste management at the site may be undertaken by the licensee until the Department has approved in writing final plans for facilities proposed by the licensee.
- B2. Following written approval by the Department of final detailed engineering plans, the licensee shall proceed expeditiously with construction of the approved facilities.
- B3. No waste management facility may be used by the licensee until the Department has inspected the site and certified in writing that the facility is satisfactory and complies with the approved final detailed engineering plans.
- B4. Operation of the site shall not be discontinued without the approval of the Department, except for temporary work suspension caused by conditions beyond the control of the licensee such as, but not limited to, labor disputes, weather conditions, equipment failure, shortages of materials or unavailability of qualified personnel. In the case of a temporary discontinuance of disposal activities which exceed 5 working days, the licensee will notify the Department in writing, giving the reason for the shut down and the estimated duration of the temporary closure. During any temporary discontinuance of disposal activities, the licensee shall maintain the security and integrity of the site.
- B5. Conditions B1, B2, B3, and B4 and other conditions of this license shall apply to present facilities and operations and to any subsequent facilities and operations proposed by the licensee.
- B6. Waste handling, storage, disposal, treatment, monitoring and other waste management activities at the site shall comply with procedures and plans approved by the Department and other conditions of this license.
- B7. The licensee shall assume all liability for containment, clean-up, and rectification of the conditions caused by any spill, fire, accident, emergency or other unusual condition that may occur:
 - (a) At the site;
 - (b) During the transportation of waste by the licensee to the site;
 - (c) During the authorized transportation of waste by others to the site, if:
 - (1) The licensee is made aware of the incident; and,
 - (2) The incident occurs on the following access routes to the site:
 - (i) State 19 from Olex to its junction with I-80 (including all of Arlington South of I-80 but excluding the flood diversion canal or the Columbia River.)
 - (ii) Blalock Canyon Road
 - (iii) Cedar Spring Road from Rock Creek to its Junction with State 19.

L I C E N S E C O N D I T I O N S

- B8. Before use of the site for disposal is terminated, the licensee shall restore the site to its original condition, to the extent reasonably practicable. No less than one year prior to intended closure of the site the licensee shall submit detailed plans for the Department's approval indicating steps to be taken to properly close and restore the site. No action toward closure shall be taken without prior written approval from the Department.
- B9. Upon completion of each burial trench, a granite or concrete marker shall be erected at the end of the trench. To such trench markers shall be attached a bronze or stainless steel plate which shall contain the following information: a trench identification number; dimension of the trench and its location relative to the marker; volume of waste buried; and dates of beginning and completion of burial operations.
- B10. The licensee may at any time propose in writing for the Department's consideration changes in previously approved facilities or procedures, or the addition of new facilities or procedures.
- B11. The licensee is authorized to accept and dispose at the site only those wastes for which specific treatment and disposal procedures or research programs have received prior approval by the Department. This authorization may be revoked if the Department finds the acceptance or disposal of such wastes to constitute a threat to the public health or welfare or the environment. The storage, treatment or disposal of wastes at the site shall be conducted only in facilities approved by the Department.
- B12. Except as provided in Condition B13, the licensee shall submit a Disposal Request, and received approval of same, for all wastes proposed to be brought to the site. This Disposal Request must be submitted in writing to the Department and include the following information (if applicable):
- (a) Name, location and business of the waste generator and contact person at the generator.
 - (b) Process in which waste was generated and/or marketable products arising from that process.
 - (c) Volume, chemical and physical nature of the waste.
 - (d) Manner in which waste is packaged for shipment.
 - (e) Proposed treatment and/or disposal procedure.

The Department may require written confirmation of (a) to (d) from the waste generator. A separate request must be made for each waste source and for each waste whose annual volume increases by more than 50 percent over that receiving prior approval from the Department. The Department will submit a written response to the licensee no later than 14 days following receipt of a request, however, a request is not complete until the Department has received all information necessary to arrive at an informed decision.

L I C E N S E C O N D I T I O N S

- B13. The Department may give verbal approval for the treatment, storage or disposal of certain wastes including, but not limited to, the following:
- (a) Wastes generated within the Pacific Northwest that do not exceed 2000 lbs./250 gallons from a single source within a single year.
 - (b) Wastes resulting from an accident or spill for which storage may not be feasible or may pose an unusual hazard.
 - (c) Wastes that have been given prior approval, but are received in a different form or package or for which a different but equivalent disposal procedure is requested.
- B14. If the Department determines that any specific waste originating in Oregon should be disposed at the site, based on unavailability or infeasibility of alternative disposal methods or other factors, the licensee shall provide disposal for such waste under treatment or disposal procedures directed by the Department utilizing existing site facilities and equipment. In the event that treatment or disposal procedures directed by the Department require additional facilities or equipment, the obligation of the licensee shall depend upon financial commitments by the waste generator satisfactory to licensee.
- B15. By March 1, 1979, the licensee shall submit a report to the Department which outlines the feasibility of adding incineration facilities to its operation. This report shall include an analysis of: the types and volumes of organic wastes that would be amenable to incineration; volumes of such wastes that have been disposed at the site by other means; conceptual design for appropriate incineration facilities including capital and operating costs, method of feed, hourly feed rate, and hours of operation; quantity and character of air contaminants to be emitted and proposed monitoring equipment, if any; and other information pertinent to the incineration facilities.
- B16. The licensee shall designate a site superintendent and shall advise the Department of the name and qualifications of the superintendent. The superintendent shall be in charge of all activities at the site within his qualifications. The licensee shall also advise the Department of the individual to be contacted on any problem not within the site superintendent's qualifications. The licensee shall immediately notify the Department if any change is made in these designated individuals.
- B17. The licensee shall not open burn any wastes or materials at the site, except for uncontaminated refuse and scrap and in compliance with State and local open burning rules, without prior written approval by the Department.
- B18. As provided in agreements or contract between the licensee, the Department, and other persons, ownership may be retained by other persons over certain wastes disposed at the site by the licensee. Such agreements shall further provide that the Department shall not be liable for any expenses associated with future recovery or re-disposal of such wastes and that following any future recovery or re-disposal operations, the site shall be returned to a condition satisfactory to the Department.

L I C E N S E C O N D I T I O N S

- B19. Wastes shall be managed on the site in a manner so as to prevent the reaction of incompatible materials which may cause a fire or explosion, the release of noxious gases, or otherwise endangering public health or the environment.
- B20. Wastes shall be consigned to treatment or disposal as rapidly as practicable.
- B21. The licensee shall designate a specific area(s) for the storage of wastes. Wastes shall not be stored in other than a storage area.
- B22. All containers of waste on site shall be identified sufficiently to assure rapid positive identification of their contents.
- B23. The licensee shall participate in the manifest system when it is implemented.
- B24. Whenever, in the judgment of the Department from the results of monitoring or surveillance of the site operation, there is reasonable cause to believe that a clear and immediate danger to the public health and safety exists from the continued operation of the site, without hearing or prior notice, the Department may order the operation of the site halted by service of the order on the site superintendent. The licensee shall be obliged to rectify the dangerous conditions immediately, subject to such direction as the Department may give. If the licensee fails to act when directed, the Department may immediately come on the premises and take action as is necessary to rectify the dangerous conditions. The licensee shall be responsible for all expenses incurred in carrying out the action including reasonable charges for services performed and equipment and materials used.

L I C E N S E C O N D I T I O N S

C. FINANCIAL

- C1. On March 15, 1976, the licensee posted a surety bond executed in favor of the State of Oregon in the amount of \$75,000 and for a term ending April 15, 1977. Each year thereafter, for 11 years on or before April 15, the surety bond shall be renewed or a new surety bond filed with the State of Oregon in the amount of \$75,000 less the amount of the cash bond posted with the Department (condition C2). Each such surety bond shall be posted concurrently with the cash bond.
The surety bond shall be forfeited to the State of Oregon by a failure of the licensee to perform as required by this license, to the extent necessary to secure compliance with the requirements of this license, and shall indemnify the State of Oregon for any cost of closing the site and monitoring it and providing for its security after closure.
- C2. On June 27, 1977, the licensee posted a cash bond, as provided by ORS 459.590(2)(f), with the Department in the amount of \$18,750. Thereafter, annual additions to the cash bond shall be posted by the licensee in the amount of \$5,625, for 10 years on or before April 15. Bills, certificates, notes, bonds or other obligations of the United States or its agencies shall be eligible securities deemed equivalent to cash. The cash value at the time of posting shall not be less than the required bond amount. Interest earnings on the cash bond shall be paid annually to the licensee, except for the amount necessary to offset inflationary increase in monitoring, security and other costs to be funded by the cash bond. Such inflation is to be measured by changes in the consumer price index with 1977 as the base year, and is to be computed upon the entire amount deposited in the cash bond.
- C3. The licensee shall pay the Department an annual license fee within 30 days after July 1 each year. The amount of such fee shall be adequate for the Department to maintain an adequate monitoring and surveillance program for the disposal site; and will be determined by the Department as part of its biennial budgeting process.
- C4. Prior to disposal, treatment or permanent storage of any wastes thereon, the licensee shall deed land used specifically for such purpose to the State. Within 60 days after completion of any new on-site roads, the licensee shall deed such roads to the State.
Within 30 days after deeding of these properties to the State, a lease between the licensee and the Department for these properties shall be executed. The lease shall be maintained for the duration of this license.

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05. The licensee shall maintain ordinary liability insurance for operation of the site, with respect to all types of wastes, in the amount of not less than \$1,000,000. Such insurance shall also be maintained by the licensee in the amount of not less than \$1,000,000 to cover transportation by the licensee of all types of wastes to the site. The licensee shall notify the Department by a Certificate of Insurance within 7 days of any new policy or policy change and shall provide a certified copy of such policy or change within 90 days. All such insurance policies shall provide that such insurance shall not be cancelled or released except upon 30 days prior written notice to the Department. Environmental impairment liability insurance in a like amount shall be required when the Department determines that it is practicably available.
06. The licensee shall submit copies of audited annual reports, Form 10-K reports to the S.E.C., and unaudited quarterly management reports for the Arlington operation, within 30 days after completion by the licensee. These reports and, except as specifically provided in this license, other reports required by the license or requested by the Department shall be treated as confidential to the extent permitted by Oregon laws and rules.
07. The licensee shall convey title for the entire site to the State, in unencumbered fee title without compensation, except for those portions previously owned by the State, in the event of any one of the following circumstances:
- (a) Expiration of the license due to failure of the licensee to seek renewal.
 - (b) Termination or expiration of the license due to utilization of the site to its full capacity, as determined by the Department.
 - (c) Default by the licensee of any provision of this license that remains uncorrected after 30 days written notice.
- If, at the end of said 30 days, the Department determines that such fault remains uncorrected, it shall notify the licensee of the continued default and of its intent to enforce this license condition.
- If the licensee contests the enforcement action, within 10 days after the notification both parties shall appoint an arbitrator and the two arbitrators so appointed shall, within 5 days after their appointment, choose a third arbitrator. The written decision of a majority of the arbitrators shall be final and binding upon both parties, except that, in the event of a decision favorable to the Department, the licensee shall have an additional 30 days to correct the fault. (The Department or the arbitrators may extend this period if the fault cannot be reasonably corrected within 30 days). At the end of this period, the Department may accept the licensee's efforts or again remand the dispute to arbitration. The written decision of a majority of the arbitrators at this second arbitration shall be final and binding upon both parties.
- In the event that either party shall fail to choose an arbitrator within said 10 day period, or the two arbitrators shall fail to choose a third arbitrator within the 5 day period allotted to them, then either party may request the presiding judge of the Circuit Court of the State of Oregon for Multnomah County to choose the required arbitrator.
- The arbitrators, at their discretion, shall assess either or both parties for payment of the cost of arbitration.
- This condition shall survive the expiration or termination of the license.

L I C E N S E C O N D I T I O N S

D. RECORDKEEPING AND REPORTING

- D1. The licensee shall maintain records and submit monthly reports to the Department including but not limited to: quantity and type of waste received; generator; request number; date of waste receipt; name of carrier; fee collected; and the applicable of: storage location; date of waste treatment; date of placing in pond and pond number; date of burial, burial trench number, and location coordinates in trench.
Every shipment of waste received must be clearly traceable from its time of receipt to its placement in a pond or a burial trench.
The licensee shall also submit a monthly public information report on a form approved by the Department which will be available for public inspection.
- D2. All site records pertaining to the receipt, treatment, storage, and disposal of wastes are to be kept for at least 3 years and turned over to the Department at (or before) the termination of site operation. Such records shall be treated as confidential to the extent permitted by Oregon laws and rules.
- D3. The licensee shall maintain survey records for each burial trench, referenced to the nearest U. S. Coast Guard bench mark, to define the exact location and boundaries of each trench. Within 60 days after completion of a trench, the licensee shall forward the required marker information and a copy of the survey records to the Department.

L I C E N S E C O N D I T I O N S

E. ENVIRONMENTAL MONITORING

The licensee shall conduct chemical and biological environmental monitoring in accordance with a program designed jointly with the Department. This program will be reviewed annually by both parties and is to include at least the following:

- E1. On-site deep wells (Nos. B-1, B-2, B-3, B-4, B-5, and B-6) will be checked for the presence of water annually about May 1. A water sample will be obtained by a mutually agreed procedure from each well in which water is observed.
- E2. Monitoring wells in the pond and burial area will be checked monthly (or as otherwise determined by the Department) for the presence of water. A water sample will be obtained by a mutually agreed procedure from each well in which water is observed.
- E3. A sampling of the resident vertebrate population and of vegetation will be performed annually.
- E4. All samples required above will be analyzed in accordance with the jointly designed program and for wastes relative to those that were disposed. Such analysis may include but not be limited to total organic carbon, pH, specific conductance, heavy metals, chlorinated hydrocarbons, phenolics, cyanide, or other chemical species.
- E5. The monitoring program in effect at any time preceding or during the period of this license shall remain in effect until a new program has been jointly agreed upon.
- E6. All findings and results from the licensee's environmental monitoring program shall be reported to the Department within 15 days of their availability.
- E7. The Department may require special monitoring when it is deemed that conditions may exist to threaten the public health or welfare or the environment. The cost of such monitoring will be determined by both parties on a case-by-case basis.

LICENSE HW-1

APPENDIX 1

CONDITIONS FOR PURCHASE OF

CHEM-NUCLEAR POLLUTION CONTROL CENTER

Pursuant to License HW-1 condition A8, the following specifies the basis and conditions under which the Department may purchase the Chem-Nuclear Pollution Control Center:

1. In the event of expiration, revocation, suspension or termination of License HW-1 issued by the Department for Chem-Nuclear's Pollution Control Center (site) near Arlington, Oregon, except for reason specified in license condition C7, the Department shall have exclusive right and option to purchase from Chem-Nuclear all of the site and improvements thereon not theretofore deeded to the State.
2. "Site", hereunder shall include all real property within the legal description noted on License HW-1.
3. "Improvements", hereunder shall include trenches, ponds, fencing, signs, roads, water supply, monitoring wells and devices, and any other items specially designated in Exhibit A attached hereto and hereby made a part hereof. Improvements shall not include any rented or leased equipment, furniture, tools, mobile firefighting equipment, vehicles, tractors, graders, dozers, loaders, forklift trucks, trucks and other mobile equipment and their accessories.
4. Purchase of said site and improvements shall be at the adjusted price shown in Exhibit A attached hereto. Full cash payment shall be due on closing. Closing costs shall be shared equally, except that Chem-Nuclear shall not pay in excess of \$2000 of such costs.
5. If the Department determines that it will not purchase the site and improvements, it shall advise Chem-Nuclear in writing as soon as possible of such determination and shall release Chem-Nuclear from the Department's exclusive right and option under License HW-1 condition A8.
6. Additions to, or deletions from, the foregoing and Exhibit A attached hereto may be made at any time for the purpose of adding new facilities or deleting obsolete or retired facilities or for other mutually agreeable purpose. Said addition or deletion shall be executed by submission of a written response from the other party agreeing to the requested change. Said additions or deletions may be executed only by the President of Chem-Nuclear and the Director of the Department.
7. The foregoing provisions and conditions shall survive the expiration, revocation, suspension, or termination of License HW-1 for a period of two years.

EXHIBIT A to APPENDIX I of LICENSE HW-1

<u>Category</u>	<u>Item</u>	<u>Base Cost(C), \$</u>	<u>Base Year</u>	<u>Adjusted Price, \$</u>
Site	Site Real	1,800	1970	C x F1 x F3
	Property	63,924	1972	C x F1 x F3
	Site	93,080	1970	C x F1 x F3
	Development	81,943	1971	C x F1 x F3
		65,348	1972	C x F1 x F3
		10,953	1973	C x F1 x F3
		13,291	1974	C x F1 x F3
	6,628	1976	C x F1 x F3	
Improvements	Burial	112,616	1976	C x F1 x F2a x F3
	Trenches			
	Evaporation	8,500	1976	C x F1 x F2b x F3
	Ponds			
	Evaporation	16,374	1976	C x F1 x F2c x F3
	Ponds Liners			
	Fencing,	3,721	1970	C x F1 x F3
	Signs & Roads	4,430	1972	C x F1 x F3
		2,844	1973	C x F1 x F3
		60,854	1976	C x F1 x F3
		7,528	1978	C x F1 x F3
	Water Wells	1,693	1972	C x F1 x F2b x F3
	& Systems	2,622	1975	C x F1 x F2b x F3
		4,908	1976	C x F1 x F2b x F3
	Septic Systems	1,320	1975	C x F1 x F2d x F3
	1,068	1976	C x F1 x F2d x F3	
Monitoring	299	1976	C x F1 x F2d x F3	
Devices	1,026	1977	C x F1 x F2d x F3	
Miscellaneous	388	1975	C x F1 x F3	
	3,665	1976	C x F1 x F3	

Adjustment Factor

F1 = The consumer price index for the purchase agreement month divided by the consumer price index for the base year. Consumer price indexes to be used are those for urban wage earners and clerical workers in Portland, Oregon.

F2 = A variable factor as follows:

F2a = Fraction of capacity unused

F2b = 1 if serviceable; 0 if not

F2c = $1 - (\text{years in use} \div 5)$ if serviceable; 0 if not

F2d = $1 - (\text{years in use} \div 10)$ if serviceable; 0 if not

F3 = Fraction of land not deeded to Oregon

GUARANTEE OF PERFORMANCE

Final language is still being determined following agreement and obtaining signatures of President of Chem-Nuclear and Director of DEQ, copy of Guarantee will be mailed.

This signed agreement may not be available prior to EQC meeting of April 18, 1980.

Richard P. Reiter
4/04/80

EXHIBIT A to APPENDIX 1 of LICENSE HW-1

<u>Item</u>	<u>Description</u>	<u>Base Cost (C), \$</u>	<u>Base Year</u>	<u>Purchase Price, \$</u>
<u>REAL PROPERTY AND SITE DEVELOPMENT</u>				
Property	Lease/Option	1,800	1970	C x F1 x F3
	Land	58,000	1972	C x F1 x F3
	Land	7,500	1978	C x F1 x F3
	Mineral rights, etc.	5,924	1972	C x F1 x F3
	Development	Site studies, capitalized salaries, legal services, engineering, consultants, etc.	93,080 81,943 65,434 4,389 6,628 2,100	1970 1971 1972 1973 1976 1978
<u>SITE IMPROVEMENTS</u>				
Trenches	No. 1-Const.	27,183	1976	C x F1 x F2a x F3
	No. 3-Const.	39,433	1976	C x F1 x F2a x F3
	No. 5-Const.	46,000	1976	C x F1 x F2a x F3
	No. 6-Const.	106,515	1979	C x F1 x F2a x F3
	No. 8-Const.			
Ponds	No. 1-Const.	5,500	1976	C x F1 x F2b x F3
	-Liner	7,458	1976	C x F1 x F2c x F3
	No. 2-Const.	3,000	1976	C x F1 x F2b x F3
	-Liner	8,917	1976	C x F1 x F2c x F3
	No. 3-Const.	6,500	1979	C x F1 x F2b x F3
	-Liner	7,536	1979	C x F1 x F2c x F3
	No. 4-Const.	6,000	1979	C x F1 x F2b x F3
	-Liner	7,725	1979	C x F1 x F2c x F3
	No. 5-Const.	11,000	1979	C x F1 x F2b x F3
	-Liner		1979	C x F1 x F2c x F3
	No. 6-Const.	10,858	1979	C x F1 x F2b x F3
	-Liner	24,858	1979	C x F1 x F2c x F3
	No. 7-Const.		1980	C x F1 x F2b x F3
	-Liner		1980	C x F1 x F2c x F3
	No. 8-Const.		1980	C x F1 x F2b x F3
	-Liner		1980	C x F1 x F2c x F3
	No. 9-Const.		1980	C x F1 x F2b x F3
	-Liner		1980	C x F1 x F2c x F3

Exhibit A (cont.)

<u>Item</u>	<u>Description</u>	<u>Base Cost (C), \$</u>	<u>Base Year</u>	<u>Purchase Price, \$</u>
Fencing, Signs & Roads	Construction, chain link, etc.	3,720	1970	C x F1 x F3
		4,430	1972	C x F1 x F3
		2,844	1973	C x F1 x F3
		60,854	1976	C x F1 x F3
		7,528	1978	C x F1 x F3
		42,511	1979	C x F1 x F3
Water Wells & Systems	Construction, pumps, etc.	1,693	1972	C x F1 x F2b x F3
		110	1973	C x F1 x F2b x F3
		2,622	1975	C x F1 x F2b x F3
		4,908	1976	C x F1 x F2b x F3
Septic Systems		1,320	1975	C x F1 x F2d x F3
		1,068	1976	C x F1 x F2d x F3
Monitoring Devices		299	1976	C x F1 x F2d x F3
Miscellaneous		388	1975	C x F1 x F3
		3,665	1976	C x F1 x F3

Adjustment Factor

F1 = The consumer price index for the purchase agreement month divided by the consumer price index for the base year. Consumer price indexes to be used are those for urban wage earners and clerical workers in Portland, Oregon.

F2 = A variable factor as follows:

F2a = Fraction of capacity unused

F2b = 1 if serviceable; 0 if not

F2c = 1-(years in use ÷ 5) if serviceable; 0 if not

F2d = 1-(years in use ÷ 10) if serviceable; 0 if not

F3 = Fraction of land not deeded to Oregon

Cash Bond and Surety Bond
 Calculations and Schedule

1. Year	2. Cash Bond at 1st of Each Year	3. Cash Added Annually	4. Interest Earnings @ 9%	5. Cash Bond Year End	6. Total Bond (Thousands)	7. Surety Bond (Thousands)
1980	\$ 35,625 ⁽²⁾	\$16,650 ⁽³⁾	\$ 2,634 ⁽⁴⁾	\$ 54,909 ⁽⁵⁾	\$219 ⁽⁶⁾	\$183 ⁽⁷⁾
1981	54,909	25,000	6,067	85,976	232	177
1982	85,976	25,000	8,863	119,839	253	167
1983	119,839	25,000	11,911	156,750	276	156
1984	156,750	25,000	15,232	196,982	301	144
1985	196,982	25,000	18,853	240,835	328	131
1986	240,835	25,000	22,800	288,635	358	117
1987	288,635	25,000	27,102	340,737	390	103
1988	340,737	25,000	31,791	397,528	425	84
1989	397,528	25,000	36,903	459,431	463	65
1990	459,431	25,000	42,474	526,905	505	46

Notes

- (1) Present value of closure plus monitoring costs = \$77,000 + 40 visits (\$3,550/visit) = \$219,000.
- (2) The cash bond as of May 1, 1980.
- (3) The cash bond payment for period of year remaining after May 1 = .666(\$25,000) = \$16,650 (equivalent to 8 months at \$2,083 per month).
- (4) Interest for 8 months on cash bond as of May 1 plus interest for eight months on only half the monthly cash bond after May 1, both at 9%. Assumption: collect interest on only one half the cash bond payments for a year.
- (5) Cash bond at end of year equals sum of Columns 2, 3 and 4.
- (6) Total bond requirement inflated at 9% per year. For 1980, the bond requirement is inflated for eight months commencing May 1.
- (7) The surety bond for a year represents the difference between total bond (to cover closure and post-closure monitoring costs) and the cash bond at beginning of the year. The total bond is inflated 9% each year.

JLW: hk 4/29/80 #3N

GUARANTY

GUARANTY given by CHEM-NUCLEAR SYSTEMS, INC., a Washington corporation (hereinafter called "Guarantor"), to induce the STATE OF OREGON, acting by and through its Department of Environmental Quality and its Environmental Quality Commission (hereinafter called "State"), to issue a license (the "License") to Chem-Security Systems, Inc., a Washington corporation (hereinafter called "Licensee"), a wholly owned subsidiary of Guarantor, for a hazardous waste disposal site located near Arlington, Gilliam county, Oregon (the "Site"), pursuant to ORS 459.410 to 459.690.

1. Guarantor hereby guarantees to State the prompt and complete performance by Licensee of all requirements and conditions, including the payment of all fees, imposed upon Licensee under the terms of ORS 459.410 to ORS 459.690, the rules adopted thereunder, and the License, as they may be amended from time to time.

2. Guarantor consents that State may, without notice to or consent of Guarantor, to the extent permitted by law: (a) revise any of the conditions of the License or amend the License on its own motion in accordance with applicable statutes and rules of State; and (b) settle or compromise any claim of State against

Licensee; provided, however, that this provision shall not be deemed a waiver of any notice required by statute or rule of State to be given by State to Licensee. In the event Licensee shall be controlled by a court-appointed receiver or shall otherwise have interests ^{known to State} which are not identical to those of Guarantor at the time of a settlement or compromise of any claim of State against Licensee, Guarantor shall be entitled to reasonable notice of any such settlement or compromise prior to its effectiveness.

3. Guarantor represents that it is aware of no circumstance preventing this Guaranty, when duly executed, from being a legal, valid and binding obligation of the Guarantor, effective at the time of such execution.

4. State may at its option proceed directly against Guarantor, to the same extent and under the same circumstances as it could proceed against Licensee, to enforce any obligation covered by this Guaranty without first proceeding against Licensee.

5. If either party shall institute any suit or action for enforcement of the provisions of this Guaranty or for damages by reason of the breach thereof, the prevailing party shall be entitled to such sum as the court may adjudge to be a reasonable attorneys' fee in such litigation, in addition to costs and

disbursements allowed by the court, and such sums shall be promptly paid to the prevailing party. In the event both parties shall prevail to some extent in such litigation, the determination of the award of attorneys' fees, if any, shall be within the discretion of the court. The foregoing provisions shall not apply to any settlement of a dispute between the parties.

6. This Guaranty is the sole agreement between Guarantor and State with respect to guaranteeing Licensee's obligations to State. The whole of this Guaranty is herein set forth, and there is no verbal or other written agreement, and no understanding or custom affecting the terms hereof. This Guaranty can be modified only by written instrument signed by Guarantor and State.

7. This Guaranty shall become effective on the date of execution hereof and shall be a continuing guarantee which shall cover obligations incurred after the date of execution hereof and during such time as the Licensee holds a License from State to operate the Site. This Guarantee shall expire as to future obligations upon revocation of or expiration of the License.

8. This Guaranty is delivered and made in, and shall be construed pursuant to the laws of, the State of Oregon, and is binding upon Guarantor and its successors and assigns, and shall inure to the benefit of the State and its assigns. This Guaranty

shall not create any liability or obligations to any person not a party hereto or a successor ^{or assignee of} to a party hereto.

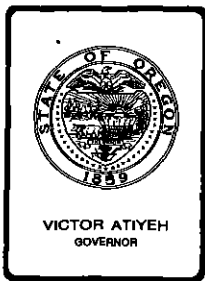
IN WITNESS WHEREOF, Guarantor has executed this agreement on the ____ day of _____, 1980.

CHEM-NUCLEAR SYSTEMS, INC.,
a Washington corporation

By _____
Its President

By _____
Its Secretary

JLW/3N



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

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

• MEMORANDUM

To: Environmental Quality Commission
From: Director
Subject: Agenda Item L, May 16, 1980, EQC Meeting

COLUMBIA SAND AND GRAVEL PIT - REQUEST FOR HEARING ON THE
DENIAL OF LAND RECLAMATION, INC. APPLICATION FOR A SOLID
WASTE DISPOSAL FACILITY PERMIT

Enclosed for your information on this matter are the following documents:

1. Notice of Appeal and Proof of Service by Land Reclamation, Inc. received May 6, 1980.
2. Applicants' Brief and Certificates of Service and Filing received May 8, 1980.
3. Department Brief and Certificate of Service received May 7, 1980.
4. Hearing Officer's Final Order received May 6, 1980.
5. Stipulation and Agreement and Exhibits received May 6, 1980.

WILLIAM H. YOUNG

CASplettstaszer
229-6484
May 8, 1980
Attachments



Contains
Recycled
Materials

MAY 06 1980

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
OF THE STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL
QUALITY

v.

LAND RECLAMATION, INC.,
RALPH GILBERT and WESTERN
PACIFIC ENTERPRISES, INC.

Case No. 19-P-SW 329-NWR-79

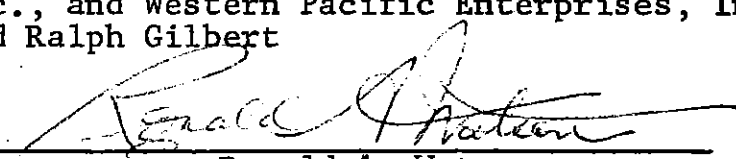
NOTICE OF APPEAL

The applicants hereby appeal the final order of Hearings Officer, Linda Zucker, dated May 6, 1980, sustaining the denial of a solid waste permit to the applicants for the Columbia Pit in Multnomah County by the Department of Environmental Quality, to the Environmental Quality Commission under OAR 340-11-132.

DATED May 6, 1980.

RONALD A. WATSON and RICHARD J. BROWNSTEIN
Attorneys for Applicants, Land Reclamation,
Inc., and Western Pacific Enterprises, Inc.
and Ralph Gilbert

By



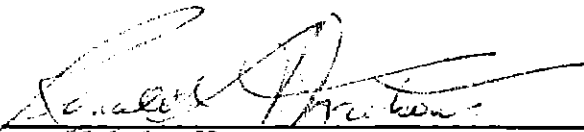
Ronald A. Watson

PROOF OF SERVICE

STATE OF OREGON)
) ss.
County of Multnomah)


I hereby certify that I made service of the foregoing Notice of Appeal upon Carole A. Splettstaszer of the Environmental Quality Commission and Raymond P. Underwood, Esq., Attorney for the Department of Environmental Quality, 500 Pacific Building, 520 S. W. Yamhill, Portland, Oregon, by serving the original on Carole A. Splettstaszer, Environmental Quality Commission Assistant, at Third Floor, Yeon Building, 522 S. W. Fifth Avenue, Portland, Oregon, and by leaving a true copy of said Notice of Appeal certified by me as attorney for the applicant, on May 6, 1980, at the Office of Raymond P. Underwood at the above address.

DATED May 8, 1980.



Ronald A. Watson
Of Attorneys for Applicants

Subscribed and sworn to before me this 8th day of
May, 1980.



Notary Public for Oregon
My Commission Expires: 4/25/82

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
OF THE STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY
v.
LAND RECLAMATION, INC.
RALPH GILBERT and WESTERN PACIFIC ENTERPRISES, INC.
Permit Applicants.

Case No. 19-P-SW 329-NWR-79
APPLICANTS' BRIEF

INTRODUCTION

Aggregate was first mined at N.E. 122nd and San Rafael in 1947. The present owners, Ralph Gilbert and Western Pacific Enterprises, Inc., acquired the site in 1965. Ralph Gilbert is the sole shareholder of CSG Co., a corporation which does business as Columbia Sand & Gravel Co. Between 1965 and 1978 Columbia Sand & Gravel mined the pit, sold some aggregate directly, and used the rest to manufacture ready-mix concrete on the site. Approximately 1.3 million yards of aggregate have been mined and employed in construction throughout East Multnomah County. Mining operations ceased in December, 1977. Columbia Sand & Gravel Co. now uses the area for its ready-mix operations, importing the necessary aggregate.

During the first weekend of December, 1977, the west face of the pit collapsed, taking with it a portion of N.E. 122nd Avenue, a four-lane main North-South County arterial. (See Stipulation Exhibit A.) The cause of the collapse has not been settled between Columbia Sand & Gravel and Multnomah County.

1 Traffic has been diverted around the slide area on the remaining
2 portions of N.E. 122nd Avenue, creating traffic and safety pro-
3 blems. Although refilling the pit to support 122nd Avenue is
4 not technically the only method available to restore the street,
5 it is certainly the most feasible.

6 The mining operations have, from their inception, con-
7 stituted a valid enterprise and land use under laws and regula-
8 tions existing from time to time. The site operates under a
9 conditional use permit in an R-7 zone. Multnomah County has
10 approved a conditional use of the pit for a demolition fill.
11 (See Stipulation Exhibits A-E and B.)

12 In the immediate vicinity of the pit, N.E. 122nd Avenue
13 is a neighborhood of single-family dwellings. It is zoned R-7
14 but is turning commercial. The San Rafael Shopping Center, a
15 complex of approximately 25 stores, is directly across San Rafael
16 from the pit. Park Rose Heights Junior High School borders the
17 pit on the East. The community, as it has developed and matured,
18 has expressed an increasing concern that the pit operations be
19 concluded, the property restored, and the site developed. As
20 illustrated and described in the text of the Stipulation and
21 Exhibits D and E thereof, the pit occupies approximately nine
22 acres near the geographic center of a district that could be
23 Oregon's fourth largest city.

24 The slide of the pit's west face, the mining of the pit
25 to its maximum practical depth, and the general concern of the
26 community as to its continuance coincided and motivated Columbia

1 Sand & Gravel to engage Land Reclamation, Inc., an established
2 landfill operator in the Portland metropolitan area, to develop,
3 promote, and implement a plan to reclaim the pit by land filling.

4 Land Reclamation prepared the documentation and com-
5 menced necessary agency contact in late February, 1978, includ-
6 ing correspondence to the Department of Environmental Quality,
7 conferring with the Metropolitan Service District Advisory
8 Landfill Committee, and with the Multnomah County Engineer.

9 There was some, if not total, resistance by each agency to deal
10 with the application prior to the sister agency's reaching a
11 conclusion. The application process became somewhat circular
12 and most difficult to enter, let alone conclude.

13 Negotiations and review were pursued on three fronts
14 with DEQ, Multnomah County, and MSD. DEQ stated that a demoli-
15 tion landfill permit would, ultimately, be granted. (See Brief
16 Exhibit 1.) Metropolitan Service District appeared to look
17 favorably toward the application subject, of course, to DEQ
18 approval. (See Stipulation Exhibit A-D.) On February 6, 1979,
19 Multnomah County indicated its willingness to issue a land use
20 permit (See Stipulation Exhibit A-E and B). Based upon the
21 discussions and correspondence, the feasibility study and
22 revised permit application (See Stipulation Exhibit A-A-2,) were
23 prepared and submitted to DEQ.

24 Then, for reasons which have never been explained to
25 either applicant, their engineers, or their lawyers, DEQ turned
26 180 degrees and stated explicitly on three occasions, informally

1 and then formally, that, under no circumstances, would it issue
2 a demolition fill permit to the applicants. (See Stipulation
3 Exhibit H.)

4 By its November 23, 1979, letter of denial (Stipula-
5 tion Exhibit H) DEQ takes some exception to the procedural
6 aspects of the pending application, but concludes that, even
7 if procedurally complete, DEQ would deny the proposal. It
8 states the following reasons:

9 ". . . The uncertainty of technology, no dem-
10 onstrated need that this particular site is
11 necessary since less risky alternate sites
12 are available, and the Department's intent
13 to protect the ground water aquifer as a do-
14 mestic water supply source . . ."

13 DEQ cited no statute or administrative rule for its
14 denial. This is because it has none.

15 LEGAL CONCERNS

16 The basic statutory applicable law thrust with respect
17 to disposal sites favors them if they meet the conditions set
18 forth by statute and administrative rules. (In fact, we are not
19 aware of any applications that have been denied.)

20 "If the disposal site meets the requirements
21 of ORS 459.005 to 459.105 and 459.205 to
22 459.285, the department shall issue the per-
mit." ORS 459.245(1) (Emphasis added.)

23 The Department, without citing any of its own published
24 rules, by its letter of denial, has adopted two criteria for approval
25 of the proposed disposal site: (1) location, and (2) design a
26 construction.

1 DEQ has exceeded its authority.

2 Siting. ORS 459.017 clearly vests MSD with the pri-
3 mary responsibility for locating landfill disposal sites and
4 further mandates DEQ to assist in their establishment, once
5 identified by MSD. Subsection 1 of the Act provides, in part:

6 "(b) Local government has the primary respon-
7 sibility for planning for solid waste manage-
8 ment.

8 "(c) Where the solid waste management plan of
9 a local government unit has identified a need
10 for landfill disposal site, the state has a
11 responsibility to assist local government and
12 private persons in establishing such site."

13 MSD has in fact identified a need for a landfill dis-
14 posal site at the subject location. (See Stipulation Exhibit A-D.)
15 Thus, DEQ's conclusion that there is "no demonstrated need that
16 this particular site is necessary . . ." is merely its gratuitous
17 opinion. That opinion flies in the teeth of ORS 459.017 and the
18 findings of Metro, (See Stipulation Exhibit A-D) and Multnomah
19 County (See Stipulation Exhibit A-E and B).

20 Construction. A review of the Department's Special
21 Rules Pertaining to Landfills, OAR 340-61-040, is particularly
22 revealing.

23 Subsection (3)(b) requires that:

24 "Leachate production shall be minimized and
25 where required shall be collected and treated
26 or otherwise controlled in a manner approved
27 by the Department."

28 Certainly, "minimize" does not mean "eliminate".

29 Thus, to the extent that a landfill proposes to maximize the

1 collection or leachate production by employing the current
2 state of the art, production must be deemed to be "minimized".

3 DEQ must honor its own rules. Possibly it could adopt
4 a rule generally restricting the siting of landfills, but it has
5 not done so. The only outright prohibition authorized by DEQ's
6 regulations is set forth at the second paragraph of OAR

7 340-61-040(3)(c):

8 "Solid wastes other than tires, rock, dirt,
9 brick and concrete rubble and similar non-
10 decomposable materials shall not be deposited
11 directly into the groundwater table or in
12 flooded trenches or cells." (Emphasis added.
13 The bottom of the Columbia Pit is, parentheti-
14 cally, 105 over the ground water.)

15 In all other instances, landfills are permitted sub-
16 ject to the conditions provided in the rules. For example, not
17 even the disposal of "large dead animals, sewage sludges, septic
18 tank pumpings, hospital wastes, and other materials which may be
19 hazardous or difficult to manage," are prohibited. They are
20 merely subject to "special provisions for such disposal . . .
21 in the operation plan . . ." (Subsection [3][n]).

22 Failure to Adopt Rules. The Department cannot tailor
23 its rules to the individual application. A decision by DEQ to
24 preclude, in general, any landfills over a "large aquifer" is a
25 "rule". "Rule" is defined as "any agency directive, standard,
26 regulation, or statement of general applicability that implements,
interprets or prescribes law or policy . . ." (ORS 183.310[7]
Emphasis Added). The Act spells out the rule making procedure.
DEQ concedes that it has not complied with that procedure.

1 A rule is distinguished from an "order", which is "any
2 agency action expressed orally or in writing directed to a named
3 person or persons". (ORS 183.310[4][a]) The purposes of rule
4 making and order making are significantly different, as are their
5 consequences. The means for their adoption also vary dramati-
6 cally. Rule making involves broad policy generally applicable
7 to all participants. Accordingly, involvement in rule making by
8 relevant members of the public is encouraged. The rules then
9 form the basis for individual applications. The determination
10 of those applications is the resulting "order". A valid order
11 presupposes a basis in adequate and duly adopted rules.

12 The necessity for clear, written standards was described
13 by Judge Tanzer, while serving on the Oregon Court of Appeals and
14 prior to his appointment to the Supreme Court, in Sun Ray Drive-In
15 Dairy, Inc. v. Oregon Liquor Control Commission, 517 P.2d 289
16 (Or. App., 1973), at page 293:

17 "Compliance with the Administrative Pro-
18 cedures Act is much more than an act of tech-
19 nical legal ritual. Unwritten standards and
20 policies are no better than no standards and
21 policies at all. Without written, published
22 standards, the entire system of administrative
23 law loses its keystone. The ramifications
24 affect every party and every procedure involved
25 in the fulfillment of the agency's responsi-
26 bility under the law, e.g., the public, the
applicant, agency personnel, the participants
in the hearing, the commission, the legisla-
ture and the judiciary.

24 "The policies of an agency in a democra-
25 tic society must be subject to public scrutiny.
26 Published standards are essential to inform
the public. Further, they help assure public
confidence that the agency acts by rules and

1 not from whim or corrupt motivation. In addi-
2 tion, interested parties and general public
3 are entitled to be heard in the process of
rule adoption under the Administrative Pro-
cedures Act.

4 "An applicant for a license should be
5 able to know the standards by which his
6 application will be judged before going to
7 the expense in time, investment and legal
8 fees necessary to make application. There-
after, he is entitled to even treatment by
rule of law and reasonable confidence that he
has received such treatment. This cannot be
achieved without published rules."

9 Again, Judge Tanzer in reviewing the body of law
10 respecting the precision with which rules must be announced
11 stated in McCann v. OLCC, 556 P.2d 973, (Or. App., 1976) at
12 page 976:

13 "This case presents an opportunity for
14 review of the body of decisional law which we
15 have developed, case by case, over the past
16 few years, and how the principles we have
17 adopted apply. We have held that the Adminis-
18 trative Procedures Act, ORS Ch. 183, requires
19 that administrative agencies operating under
20 broad grants of power establish standards for
official action for the purpose, among others,
of consistency of application. One reason for
that requirement, we observed in Sun Ray
Dairy . . . is that an applicant is 'entitled
to even treatment by rule of law and reason-
able confidence that he has received such
treatment' . . .

21 "Absolute consistency cannot be expected
22 of an agency with as broad a delegation and
23 complex a task as the OLCC, but procedures
24 should work toward that end. Thus we recog-
25 nized in Sun Ray Drive-In Dairy . . . that
26 where standards cannot by their nature be
precisely defined in advance of their appli-
cation, the 'Commission must have certain
latitude in applying these criteria to con-
flicting interests'. So many variables
exist, that we have declined to require

1 mathematical precision, so long as the agency
2 provides notice to applicants and others of
3 the criteria upon which what are often judg-
4 ment calls are to be made . . .

5 "Where the adoption of precise pre-deci-
6 sional criteria would be unfeasible, we have
7 required instead that an agency demonstrate
8 in its order a rational relationship between
9 the facts and the legal conclusions upon which
10 it acts in each case."

11 This same principle was reiterated by Chief Judge
12 Schwab in Commonwealth Properties v. Washington County, Or. App.,
13 582 P.2d 1384, (1978). He discusses the cases previously cited
14 herein. Judge Schwab's statement summarizes the applicant's
15 position in this matter:

16 "An applicant, be he seeking a liquor license
17 or a subdivision, should not be put in a posi-
18 tion of having his success or failure deter-
19 mined by guessing under which shell lies the
20 pea." (P. 1590.)

21 We re-emphasize ORS 459.254(1). Having met the statu-
22 tory and regulatory requirements of the Department, it must honor
23 the law and its own rules and issue the permit.

24 TECHNICAL CONCERNS

25 (We were assisted in the preparation of this portion
26 of the Brief by Bryan M. Johnson, of Seton, Johnson & Odell, Inc.,
and Randy Sweet of Sweet, Edwards & Associates, Inc.)

27 The application of September 13, 1979, (See Stipula-
28 tion Exhibit A-A-2) described as a preliminary concept the first
29 fully engineered landfill in the Portland metropolitan area, i.e.,
30 a fill that fully accommodated all leachate and gas production,
31 storm water, and future maintenance. (Of course, as a preliminary

1 concept, it was subject to refinement and clarification upon pre-
2 liminary approval -- a common engineering practice.) The Colum-
3 bia Pit, as so engineered, will minimize leachate production and
4 collect or treat it in a reasonable manner, all as required by
5 the rules of the Department. It will be accomplished in the
6 following manner and for the following reasons:

7 1) The system is designed to collect 80% of the rain-
8 fall at the Pit site. (See Brief Exhibit 2.)

9 2) The Pit bottom will be lined with uniform imper-
10 vious material. (See Stipulation Exhibit A-A-2.) Therefore,
11 to the extent that leachate permeates the Pit bottom, it will do
12 so uniformly.

13 3) In view of the significant additional volumes of
14 water that are generated in the entire area (5.732 billion
15 gallons per year as set forth at the Stipulation), the volume
16 added by the leachate flowing from the Columbia Pit, .0097%,
17 will be diluted to such an extent that it will have no adverse
18 effect should it reach the water table.

19 4) It is common to evaluate leachate absorption in
20 the soil on a basis of 1 meq/100 gm (100 milequivalents per 100
21 grams of soil). This is acknowledged to be a most conservative
22 standard. We estimate that, if 100% of the leachate generated
23 in the Pit passed through to the subsoil without collection,
24 there would still be complete sorption of the leachate within the
25 100 feet of natural material between the bottom of the Pit and
26 the water table.

1 5) Thus, under virtually all circumstances, the actual
2 danger to the aquifer and the ground water -- with abundant pro-
3 vision for error and miscalculation -- will provide a site whose
4 risk to the underlying ground water approaches zero.

5 POLICY CONCERNS

6 (We were assisted in the preparation of this portion
7 of the Brief by Arnold Cogan and Beverly Booken of Cogan & Asso-
8 ciates.)

9 There are a number of policy issues involved in the
10 ultimate disposition of the Columbia Pit.

11 Protection of ground water. The CSG site lies in
12 the vicinity of three water districts which depend on the aquifer
13 for water. (See Stipulation Exhibit C.) In order to protect
14 this supply, the aquifer must be protected from contamination.

15 Community impacts of abandoned pits. An abandoned
16 sand and gravel pit:

17 a) is potentially hazardous for neighborhood
18 residents, particularly children who can be injured by
19 falling or from landslides; (See pictures in Stipulation
20 Exhibit A-A-1.)

21 b) can cause erosion which undermines and
22 seriously damages adjacent roadways and properties;
23 (See Stipulation Agreement A-A-1.)

24 c) can be a receptacle for storm runoff and
25 uncontrolled dumping which produces leachate and
26 seriously pollutes the underlying aquifer;

1 d) is aesthetically displeasing.

2 Filling is the only way to fully mitigate these adverse
3 impacts. Without doubt, it will and must someday be refilled.
4 (See pictures in Stipulation Exhibit A-A-1.)

5 Ultimate reuse. The nine-acre Columbia Pit is located
6 in the heart of rapidly growing East Multnomah County. Reclama-
7 tion would permit it to be reused for residential, commercial,
8 recreational, and other purposes compatible with adjacent land
9 uses. (See 4B. of page 5 and conclusions A and H of page 7 and
10 8 of Stipulation Exhibit A-E)

11 Compatibility with neighborhood and community values.
12 Sand and gravel mining causes a number of local adverse impacts
13 including increased truck traffic, noise, and air and visual
14 pollution. Despite this, it is permitted as a conditional use
15 because of its vital contribution to the region's economy.
16 However, an exhausted pit is a community liability. Only by con-
17 version to another use can it become compatible with important
18 neighborhood and community values such as livability and enhanced
19 property values. (See Stipulation Exhibit A-E, item 5C, page 5,
20 item 5D, page 6, item 6A #11, page 6, item 7 #23, page 6.)

21 Regional need for solid waste disposal sites. The
22 Portland metropolitan region faces a serious long term shortage
23 of appropriate locations for disposal of solid waste, including
24 demolition materials. Useless sand and gravel pits in East Mult-
25 nomah County and elsewhere are ideal sites for this fill. (See
26 3A and B and 4B of Stipulation Exhibit A-E on page 5.)

1 Energy conservation. This is a concern in the issues
2 of landfill siting and land use. In the former, demolition
3 landfills close to construction encourage more fuel conservation
4 than centralized landfills which may be far from major building
5 activities. Furthermore, energy efficiency is a factor in reclaim-
6 ing land for residential, commercial, and other uses in urbanized
7 areas rather than forcing construction in more underdeveloped
8 areas. (See Stipulation Exhibit A-E, item A #13, page 6 and
9 Conclusion D, page 7.)

10 Necessity to restore the full width of N.E. 122nd
11 Avenue, which is an arterial street in Multnomah County. (See
12 pictures in Stipulation Exhibit A-A-1.) Approximately one
13 lane of N.E. 122nd has slid into the Pit and a danger exists to
14 the remaining roadway. Landfilling of the site will provide the
15 support to restore N.E. 122nd.

16 Institutional and Governmental Support. The strong
17 institutional and governmental support for the above public
18 concerns include:

19 1) Federal legislation. Regulations of the federal
20 Environmental Protection Agency (40 CFR 257) require protection
21 of ground water resources.

22 2) Oregon Mined Land Reclamation Act. The State of
23 Oregon has a clearly stated policy of reclaiming active or aban-
24 doned surface mining pits as articulated in the 1971 Mined Land
25 Reclamation Act (ORS Chapter 517, Sections 750 through 990).

26 At ORS 517.760 the State announces the following policy:

1 Nevertheless, the concern and objectives of the State are clear.

2 3) LCDC goals and guidelines. LCDC Goal 6 pertaining
3 to air, water, and land resources quality calls for the protec-
4 tion of ground water resources. Other public issues described
5 above are supported in Goal 7, Areas Subject to Natural Disasters
6 and Hazards; 10, Housing; 11, Public Facilities and Services; and
7 13, Energy Conservation. Goal 14, Urbanization, is concerned with
8 promoting increased housing densities and infill, the use of vacant
9 land within urbanized areas, as a means of preventing urban sprawl.

10 4) Metropolitan Service District. Metro's Solid Waste
11 Management Plan approved in May 1979, requires landfill operations
12 to comply with applicable local, state and federal health, safety,
13 and environmental standards. It also encourages energy conserva-
14 tion in landfill operations. In addition, the agency's Statement
15 of Goals and Objectives, adopted in September 1976, reiterates
16 many of the state's land use goals and guidelines, including
17 policies to encourage increased regional housing opportunities,
18 energy conservation, orderly and efficient urban development, and
19 elimination of hazards.

20 5) Multnomah County. In its Comprehensive Framework
21 Plan, adopted in September 1977, the County established several
22 policies which can be applied to the utilization of the Columbia
23 Pit. These include 13, Air and Water Quality and Noise; 20,
24 Arrangement of Land Uses; 21, Housing Choice; 22, Energy Conser-
25 vation; and 23, Redevelopment Policy. Policy 16 provides:
26 "mined-out pits . . . should be filled and restored to their

1 natural contours". Furthermore, in the County's plan for the
2 Cully-Parkrose community, where many of the County's sand and
3 gravel pits are located, reclamation of exhausted mineral sites
4 to eliminate potential "pollution and erosion, safety . . . and
5 vector control problems," is supported.

6 Comparative Matrix. As the foregoing discussion sug-
7 gests, there are a number of public goals affected by the final
8 disposition of the Columbia Pit which must be addressed. We have
9 prepared a matrix which ranks these public goals with the actions
10 presently contemplated for the site. These include:

- 11 a) fill the pit with unclassified solid waste;
- 12 b) fill the pit with demolition material;
- 13 c) do nothing.

14 Using a scale of 0 to 10, with 0 being the worst and 10 the best,
15 the total score represents the value of each action. In addi-
16 tion, the level of authority and/or responsibility of each of four
17 public entities and the owner have been evaluated. They are
18 identified as having a principal or lead responsibility, support,
19 or no responsibility or authority in these matters.

20 Results of Matrix.

21 1) Protecting the aquifer is only one of at least
22 nine important public goals relating to the issue of reuse of
23 exhausted gravel pits. Filling is needed to satisfy the other
24 goals.

25 2) Doing nothing apparently addresses only the goal of
26 protecting the aquifer; however, even this goal cannot be wholly

Columbia Sand & Gravel Pit -
Comparative Evaluation of Goal
Satisfaction and Authority/Responsibility

Goals	Actions			Authority and/or Responsibility				
	Fill Pit with Unclassified Solid Waste	Fill Pit with Demolition Material	Do Nothing	DEQ	MSD	County	Water Resources	Private Industry
1. Protect aquifer	0	7	8	P	S	S	P	X
2. Remove hazards	6	8	0	X	S	P	X	P
3. Prevent cave-ins	7	9	0	X	X	P	X	P
4. Conserve energy	10	10	0	X	S	S	X	X
5. Create desirable land use	8	9	0	X	P	P	X	S
6. Support neighborhood values	2	9	0	X	S	P	X	S
7. Conform to local plans	4	10	0	X	S	P	X	S
8. Dispose demolition waste	4	10	0	S	P	S	X	P
9. Eliminate open pit	10	10	0	X	X	X	X	P
	51	82	8					

Goal Satisfaction: 10 - Excellent
0 - Poor

Authority/Responsibility: P - Principal or lead
S - Support
X - None

1 satisfied by no action, as there will be no monitoring or control
2 of material randomly dumped or collected in the bottom of the pit.
3 With normal rainfall, uncontrolled leachate will be generated.

4 3) DEQ has principal responsibility for only one goal
5 and plays a support role for one other; authority over the others
6 is shared, with the principal burden on Multnomah County and pri-
7 vate industry.

8 4) No public or private entity has the principal
9 responsibility for conserving energy. However, an important
10 community concern which could be addressed in part by placing
11 several deposit sites for building materials at strategic
12 locations throughout the community.

13 5) DEQ's concern over protection of the aquifer
14 effectively blocks opportunities to satisfy other most urgent
15 goals.

16 Commission's Responsibility. We would urge the Com-
17 mission to review this matter with complete independence and urge
18 it to consider the admonition of Judge Linde in Application of
19 Portland General Electric Co., 561 P.2d 184 (Or., 1977,) at
20 page 168:

21 "State agencies, unlike federal agencies, are
22 often composed of private citizens who are
23 given crucial governmental responsibilities
24 on a part-time basis . . . It is doubly im-
25 portant that such non-professional agency
26 heads not think of their staff as the agency
and themselves as a reviewing body, but
rather understand clearly that it is their
personal responsibility to determine the
facts and to set and apply the standards
entrusted to them by the act . . ."

1 success of the project and the preservation of the aquifer.

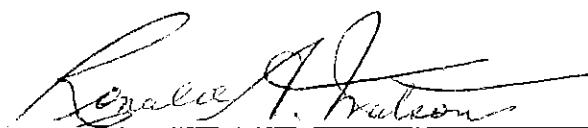
2 DATED at Portland, Oregon this 7th day of May, 1980.

3 Respectfully submitted,

4 

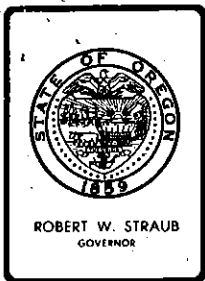
5

RICHARD J. BROWNSTEIN
6 Attorney for Western Pacific
7 Enterprises, Inc. and Ralph
8 Gilbert

9 

10

RONALD A. WATSON
11 Attorney for Land Reclamation, Inc.



Brief exhibit 1

Department of Environmental Quality

522 S.W. 5th AVENUE, P.O. BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229- 5209

October 20, 1978

Mr. Ronald A. Watson
Jackson Tower
806 SW Broadway
Portland, Oregon 97205

Re: SW - Multnomah County
Columbia Sand and Gravel Pit
NE San Rafael and 122nd Avenue

Dear Mr. Watson:

In reference to your letter of October 4, 1978 and our recent meeting with you and Messrs. Gene and Bill Plew, we have the following comments.

We would give favorable consideration to the Columbia Sand and Gravel Pit on NE San Rafael and 122nd Avenue for a limited demolition landfill. Material resulting from the demolition of buildings, asphalt, dirt, rock, bricks, concrete and sand could be landfilled. No public, only commercial haulers would be allowed access to the landfill site.

If your application is to include other types of solid wastes, in particular wastes that could cause leachate generation, we would require submission of detailed hydrogeological review and engineering plans for the site. As previously expressed to you, application for the broader scope of solid wastes or public access to the site is also of concern to us due to the location of the Parkrose Water District wells and the possibility of groundwater contamination.

We hope this adequately answers your inquiries about this proposed landfill site. If you should have any further questions, please feel free to contact me at 229-5209.

Sincerely,

Robert E. Gilbert
Regional Manager
Northwest Region

REG/mkw

cc: Richard J. Brownstein, Attorney at Law
Metropolitan Service District
Multnomah County Department of Environmental Services,
Division of Planning and Development
Attn: Paul DeBonny
Solid Waste Management Division, DEQ



Contains
Recycled
Materials

BRIEF EXHIBIT 2

LAND RECLAMATION, INC.
WATER BALANCE

OPERATIONAL AREA	AREA (ft ²)	OPERATING ¹ INFILTRATION 50% (gal/day)	COVERED ² INFILTRATION @ 30% (gal/day)	CUM LEACHATE (gal/day)
A1	105,200	3,777	1,495	3,777
A2	26,800	962	381	2,457
B	44,000	1,580	625	3,456
C	119,500	4,291	1,698	6,791
FILLED AND FINISHED			4,199 (gal/day)	4,199 (gal/day)

NOTES:

1. Assumes precipitation @ 42.1 in/yr.
2. Assumes graded surface w/vegetation for maximum E.T. and 30% infiltration of 23.2 inch precipitation cumulative surplus from Johnsgard (1963). Note that E.T. losses calculated for nearby St. John's Landfill are greater than those estimated herein.

CERTIFICATE — TRUE COPY

I hereby certify that the foregoing copy of is a complete and exact copy of the original.

Dated, 19.....

Attorney(s) for

ACCEPTANCE OF SERVICE

Due service of the within is hereby accepted on, 19....., by receiving a true copy thereof.

Attorney(s) for

CERTIFICATES OF SERVICE AND FILING

Personal

I certify that on May 8, 1980, I served/the within original Applicants' Brief on Environmental Quality Commission by Carole A. Splettstaszer, EQC Assistant, by personally handing to said attorney a true copy thereof. at Yeon Bldg., Portland, Oregon. * Carole A. Splettstaszer

*See attached Acceptance of Service and Filing. of Attorney(s) for Applicants

At Office

I certify that on, 19....., I served the within attorney of record for by leaving a true copy thereof at said attorney's office with his/her clerk therein, or with a person apparently in charge thereof, at, Oregon.

Attorney(s) for

Mailing

I hereby certify that I served the foregoing on attorney(s) of record for on, 19....., by mailing to said attorney(s) a true copy thereof, certified by me as such, contained in a sealed envelope, with postage paid, addressed to said attorney(s) at said attorney(s) last known address, to-wit: and deposited in the post office at, Oregon, on said day.

Dated, 19.....

Attorney(s) for

RONALD A. WATSON ATTORNEY AT LAW 1000 Jackson Tower Portland, Oregon 97205 Telephone 228-8531

CERTIFICATE — TRUE COPY

I hereby certify that the foregoing copy of Applicants' Brief

is a complete and exact copy of the original.

Dated March 7, 1980

Attorney(s) for Applicants

ACCEPTANCE OF SERVICE

Due service of the within Applicants' Brief is hereby accepted on May, 1980, by receiving a true copy thereof.

ENVIRONMENTAL QUALITY COMMISSION
By [Signature]
Attorney(s) for

CERTIFICATES OF SERVICE

Personal

I certify that on _____, 19____, I served the within _____ on _____ attorney of record for _____ by personally handing to said attorney a true copy thereof.

Attorney(s) for _____

At Office

I certify that on _____, 19____, I served the within _____ on _____ attorney of record for _____ by leaving a true copy thereof at said attorney's office with his/her clerk therein, or with a person apparently in charge thereof, at _____, Oregon.

Attorney(s) for _____

Mailing

I hereby certify that I served the foregoing Applicants' Brief on Raymond P. Underwood, Esq. attorney(s) of record for The Department of Environmental Quality on May 8, 1980, by mailing to said attorney(s) a true copy thereof, certified by me as such, contained in a sealed envelope, with postage paid, addressed to said attorney(s) at said attorney(s) last known address, to-wit: 500 Pacific Building, 520 S.W. Yamhill St., Portland, OR 97204 and deposited in the post office at Portland, Oregon on said day.

Dated May 7, 1980

[Signature]
Attorney(s) for Applicants

GILBERTSON, BROWNSTEIN, SWEENEY,
KERR & GRIM
ATTORNEYS AT LAW
1200 S. W. Main Building
Portland, Oregon 97205
Telephone (503) 221-1772

1 BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
2 OF THE STATE OF OREGON
3 DEPARTMENT OF ENVIRONMENTAL)
 QUALITY)
4)
 v.)
5)
 LAND RECLAMATION, INC.,)
6 RALPH GILBERT and WESTERN)
 PACIFIC ENTERPRISES, INC.)
7)
 Permit Applicants.)
8

9 This brief of the Department supports the Hearing
10 Officer's Final Order which concluded that the Department
11 lawfully denied to permit applicants a solid waste disposal
12 site permit for the Columbia Pit in Multnomah County, Oregon.

13 The Department and the applicants have entered into a
14 stipulation and agreement, dated May 6, 1980, wherein
15 the agreed facts which may be relevant to this proceeding
16 are set forth in paragraphs (1) through (11). The Stipulation
17 and Agreement has been made a part of the record of this
18 proceeding.

19 The Department claims that the issues in this hearing
20 are the lawfulness of the Department's denial of the appli-
21 cants' permit application on the basis of (a) the risk to
22 groundwater supplies; and (b) the availability of other
23 solid waste disposal sites in the vicinity which did not
24 constitute similar risks.

25 ORS 459.005 to 459.285 provide for solid waste management
26 in Oregon.

1 The Commission is authorized by ORS 459.045 to adopt
2 reasonable and necessary solid waste management rules governing,
3 among other things, the disposal of solid wastes to prevent
4 the pollution of surface or groundwaters and the location of
5 disposal sites, giving consideration to the adaptability of
6 each disposal site to the population served, topography and
7 geology of the area and other characteristics as they affect
8 protection of ground and surface waters.

9 ORS 459.205 requires that a permit be obtained from the
10 Department for the operation of a solid waste disposal site.

11 The legislature has declared in ORS 459.017(1) the
12 following policy as to the relationship of the state to
13 local governments in solid waste management:

14 "(a) The planning, location, acquisition,
15 development and operation of landfill
16 disposal sites is a matter of state-wide
17 concern.

18 "(b) Local government has the primary
19 responsibility for planning for solid waste
20 management.

21 "(c) Where the solid waste management
22 plan of a local government unit has identified
23 a need for a landfill disposal site,
24 the state has a responsibility to assist
25 local government and private persons in
26 establishing such a site."

27 Thus, the state (acting by and through the Commission and
28 the Department) must have as a concern the location of landfill
29 disposal sites and has a responsibility to assist local
30 government and private persons in establishing each landfill
31 disposal site identified as needed by a solid waste management

1 ment plan of a local government. But each such site must be
2 established and permitted only in accordance with the state
3 statutes and rules controlling pollution of waters of the
4 state, including groundwater (ORS 468.700(8)). OAR
5 340-14-025(1). Such statutes include at least the following:

6 ORS 468.710 and 468.715--Policy of state
7 to prevent, abate and control water pollution; and

8 ORS 468.720--Prohibition of any person to cause
9 pollution of any waters of the state or place or
10 cause to be placed any wastes in a location where
11 such wastes are likely to escape or be carried
12 into the waters of the state by any means.

13 In its rules setting forth Oregon's plans for manage-
14 ment of the quality of public waters within the state, the
15 Commission provided that for any new waste sources, alterna-
16 tives which utilize reuse or disposal with no discharge to
17 public waters (including groundwater) shall be given highest
18 priority for use wherever practicable. OAR 340-41-026(2).

19 The Commission declared the policy for the Department
20 in solid waste disposal practices in OAR 340-61-015, as
21 follows:

22 "Whereas inadequate solid waste collection,
23 storage, transportation, recycling and disposal
24 practices cause nuisance conditions, potential
25 hazards to public health and safety and pollution
26 of the air, water and land environment, it is
 hereby declared to be the policy of the Depart-
 ment of Environmental Quality to require effective
 and efficient solid waste collection and disposal
 service to both rural and urban areas and to promote
 and support comprehensive county or regional solid
 waste management planning, utilizing progressive
 solid waste management techniques, emphasizing

26 ///

1 recovery and reuse of solid wastes and insuring
2 highest and best practicable protection of the public
health and welfare and air, water and land resources.

3 The Commission's rules as to obtaining permits for
4 solid waste disposal landfill sites are set forth in OAR
5 340-61-020 to 340-61-040.

6 With this background synopsis of the most significant
7 statutes and rules applicable in this case, we turn to a
8 discussion of the risk to groundwater supplies of the use of
9 the Columbia Pit proposed by applicants, and to the availability
10 of other solid waste disposal sites in the vicinity which do
11 not constitute risks similar to the risks of the applicants'
12 proposed use of the Columbia Pit.

13 In a report submitted to the Department entitled
14 "Metropolitan Service District, Phase I; Siting Issues -
15 Potential Sanitary Landfills, Feasibility Report for Durham
16 Pits, Task 1, Leachate: Impact and Control" prepared for
17 MSD by CH2M Hill Northwest, Inc., dated October 25, 1979,
18 several concerns are expressed that coincide with those of
19 the Department. These concerns are:

20 "The determination of acceptability of
21 any given site will have to be based upon
22 relative risks and benefits. No major construc-
23 tion project is free of risk. The same is true
with construction of a new sanitary landfill.
The best technical solutions and construction
methods are subject to risks."

24 "Liners of natural or synthetic material
25 are the best alternative solution for areas
26 where the site's natural soil or hydrogeology
is less than desirable. The technique depends

1 on near total containment, followed by collection
2 and treatment of the leachate. The containment
3 must last in perpetuity to have zero risk.
4 However, there can be no absolute guarantee that
5 the membranes will not leak some leachate into
6 groundwater."

7 The applicants proposed the use of a natural soil liner
8 to contain leachate. Both natural soil and synthetic membrane
9 liners have been used in landfill construction since 1970.
10 However, long field use of these technical situations (greater
11 than 10-year) has not been demonstrated. It should be noted
12 that landfills are known to continue to produce leachate for
13 many years (20 plus) following closure.

14 The type of landfill proposed (demolition) may lessen
15 the chemical strength of the leachate generated. However,
16 wood waste - by itself - in a saturated, anaerobic environ-
17 ment, can produce high concentrations of volatile organic
18 acids, lignin-tannin compounds, and a range of other chemical
19 constituents, dependent upon the type of other wastes placed
20 in the landfill. The Department has experienced degradation
21 of shallow groundwater-resource rendering the water non-
22 potable in an exclusive wood waste site near Turner, Oregon.
23 Placement or selection of these demolition-type landfills
24 therefore must take into consideration the impact of leachate
25 on the groundwater.

26 Solid waste activities should not be allowed to materially
increase the risk of damage to present or future users of a
groundwater aquifer. In general, the Department would

1 prioritize gravel pits as to their environmental acceptability
2 as follows:

3 1. Down-gradient from domestic water supplies and
4 with suitable hydrogeological and physical conditions
5 (near the groundwater's discharge area). These sites
6 afford a location where the impacts would affect the
7 least possible present or future users of a groundwater
8 aquifer should the leachate system fail.

9 2. Up-gradient from existing wells and in a
10 limited potential area for development of the ground-
11 water by future users. Alternate water supply system
12 is available.

13 3. Up-gradient or within an aquifer which is
14 presently used or has the potential to serve future
15 users of the area for domestic water supply purposes.

16 The Department believes that in selecting sites for
17 landfills, either sanitary or demolition type, careful
18 consideration must be given to their environmental impacts
19 and possible associated risks. It should be noted that, at
20 this time, the landfill needs of the community can be met by
21 the development of other sites in the Columbia Slough
22 drainage area which do not involve similar risks to the
23 Troutdale aquifer. Included in this category are the
24 Nash, Waybo, Roselawn and Porter Yett sites. A solid
25 waste disposal facility permit has been issued by the
26 Department for the Nash site. The feasibility of opening

1 the Waybo and Roselawn sites for landfills is presently
2 under study by consulting engineering firms.

3 The Department does not believe that paragraph 7 of the
4 Stipulation and Agreement is relevant to the issues of this
5 case. This paragraph is concerned with the effects or
6 possible effects of other contaminant sources on the ground-
7 water resource and are not at issue here. However, it
8 should be noted that the technology to correct the nitrate-
9 nitrogen problem, caused primarily by the cesspools, is
10 known and has been demonstrated while the technology for
11 leachate containment and control has only been demonstrated
12 in the field to be effective for less than 10 years, while
13 leachate may be produced for many years (20 plus) following
14 closure.

15 The Department asserts that the issuance of a solid
16 waste disposal site permit for the Columbia Pit would be:

17 1. In conflict with previous Commission and
18 Department actions to protect and restore the ground-
19 water resource for domestic water supply purposes (in-
20 cluding the Commission's Interim Groundwater Policy
21 adopted on April 18, 1980);

22 2. In conflict with Multnomah County's Ground-
23 water Protection Plan (Exhibits E and F of the
24 Stipulation and Agreement);

25 3. An indication that the Department should
26 concern itself only with the technology and construction

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standards for a landfill;

4. An abdication of the Department's broad responsibility and authority to concern itself with solid waste disposal site selection in relation to the potential pollution of both groundwater and surface water and in relation to other possible alternative sites.

WHEREFORE, the Department urges the Commission to sustain the Department's denial of the application by permit applicants for a solid waste disposal site permit for the Columbia Pit in Multnomah County Oregon.

DATED: May 7, 1980.

Raymond P. Underwood
RAYMOND P. UNDERWOOD
Assistant Attorney General
Of Attorneys for the Department
of Environmental Quality


Robert E. Gilbert
ROBERT E. GILBERT
Northwest Regional Office
Department of Environmental
Quality

CERTIFICATE OF SERVICE

I hereby certify that true copies of the foregoing Department Brief were served on the following parties at the address set below each name by deposit in the United States mail at Portland, Oregon, postage prepaid, on the 7th day of May, 1980.

Ronald A. Watson
Attorney at Law
1000 Jackson Tower
806 S.W. Broadway
Portland, OR 97205

Richard J. Brownstein
Gilbertson, Brownstein,
Sweeney, Kerr & Grim
Attorneys at Law
1200 S.W. Main Building
Portland, OR 97205


RAYMOND P. UNDERWOOD
Assistant Attorney General

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BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
OF THE STATE OF OREGON

DEPARTMENT OF ENVIROMENTAL)
QUALITY) HEARING OFFICER'S FINAL ORDER
)
vs.)
)
LAND RECLAMATION, INC.,) Case No. 19-P-SW 329-NWR-79
RALPH GILBERT and WESTERN)
ENTERPRISES, INC.,)
)
Permit Applicants.)

FINDINGS OF FACT

The Findings of Fact in this proceeding are those stipulated in the Stipulation and Agreement of the parties relating to this proceeding.

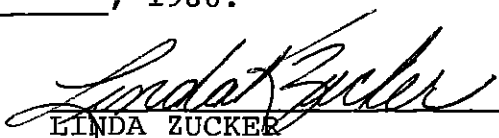
CONCLUSIONS OF LAW

The Department of Environmental Quality lawfully denied to permit applicants a solid waste disposal site permit for the Columbia Pit in Multnomah County, Oregon.

ORDER

IT IS ORDERED that the denial by the Department of Environmental Quality of the application by permit applicants for a solid waste disposal site permit for the Columbia Pit in Multnomah County, Oregon is sustained.

DATED: May 6, 1980.


LINDA ZUCKER
Hearings Officer for Environmental
Quality Commission

NOTICE: You will be entitled to judicial review of the Environmental Quality Commission's final order pursuant to ORS 183.482.

1 (1) The Columbia Pit is located by street address at
2 12401 N.E. San Rafael Street in Multnomah County, Oregon.
3 The site of the Columbia Pit contains approximately nine
4 acres. It is currently used for mining, gravel crushing
5 and concrete mixing operations.

6 (2) The Columbia Pit owners, Ralph Gilbert and Western
7 Pacific Enterprises, Inc. and a landfill operator, Land
8 Reclamation, Inc. (the applicants) have applied to the
9 Department for a solid waste disposal facility permit as
10 required by ORS 459.205 to 459.265 and OAR ch 340, to
11 operate a solid waste landfill disposal facility in the
12 Columbia Pit. A copy of the application and supporting
13 information is attached hereto as Exhibit A.

14 (3) The proposed landfill would be limited to demoli-
15 tion materials described in the July 13, 1979, letter from
16 the Multnomah County Division of Planning and Development,
17 which is attached hereto as Exhibit B.

18 (4) The Columbia Pit has been excavated to a depth of
19 approximately 120 feet below land surface in unconsolidated
20 alluvial deposits. These deposits overlie the partially
21 cemented alluvium of the Troutdale groundwater aquifer.
22 Exhibit C, attached hereto, describes the current, relevant
23 use of the acquirer and the wells located therein. Ground-
24 water is part of the waters of the State of Oregon.

25 (5) The relevant geographic area for the purposes of
26 this Stipulation and Agreement is the Inverness Service

1 District of Multnomah County as shown on Exhibit D, attached
2 hereto (the area). The environment of the area is as
3 follows:

4 The area, consisting of approximately 6,000 acres, is
5 generally improved throughout with single and multi-family
6 residences and commercial buildings. It has an average
7 population of 12.5 persons per acre. There is no compre-
8 hensive sanitary or storm sewer system in the area and it is
9 served almost entirely by cesspools and dry wells. Approxi-
10 mately 90% of the population of the area does not have
11 sanitary sewers.

12 (6) The area has an average annual rainfall of 39
13 inches, which equates to approximately one million gallons
14 per acre. The peizometric or groundwater table surface is
15 approximately 105 feet below the deepest point of the pit.

16 (7) The effect on the aquifer and groundwater of the
17 foregoing condition in the area is, generally, as follows:
18 Total annual rainfall is 6 billion gallons. Some portions
19 are removed by evaporation and surface runoff but a signifi-
20 cant amount (approximately 75%) seeps into the ground carry-
21 ing some contaminants. That seepage, carrying elements of
22 lawn and garden fertilizers, insecticides and herbicides
23 applied in the area, is estimated at 4.5 billion gallons
24 per year. In addition, the discharge into cesspools of
25 raw sewage at the rate of 50 gallons per person per day
26 would equal approximately 1.232 billion gallons per year.

1 Thus, the approximate quantity of water added to the ground-
2 water in the area is 5.732 billion gallons per year. Actions
3 have been taken by the Commission, the Department and Multnomah
4 County to protect the groundwater of the area for the bene-
5 ficial use of domestic water supply, as more particularly
6 described in Exhibits E and F, attached hereto.

7 (8) Rainfall at the Columbia Pit would equal approxi-
8 mately 9 million gallons per year. Of this amount, after
9 the Pit is completed and covered, approximately 4.5 million
10 gallons per year would, without recovery, be discharged as
11 leachate (i.e., is liquid which has percolated through solid
12 waste). Permit applicants' estimates of the amount of
13 lechate which could occur at the site of the Columbia Pit
14 range from 557,000 gallons per year, with leachate collec-
15 tion, to 4.5 million gallons per year, without leachate
16 collection, to be absorbed by the aquifer. Exhibit G
17 contains two tables that indicate the range of chemical
18 constituents found in leachate. The range of leachate
19 characteristics can vary from landfill to landfill according
20 to the specific types of solid waste placed in the landfill
21 and the length of contact time between the decomposing waste
22 and water.

23 (9) The Department on November 23, 1979, by letter
24 informed the applicants that the Department would deny the
25 application on the basis of the risk to the groundwater
26 supply in the vicinity to the Columbia Pit from leachate.

1 The Department also informed the applicants that the public
2 need for the Columbia Pit was tempered by the availability
3 of other locations for landfills in the East Multnomah
4 County area which did not constitute similar risk to drinking
5 water supplies. A copy of that letter and supporting memo-
6 randa are attached hereto as Exhibits H, I and J.

7 (10) As a result of applicants' receipt of the
8 Department's November 23, 1979, letter, the applicants
9 have not fully complied with the requirements of OAR 340-61-025,
10 340-61-030 and 340-61-035. The applicants' application is
11 therefore not complete and the time periods set forth in
12 OAR 340-14-020 for Department action on applications accepted
13 for filing have not commenced.

14 (11) The applicants, by letter dated December 12,
15 1979, requested a hearing pursuant to OAR 340-14-035. A
16 copy of the applicants' letter is attached hereto as Exhibit
17 K. The Department's November 23, 1979, letter shall be
18 considered a denial of the application and the applicants'
19 December 12, 1979, letter shall be considered a request for
20 a hearing, and any objections to the form or procedure of
21 the denial or request for a hearing are waived.

22 (12) The facts which may be relevant to this proceeding
23 are those set forth in paragraphs (1) through (11) above.

24 (13) The many unresolved engineering and other tech-
25 nical issues cannot be practically or timely resolved in
26 this proceeding and thus are not at issue in this proceeding.

1 If an order is issued by the Commission or the Court of
2 Appeals which reverses the Department's denial of the appli-
3 cation, the applicant will be required to meet the re-
4 quirements of OAR ch 340.

5 (14) The issues in this hearing:

6 (a) Are claimed by the applicants to be the
7 following:

8 (A) Does the Department have the authority under
9 ORS 459.005 to 459.265 (as amended by SB 925, 1979
10 Oregon Laws Chapter 773) to site landfills and set
11 priorities among landfills identified by Metropolitan
12 Service District as potential sites which need to
13 be reclaimed?

14 (B) Does the Department have the authority to
15 deny the permit to the applicants when it has complied
16 with, or is willing to comply with, ORS 459.005 to
17 459.265 and all the provisions of the rules pertaining
18 to landfills in OAR Chapter 340, Divisions 14 and 61,
19 and applicable subsections thereunder?

20 (C) Has the Department exceeded its authority
21 by denying Columbia Pit's application on policy
22 grounds without its having adopted rules, permitting
23 denial (assuming such rules, if adopted, would be
24 valid)?

25 (D) Did the Department fail to take into con-
26 sideration other public safety and welfare factors


1 such as the restoration of N.E. 122nd which has
2 partially slid into the site in its denial and,
3 if not, should not those factors be considered?


4 (b) Are claimed by the Department to be the
5 lawfulness of the Department's denial of the appli-
6 cants' permit application on the basis of the risk
7 to groundwater supplies and on the basis of the
8 availability of other sites in the vicinity which
9 did not constitute similar risks.

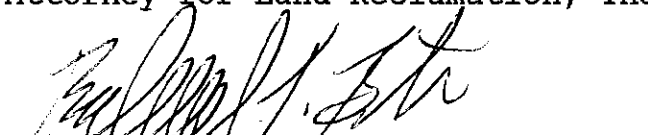
10 (15) For the purpose of having the issues which are
11 described in paragraph (14) determined on appeal to the
12 Commission, the Hearing Officer's Findings of Fact,
13 Conclusion of Law and Order may be in the form attached
14 hereto as Exhibit L.

15 DATED this 6th day of May, 1980.

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26


RAYMOND P. UNDERWOOD
Assistant Attorney General
Of Attorneys for Department of
Environmental Quality


RONALD A. WATSON
Attorney for Land Reclamation, Inc.


RICHARD J. BROWNSTEIN
Attorney for Western Pacific
Enterprises, Inc. and Ralph Gilbert

STIPULATION AND AGREEMENT - EXHIBITS

The exhibits to the Stipulation and Agreement are too voluminous to copy for general distribution. They may be reviewed upon request in the Director's Office of the Department of Environmental Quality, 522 Southwest Fifth Avenue, Portland, Oregon.

APPLICATION TO THE DEPARTMENT OF ENVIRONMENTAL QUALITY

FOR A PERMIT

FOR A NEW OR MODIFIED SOLID WASTE DISPOSAL FACILITY

(Pursuant to ORS 459.209-459.265)

(A minimum of three (3) copies of the completed application including all required exhibits must be submitted)

A. REFERENCE INFORMATION

<u>Columbia Sand & Gravel Pit</u> Official Name of Proposed Disposal Facility	<u>Land Reclamation, Inc.</u> Disposal Site Operator
<u>Multnomah</u> County	<u>10345 N. E. 13th</u> Address
<u>12401 N. E. San Rafael St.</u> Address or Location	<u>Portland, Oregon 97211</u> City, State, Zip Code
<u>Portland, Oregon 97230</u>	<u>289-7833</u> Telephone
<u>Land Reclamation, Inc.</u> Official Applicant (Property Owner or Lessee)	<u>Ralph Gilbert & Western Pacific</u> (joint venture) Property Owner or Lessee (If not Official Applicant)
<u>by William J. Plew, President</u> Title	<u>by Ralph Gilbert</u> Title
<u>10345 N. E. 13th</u> Address	<u>12401 N. E. San Rafael St.</u> Address
<u>Portland, Oregon 97211</u> City, State, Zip Code	<u>Portland, Oregon 97230</u> City, State, Zip Code
<u>289-7833</u> Telephone	<u>255-0822</u> Telephone

B. FACILITY LOCATION AND GENERAL DESCRIPTION

LOCATION SW 1/4 Sec. (s) 26 T 1 N, R 2 E W.M.

DESCRIPTION - Briefly summarize the proposal for solid waste processing and/or disposal.

The permit request is for a solid waste landfill disposal facility in an existing gravel pit adjacent to a major arterial street (N. E. 122nd Avenue and San Rafael) which has ample cover material on site. The fill is necessary to bring the site up to the surrounding grade at which time it will be developed dependent on the zoning at that time. Estimated time to fill is 3 years.

C. REQUIRED EXHIBITS

EXHIBIT A. Attach a complete FEASIBILITY STUDY REPORT prepared in compliance with Regulations Pertaining to Solid Waste Management (OAR Chapter 340, Division 6, Subdivision 1), including all information, maps, reports and exhibits required by Section 61-030.

EXHIBIT B. Attach a statement or other document from the property owner which shows the arrangement by which the official applicant has control of the disposal site.

EXHIBIT C. For a proposed SOLID WASTE LAND DISPOSAL SITE, complete the attached GENERAL INFORMATION form.

EXHIBIT D. Attach recommendations of the local agency having jurisdiction for solid waste management.

EXHIBIT E. Attach recommendations of the County or Regional governing body and its solid waste advisory committee and the city or county planning commission having jurisdiction.

OPTIONAL EXHIBITS The following exhibits need not accompany this application unless the Department specifically requests submittal at this time, however these exhibits must be submitted to the Department and approved in writing before a disposal site may be established, operated or modified.

EXHIBIT F. Final detailed plans and specifications for construction and operation of the proposed disposal site prepared in accordance with OAR Chapter 340, Division 6, Subdivision 1, Section 61-035.

EXHIBIT G. For landfills, a detailed operational plan and time table including the proposed method and sequence of site development, utilization and operation, and a proposal for monitoring and reporting any environmental effects resulting therefrom.

I HEREBY CERTIFY THAT THE INFORMATION CONTAINED IN THIS APPLICATION IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

LAND RECLAMATION, INC.

Signature of Official Applicant (or legally authorized representative) William J. Plew

Title President

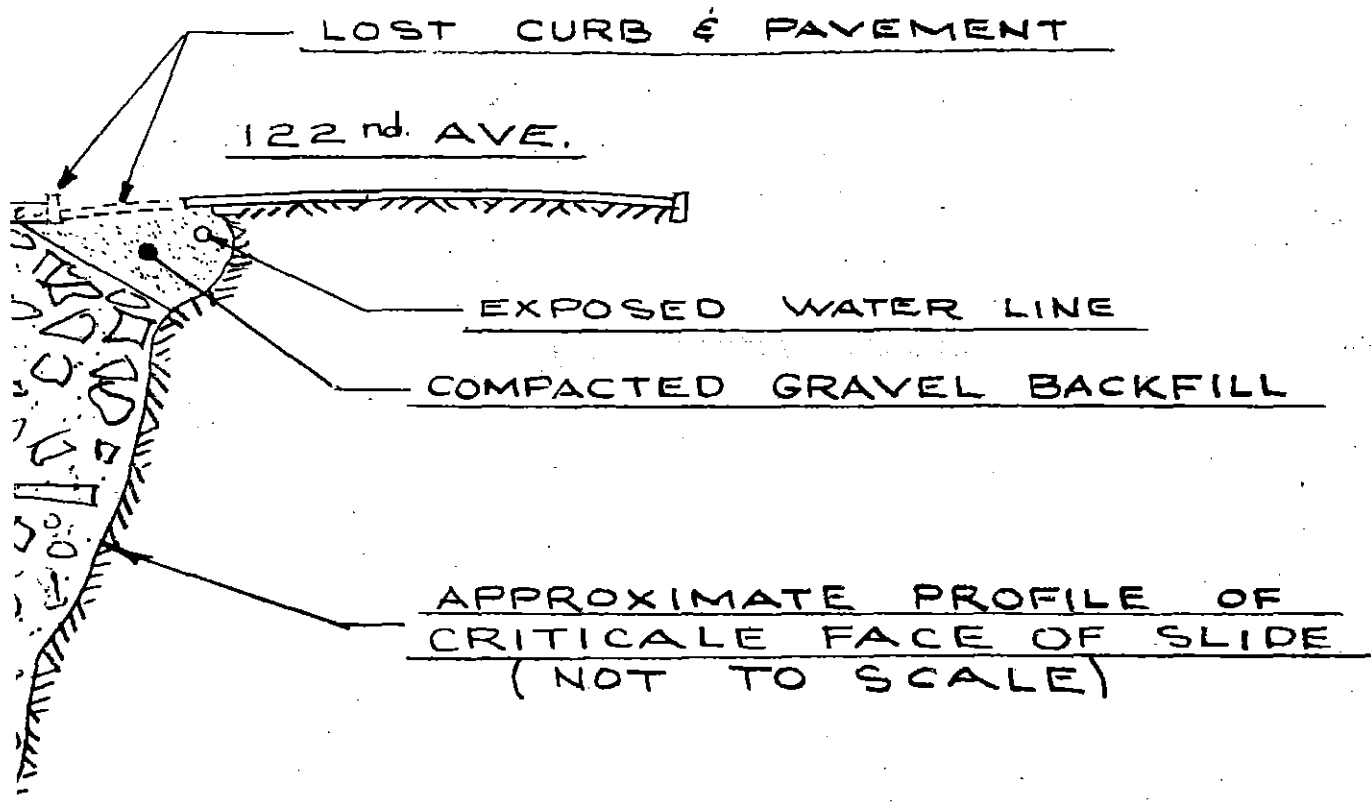
Date MARCH 21, 1978
~~FEBRUARY 14, 1978~~

EXHIBIT A-A-1



PHOTO No. 3

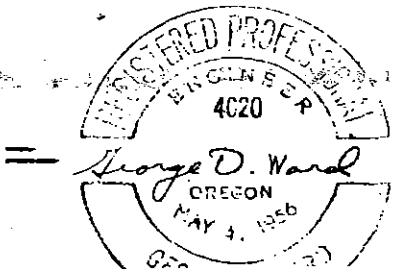
ACROSS SLIDE AREA WITHIN PIT



SELECTED INORGANIC BACKFILL TO BE CONSTRUCTED WITH COMPACTED, BROKEN CONCRETE SLABS AND CURBS, MASSIVE CONCRETE OR BRICK FOOTINGS AND STRUCTURAL SECTIONS, PAVEMENT, ROCK OR BOULDERS. MINIMUM SLOPE 1 1/2:1

ING EMERGENCY HAUL ROAD FILL

DATE PRINTED: _____



LAND RECLAMATION INC.		
SLIDE REPAIR & FILL PLAN		
SCALE: NONE	APPROVED BY:	DRAWN BY
DATE: 3-1-78		REVISED
N.E. 122ND. & SAN RAFAEL		

PERMIT APPLICATION
for the operation of
COLUMBIA SAND & GRAVEL
by
LAND RECLAMATION, INC.

September 13, 1979

Prepared by:

Seton, Johnson & Odell, Inc.

Randy Sweet

LAND RECLAMATION, INC.

PERMIT APPLICATION

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1. INTRODUCTION

This permit application is submitted by Land Reclamation, Inc. to obtain a solid waste permit to operate a solid waste landfill operation at the Columbia Sand & Gravel Pit, located at N.E. 122nd and N.E. San Rafael in Multnomah County. Specifically, the request is for the above location to serve as a solid waste disposal site for the surrounding area; to accept inert solid wastes, demolition solid wastes, land clearing wastes and construction wastes. All of these types of wastes are described in greater detail in Table 1.1. A description of unacceptable wastes is also included.

The Columbia Sand & Gravel Pit, a 10 acre site located at 12401 N.E. San Rafael in a commercial/residential area of east Multnomah County, is owned by Ralph Gilbert and Western Pacific, also located at that address. The property owners currently conduct non-conforming mining, gravel crushing and ready-mix concrete operations on the property. The proposed site is located outside the limits of any city. Governing political bodies are the Metropolitan Service District, Multnomah County and the Oregon Department of Environmental Quality. The location of the proposed site is currently zoned R-7, Single Family Residential District; the surrounding uses are residential and commercial and the immediate area is almost entirely developed for those uses. Conditional approval has been given for a re-zoning to R-7, C-8, Single Family Residential, Community Service District.

Land Reclamation, Inc., proposes to operate a solid waste landfill operation on the above site to reclaim the existing gravel pit. During the initial 10 months of filling at the site, gravel excavation operations will continue in the southeast corner of the site. The applicant and the property owners also propose to recycle concrete and brick material as ancillary to its current non-conforming use throughout the life of the site. As part of the proposed development, leachate and gas control features, described later in the application, are programmed for implementation at the site.

This proposed landfill operation is located in an area which currently does not have a designated landfill site nearby. Because of the

existing large pit, the result of past sand and gravel extraction, the site lends itself to serving as a landfill area. This factor also encourages lower costs as compared to alternative types of solid waste disposal. The Metropolitan Service District (MSD) report, "Disposal Siting Alternatives", found that "the lowest cost disposal alternative for the future 20-year period results from filling close-in gravel pits..." (Appendix, S-2).

Use of the San Rafael site, then, would serve several purposes:

- 1) provide a disposal site for selected solid wastes, currently a major problem in Multnomah County,
- 2) provide a method for reclaiming the 10 acre site to ground level for future uses similar to those on surrounding properties and
- 3) stabilize an area which currently suffers from landslide damage (122nd street boundary).

This permit application will present findings on the wastes volumes generated, economic and regional planning factors of the service area which will affect operations of the site, the hydrogeology pertinent to the conversion of the site into a landfill operation, noise and traffic analysis relevant to the site and environmental protection and plans for minimizing the effects of the conversion as well as a detailed description of the proposed operation of the site as a solid waste landfill facility. A brief description of the anticipated future use of the proposed site is also included.

Table 1.1

ANTICIPATED WASTES FOR PROPOSED SITE

Land Reclamation, Inc. requests that in its application and approval for a solid waste permit for the San Rafael Sand and Gravel Pit at N.E. 122nd and San Rafael it be permitted to accept the following solid wastes:

1. Inert Solid Wastes: Soils, rock, gravel, pavement (asphaltic concrete), bricks, concrete, crushed glass and tire chips. No permit is required from MSD, but is required from DEQ.
2. Demolition Solid Wastes: Concrete, concrete block, reinforcing steel, brick, mortar, rubble, tile, electric copper wire, insulation, wood (boards and beams), fixtures, glass, metal window and door frames, small amounts of paper, and some inert solid wastes (see above).
3. Land Clearing Wastes: Stumps, logs, limbs, dirt, rock, sod, gravel, trees, etc.
4. Construction Wastes: Wood, pallets, corrugated, packing materials, metal bands, metal studding materials, wrapping paper, copper wiring, etc.

Unacceptable Solid Wastes:

Commercial and household food wastes, food containers, oils, toxic and hazardous wastes, septic tank pumpings, industrial sludges, sewage sludges, commercial and industrial wastes, dead animals, "white" goods (other than associated with demolition or construction wastes), car bodies, whole tires, hospital wastes, etc.

2. SERVICE AREA

2.1 Volume Generated

Figures compiled by MSD for construction and demolition wastes currently generated in all zones, as well as projections for commercial and industrial wastes generated in future years from all zones are included in Tables 2.1 and 2.1a. These figures may be low in terms of estimating volumes generated. The applicant for this permit and proposed operator at the site estimates, through past experience at a similar site, that a volume of 125,000 yards of compacted solid wastes (of the types described in Table 1.1) will be deposited at the site per year. The site, with a 710,000 ton capacity and an estimated 1,200,000 capacity after gravel and clayey fines removal, would thus have a life of 5 to 10 years, depending upon 1) the volume disposed at the site, 2) the types of material disposed at the site, 3) the actual amount of gravel removed from the pit and 4) the actual amount of soil removed for cover usage.

2.2 Other Sites

There are currently three demolition/landfill operations in use in the Multnomah County area:

1. Lavelle's - N.E. 82nd Ave.
2. Plews' - N. Columbia Blvd.
3. Rossman's - Oregon City

Because of the few sites in operation, solid waste disposal is a major problem in Multnomah County.

Nineteen sites were mapped by MSD for their study on potential landfill sites. The Columbia Sand & Gravel site, with its proximity to two major highways, provides rapid access to customers traveling east and west or north and south. Its locations on a major thoroughfare provides easy access to customers from surrounding neighborhoods and consequent energy savings to its customers. The proposed site would thus provide a convenient disposal site and assist in alleviating a major disposal problem.

TABLE 2.1
 (From "Disposal Siting Alternatives")

CONSTRUCTION AND DEMOLITION WASTE IN MSD TONS/YR

ZONE	CONSTRUCTION	DEMOLITION	TOTAL
1	398.94	3373.95	3772.90
2	103.19	411.11	514.30
3	625.19	2319.16	2944.35
4	79.87	1460.45	1540.32
5	137.34	0.00	137.34
6	324.35	5154.31	5478.66
7	636.59	4144.91	4781.50
8	998.97	4966.46	5965.43
9	817.94	7836.92	8654.86
10	510.04	1958.73	2468.77
11	379.42	146.82	526.24
12	136.19	471.77	607.96
13	142.01	4624.56	4766.57
14	197.05	1505.67	1702.72
15	282.07	1067.46	1349.52
16	622.65	2476.64	3099.30
17	1664.23	58.73	1722.96
18	374.42	0.00	374.42
19	422.97	530.50	953.47
20	1041.56	117.46	1159.02
21	621.33	0.00	621.33
22	856.33	264.28	1120.61
23	683.82	88.09	771.91
24	696.79	0.00	696.79
25	168.69	0.00	168.69
26	163.45	58.73	222.18
27	994.01	88.09	1082.10
28	625.00	0.00	625.00
29	80.23	58.73	138.96
30	445.36	474.03	919.40
31	176.67	29.36	206.03
32	1788.70	264.28	2052.98
33	1140.68	88.09	1228.77
34	1639.00	234.92	1873.92
35	470.62	0.00	470.62
36	389.09	29.36	418.45
37	467.43	530.50	997.93
38	427.47	0.00	427.47
39	78.21	0.00	78.21
40	600.85	0.00	600.85
41	213.08	234.92	448.00
TOTAL	22621.73	45068.98	67690.56

TABLE 2.1a
 (From "Disposal Siting Alternatives")

INDUSTRIAL & COMMERCIAL WASTE GENERATION SUMMARY

SIC CODES	TONS OF WASTE
CONSTRUCTION	1924.412
FOOD AND KINRED	6291.160
TEXTILE PRODUCTS	1271.199
APPAREL	1750.558
LUMBER, WOOD	9974.344
FURNITURE	3113.306
PAPER, ALLIED PROD.	9284.063
PRINTING, PUBLISHING	311.024
CHEMICALS, ALLIED PROD	3348.307
PETROLEUM AND RELATED PROD.	1320.000
RUBBER, MISC. PLASTICS	1806.198
INSTRUMENTS	1934.499
STONE, CLAY, GLASS, CONCRETE	2972.798
PRIMARY METALS	17937.000
FABRICATED METALS	5984.398
MACHINERY	1812.333
ELECTRICAL EQUIP.	856.397
TRANSPORTATION EQUIP.	9044.457
INSTRUMENTS	3768.297
OTHER MFG. INDUSTRIES	143.312
TRANS.-CONN.-UTIL.	7211.000
WHOLESALE TRADES	9285.750
RETAIL TRADES	16898.000
FOOD STORES	11071.121
EATING, DRINKING	24428.656
OTHER RETAIL	10637.500
FINANCE-INSURANCE-REALTY	5607.891
SERVICES (HOTELS, BUSINESS, ECT.	26958.348
GOVERNMENT	15853.164
TOTAL	212799.06

2.3 Proposed Site & The Regional Plan

A Disposal Siting Plan for the district was adopted by the Metropolitan Service District in September, 1978. In the plan, the Columbia Sand & Gravel site was identified as a potential site for landfill operations. As mentioned earlier, the MSD study "Disposal Siting Alternatives" identified the filling of gravel pits as the lower cost disposal alternative for the next 20 years. The proposed site would thus be compatible with the regional plan.

2.4 Transportation & Access

Several transportation and access features contribute towards making the proposed site favorable for usage. The site is located in an area which does not currently have a solid waste disposal site. It would thus provide a service to the surrounding area.

The proposed site is located in a rapidly growing area which includes several areas zoned for light manufacturing industries. Since the proposed site would accept only uncompacted commercial hauls, it would provide an ideal disposal site for the surrounding plants.

Bordered by N.E. 122nd Street, a four lane, two way street, and N.E. San Rafael, a two lane, two way street, the site under consideration is also in a highly accessible area. One of the boundary streets for the site, 122nd Street, is a major thoroughfare in east Portland. The proposed site is located only a short distance from Highway 80N, a major highway in the area. Highway 205, located near the site, will, when completed, provide another easy access route.

The proposed site, intended for commercial hauling only, will be serviced by trucks owned by the proposed operator and other companies. It is anticipated that the convenient access to the site will help to minimize transportation costs; of the fifteen landfill sites considered by MSD in its study, the total cost per ton for hauling and disposing solid wastes from any one of the 41 generation zones to any particular site, the Columbia Sand & Gravel site had the fifth lowest cost.

3. HYDROGEOLOGY

3.1 Geology

There have been a number of previous investigations in the East Portland area which dealt wholly or partially with the regional geology. The most notable of these were by Trimble, (1963) and by Hogenson and Foxworthy (1965). The geologic map of the East Portland area shown on Figure 3.1 is from Hogenson and Foxworthy (1965) who derived their map from Trimble (1963).

The oldest rock unit exposed in the East Portland area is the Miocene Columbia River Basalts. The basalt is underlain by older marine sedimentary rocks which are not exposed in East Portland. The Columbia River Basalt is the lowest formation of a structural basin into which the overlying sediments were deposited as basin downwarping continued. The basalt was not encountered by exploratory wells drilled for the City of Portland (Willis, 1978), one of which extended to 1,000 feet below sea level. Overlying the basalt the oldest of the sedimentary units filling the structural basin is the Pliocene Sandy River Mudstone (Ts), whose total thickness in the area is unknown but exceeds several hundred feet. The mudstone has traditionally been considered to consist primarily of clay and silt with minor amounts of sand and fine gravel (Hogenson and Foxworthy, 1965); however, recent exploratory wells for the city of Portland encountered thick sequences of water bearing sands and gravels in the basal portion of the formation. Both the Sandy River Mudstone and Columbia River Basalt have slight westerly dips of approximately 2° (Willis, 1977).

The Troutdale Formation (Tt) overlies the Sandy River Mudstone and is the oldest rock unit exposed in the local area as shown on Figure 3.1. The Troutdale Formation has been considerably eroded since deposition and now has total thickness of 100 to 800 feet in the area. The Troutdale Formation consists of interbedded sequences of gravelly-sand, sandy-gravel, cobbles, and scattered boulders with varying degrees of matrix cementation and some claystone and siltstone beds. For the purpose of defining the hydrogeology of the formation it has been subdivided into an upper gravel aquifer and a lower sandstone aquifer (Trimble, 1963) which will be described in the Ground Water section.

The Troutdale Formation is variously overlain or intruded by volcanic rocks of the Plio-Pleistocene Boring Lava (QTV). The Boring Lava is resistant to erosion and underlies the Boring Hills and several isolated hills such as Mount Tabor shown on the western edge of Figure 3.1.

The Portland terraces are underlain by Fluviolacustrine deposits (Qf1) of sand and gravel which were deposited on the eroded surfaces of the Troutdale Formation and Boring Lava. These sediments were deposited by the ancestral Columbia River and constitute a blanket of sand and gravel overlying the Troutdale Formation in the vicinity of the Land Reclamation Pit. The pit is believed to be excavated entirely in the Fluviolacustrine sands and gravels and these sediments will be described in greater detail under site geology.

Quaternary Alluvium (Qal) underlies the flood plain of the Columbia River and has probable maximum thickness of 200 feet (Hogenson and Foxworthy, 1965). The composition of the alluvium is variable but it is generally made up of interbedded layers of sand, silt and clay with some gravelly layers in the deeper parts (Hogenson and Foxworthy, 1965).

As mentioned previously the Land Reclamation Pit is located on the Portland Terrace which is underlain by sands and gravels of the Quaternary Fluviolacustrine deposits. These Fluviolacustrine sands and gravels have been mined from the pit to a total estimated depth of 150 feet. As part of this study five measured sections were done along the walls of the pit and these are shown in pit profiles C-C' and D-D' on Figure 3.5 and 3.6.

As exposed in the pit walls the Fluviolacustrine deposits consist mainly of massive, crudely bedded, laterally discontinuous layers of gravelly-sand. The sand matrix is generally coarse grained and angular and varies in degree of induration from loose to moderately clay cemented. The percent of clay and silt in the sand matrix varies from a trace to an estimated 20 percent by weight. In some locations these gravelly sands form gently dipping large scale foreset cross beds with apparent dips in varying directions, depending upon pit wall orientation.

Secondary in volume to the gravelly-sands are discontinuous lenses of sandy-gravel and openwork gravels encountered at varying levels along the pit walls. The sandy-gravels are often found in moderately to steeply dipping cross beds thinner than the gravelly sand beds described previously. In some cases the gravel and cobble layers have no matrix and are termed openwork gravels. Generally these openwork gravels are less than one foot thick and laterally discontinuous.

The sandy-gravels and gravelly-sands contain occasional large cobbles and boulders. There are also several channel shaped deposits of cross bedded sands along the pit walls. Of some interest is the discontinuous layer of cemented gravel along the east wall of the pit. This layer forms a secondary ledge below the rim of the pit and the cemented zone is up to two feet in thickness. The cementing agent is not known but the resulting conglomerate is very hard.

As part of the gravel washing operation the silt and clay wash fines were drained into settling ponds as the pit was mined out. Today these deposits of silt and clay are found in three locations in the pit. The largest volume of silt and clay has accumulated in the northeast corner of the pit and in an abandoned settling pond now exposed in the southwest wall of the pit (see pit profile D-D'). The total volume of the wash fines is estimated as 100,000 cubic yards. Six samples of the fines have been sent to the Oregon State University Soil Testing Laboratory for determination of Cation Exchange Capacity, see Table 4a.

3.2 Hydrology

The major surface drain in the study area is the Columbia River with associated sloughs. The mean annual precipitation at the Portland International Airport is 37.61 inches (personal communication, 1979). Over 70 percent of the precipitation generally occurs during the period October through March. Because of the high hydraulic conductivities (permeabilities) of the terrace materials there is little surface runoff and a notable paucity of natural surface drainage on the terrace. Some of the surface runoff from roads and parking lots in the pit area is routed to dry wells in the Fluvio-lacustrine sands and gravels.

3.3 Ground Water

The Columbia River and associated sloughs is the base level and regional discharge area for ground water in the East Portland area. Ground-water occurrence in the East Portland area may be divided into regional, intermediate and local flow systems. The Columbia River Basalt and older rocks probably constitute the regional flow system, although there are few wells completed in the basalt in the East Portland area. Recharge to the regional flow system is primarily from the Cascades to the east with some from the foothills bordering the East Portland area. The Sand River Mudstone and Lower Sandstone Aquifer of the Troutdale Formation apparently constitute the intermediate ground-water flow system.

Recent exploratory wells by the City of Portland have encountered fairly extensive gravels in the Sandy River Mudstone with transmissivities (T) between 13,000 and 19,000 gpd/foot. These gravels apparently were penetrated by wells between 122nd and 160th Avenue along the floodplain of the Columbia River. As would be expected in a regional discharge area the static water level records from the exploratory wells indicate that there is upward movement of ground water from the Sandy River Mudstone into the Lower Sandstone Aquifer of the Troutdale Formation.

Trimble (1963) subdivided the Troutdale Formation into a Lower Sandstone Aquifer and an Upper Gravel Aquifer. The Lower Sandstone Aquifer is separated from the underlying Sandy River Mudstone Aquifer by fine grained semi-confining beds which allow some vertical leakage to the Troutdale Formation along the Columbia River floodplain. Aquifer tests by the City of Portland (Willis, 1978) in the Troutdale Sandstone Aquifer show a range in T values from 7,000 to 41,000 gpd/foot. The Troutdale Sandstone Aquifer is separated from the overlying Troutdale Gravel Aquifer by fine sediments including clays and sandstones (Willis, 1978).

In the East Portland area the local ground-water flow system consists primarily of the Troutdale Gravel Aquifer and the overlying Fluvio-lacustrine deposits where saturated. Along the floodplain of the Columbia River the local flow system is further complicated by a semi-confining surface layer of silts and clays over the Troutdale Gravel

Aquifer. This semi-confining layer reportedly conveys significant quantities of vertical upward leakage from the Troutdale Gravels to the Columbia River sands (Willis, 1978).

The local ground-water flow system is recharged by direct infiltration of precipitation and by underflow from the bordering hills. The direction of flow is downgradient toward the Columbia and approximately perpendicular to the surface slope. On the terrace some recharge to the upper Troutdale occurs through the overlying Fluviolacustrine deposits. The pit appears to be excavated entirely in the Fluviolacustrine deposits to a maximum estimated depth of 140 feet at elevation 150 feet msl. The piezometric or watertable surface is approximately 105 feet below the deepest point of the pit at watertable elevation 45 feet msl as measured in the on-site well, however, less than 10 percent of the pit floor area is excavated to this depth. The Fluviolacustrine deposits exposed in the pit walls and beneath the pit bottom are unsaturated and reportedly there is not flow of perched ground water into the pit even during the wet season. There is a partially saturated sand lense along the upper wall of the northwest corner of the pit parallel to 122nd Avenue. This sand lense is partially saturated even during the summer and probably is recharged by storm runoff from dry wells along 122nd Avenue.

The Troutdale Gravel Aquifer underlies the Fluviolacustrine deposits on the East Portland terrace and underlies a thick surface layer of floodplain silts and clays adjacent to the Columbia River. This unit is the most widely utilized aquifer in the East Portland area and the majority of the producing wells in the vicinity of the pit are pumping from this aquifer.

As part of this investigation all of the wells on file with the Oregon Water Resources Department in the vicinity of the pit were field located and water table measurement made if possible. Section A-A' and B-B' on Figures 3.2 and 3.3 show some of the wells and the piezometric levels measured during this study or reported by others. The well locations and well numbers are shown on Figure 3.4. Many of the wells in the area are community owned such as the Parkrose School

and Water District, Richland Water District, and Hazelwood Water District wells. Based on static water level measurements the piezometric surface gradient appears to slope to the west and south from the Richland Water District and Hazelwood District wells toward the vicinity of the pit. The Parkrose Heights High School irrigation supply is approximately 600 feet N.E. of the pit and is the closest well of record to the pit. A number of other wells are located N.W. of the pit across I-80 expressway and along the base of the terrace as shown on the well location map, Figure 3.4. The well location sheets and drillers logs are reproduced in the Appendix 3-A.

The aquifer coefficients of the Troutdale Gravel Aquifer apparently vary considerably depending upon the well location. In aquifer tests conducted in wells along the Columbia River floodplain and lower terrace area the Troutdale gravel aquifer showed T values from 127,000 to 644,000 gpd/foot. The specific capacities of wells in these areas range from 98 to 900 and commonly average 125 gpm/foot of drawdown (Willis, 1978).

In the upper terrace area where the pit is located the performance of wells in the Troutdale Gravel Aquifer is generally poorer than those along the lower terrace and floodplain. The only aquifer test data available in the vicinity of the pit was of the Hazelwood Water District well No. 3 (34 abd). In this test the T value was 20,000 gpd/foot and the well had a specific capacity of 9.5 gpm/foot of drawdown. Specific capacity data calculated from drillers logs of other wells on the upper terrace range from about four gpm/foot for the Richland Water District wells to about 80 gpm/foot for the Glendover Golf Course wells. The specific capacity of the pit well (26 cbc) is about 10 gpm/foot of drawdown and the specific capacity of the Hazelwood Water District well (34 abd) southwest of the pit is approximately 9.5 gpm/foot of drawdown. Comparison of specific capacity data between wells is of limited value because of varying well efficiencies, length of screened interval, extent of initial development, etc. It appears that these variations in well specific capacity are partially due to lateral variations in lithology and degree of cementation of the gravel and sand matrix. According to (Willis, 1977) "the permeability of the Troutdale gravels can be severely affected by the degree of cementation and/or the

weathering of the basaltic gravel . . . In locations such as near the Richland Water District wells, the degree of cementation may severely limit the volume of water which can be removed by these wells."

In order to estimate the volume of underflow beneath the pit the T value of 20,000 gpd/foot is used from the nearby Hazelwood Water District well (34 abd). A hydraulic gradient of 0.001 ft/ft has been calculated from static water level elevations in the vicinity of the pit. Given a pit width of 600 feet the ground water underflow beneath the pit is about 12,000 gal/day. If only the upper ten feet of the saturated zone is considered, the underflow is about 600 gal/day.

4. ENVIRONMENTAL PROTECTION

4.1 Leachate

Leachate is that water which has infiltrated and percolated through decomposing solid waste. Its quality and quantity are dependent upon the type of waste and its rate of decomposition as well as the amount of water entering and percolating through the waste and thence to a receiving body, e.g., ground and/or surface water. As listed in Table 1.1, only demolition type wastes are to be deposited at this facility. The later operational plan discussion and final use proposal show selected areas of the site will receive only compactable inert materials in order to facilitate future building construction. The operational plan, (Plate 2) shows that about 6 acres of the site will be filled with some organic materials, e.g., compacted building demolition, paper and land clearing debris. It is generally accepted that about 50 percent of incident precipitation will infiltrate solid waste and after the refuse has reached field capacity, generate leachate. Average annual precipitation at the nearby Portland International Airport station is reported to be 38 inches. Therefore, as much as 19 in/yr over the 6 acres of fill which is proposed to include organic materials may generate 55,000 gal/yr of Leachate.

As mentioned above, the quality or composition of the leachate is also dependent upon the waste materials. The proposed operators for this facility estimate that the waste stream at their other currently operating facility, i.e., Grand Avenue, includes about 10 percent paper; 60 percent wood demolition; 15 percent land clearing debris; 5 percent "inert" building and pavement demolition; and about 10 percent soil spoils. The wood, paper and any other organic materials will decompose and add to leachate generation. However, the paper materials include clay filler and have a demonstrated cation exchange capacity (Elzy et al, 1974). The mixed soil spoils also provide some CEC and attendant contaminant adsorption. Some of the building demolition including the cement and mortar will aid in neutralizing the weak organic acids common to the leachate. The operational plan shows and later text explains how these various waste composition factors will be used in development of the site.

One of the most important aspects of the site design is minimizing the impact that the site could have on ground water. This site has several unique features. It is generally more than 100 feet from the base of the pit to the water table as measured at the on-site well. The hydraulic conductivity of the Troutdale Gravel Aquifer, which is below the Fluvioacustrine materials the pit is excavated in, is relatively low in this particular area (see earlier discussion under Hydrogeology). About 100,000 cubic yards of clay fines have accumulated in washwater holding ponds at the site over a period of 10 years of operation, see Tables 5a and 5b . The washwater ponds have also received cement truck and batch plant cleanings, resulting in a basic pH of about 8.5 and therefore provide additional neutralizing capacity. The washwater fines were classified as ranging from silt loam to clay by the O.S.U. Soil Testing Laboratory, see Table 4b. However, their hydraulic conductivities are exceptionally low as shown on Table 4a while their CEC is relatively high. It is proposed that the total base and sidewalls of the pit will be lined with the clayey fines from the washwater as described in the operational plan.

A system for collection of leachate in French drains placed in the clayey bottom liner is shown on Plates 2 and 3 . The drains are routed to two sumps which will be at the base of the gas venting rings (see later discussion) and provide access for pumping the collected leachate to the surface. The leachate will then be pumped onto the refuse surface or reinjected and circulated through the refuse via low pressure distribution in two inch diameter French drains within the refuse, also see later discussion of gas venting system and Plate 2 . Should the volume of accumulated leachate become too great for reinjection into the refuse, pumping to the surface with treatment and disposal can be facilitated.

As mentioned above, the depth of water at the proposed site is more than 100 feet below the proposed fill bottom. The previously described soil and clay pit liner with its low hydraulic conductivity will only allow a very slow rate of discharge of that leachate not collected and pumped out through the landfill base. This will be followed by more than 100 feet of unsaturated vertical percola-

tion with additional filtration and sorption of contaminants prior to reaching the water table. In a similar situation at the 82nd Street site where the clayey soils were not used as extensively, ground-water quality has not been significantly impacted, as demonstrated by on-site monitoring.

No significant impact on beneficial uses of ground water is expected at this site. The on-site well which is to be used for dust control, summer sprinkling for compaction and fire protection is obviously the nearest field located well, see Figure 3.4. An irrigation well 600 feet to the northeast of the site is the next nearest down-gradient use of ground water, see Figure 3.4. Other wells on file with the Oregon Water Resources Department and shown in other reports are about one mile or more down gradient. The proposed Portland Bureau of Water Works East Well Field is about one and one-half miles to the northeast, see Figure 3.4, and current plans are to develop deeper aquifers at this proposed facility. It should be noted that the proposed well field is very near positive hydraulic boundaries, i.e., Columbia River, Blue Lake and Columbia Slough, and as such should have a limited area of induced gradient due to well field drawdown. It is also important to note that community water supplies are available and in use throughout the East Portland area.

Given the proposed liner, leachate collection system and depth to water, it is still proposed that monitoring of the existing on-site well, school irrigation well described above as well as at least two new monitoring wells to be located at the north end of the pit (for specific location see Plate 2). This monitoring system will allow for early warning and any necessary remedial actions at the site if ground water contamination becomes a problem. Figure 4.1 shows the proposed monitoring well design for the new well to be drilled north of the pit.

A contingency plan for interception of leachate at a solid waste facility is advisable. At this facility we propose that interceptor well be placed in the northwest and southeast ends of the pit. Should the monitoring wells show any significant leachate,

this system could be pumped to collect the contaminated water. A series of disposal sumps or drainfields could be developed in the unfilled southern portion of the pit for disposal of the contaminated water. A summer option might include recirculation of the water through the refuse via sprinkling and/or injection.

Preliminary estimates for design of such an interceptor system indicate that one or more wells discharging 100 gpm in the north end of the pit would result in a drawdown cone with a radius of influence of more than 400 feet. This would reach to the east and west pit boundaries. Use of a single 8 in. well which will double as a monitoring site is currently proposed, see Figure 4.1.

4.2 Gas

Gas generation at landfill sites is the result of the decomposition of carbonaceous materials. Gases generated primarily include carbon dioxide and methane with trace amounts of odor producers such as hydrogen sulfide. Carbon dioxide is heavier than air and accumulates at the base of the fill, migrates downward to the water table and contributes to ground-water hardness and/or is carried along with the convective flow of other gases. Only small amounts of hydrogen sulfide are commonly produced but its low threshold for odor detection makes it a nuisance at landfills. It is generally produced from such sources as gypsum board or brackish water accumulation at demolition sites.

Methane is the gas of principal concern at landfills. It is produced by anaerobic bacterial decomposition of the wastes. The period of most active methane generation is assumed to occur during the first five years of landfilling. Demolition wastes are relatively slowly decomposable but experience has shown they do produce significant quantities of methane and a program for the control of its movement and discharge is necessary, especially in populated areas. Gas movement is via convection, i.e., in response to pressure gradients, and/or diffusion, i.e., from areas of high concentration to areas of lower concentration. Methane is lighter than air and commonly migrates upward, along waste lift interfaces

to the edges of the landfill which is also away from the central area of generation and/or through the landfill surface.

Several measures are proposed for gas control as well as for monitoring the effectiveness of the control system.

Gas movement is commonly through paths of least resistance such as more permeable granular materials. The clay wall and bottom seal described under Leachate, shown on Plate 2 and discussed later under Disposal Operation. Installation of perforated concrete rings connected to radial lines with granular backfill is shown on Plate 2. The units are to provide a passive venting system curbing landfill development. As the depth of waste material increases the radial lines and additional section of the perforated rings will be added.

At other pit sites migration through the pit walls has reportedly occurred after the fill was carried to the pit top. A monitoring system incorporating seven screened wells around the site perimeter is proposed to provide early warning of lateral migration, see Figure 4.2. If there is any significant migration to these wells, a manifold vacuum pumping system will be added to the perforated rings and then pumped at a pressure of 1psi. We estimate that a fan capable of 200 cfm will be needed. The gas will be utilized if suitable or flared for disposal.

The venting system will be incorporated into the landfill operational design for use as roadway drainage. Access will be maintained to the gas vents for long term pumping as necessary.

TABLE 4a

Land Reclamation, Inc.
Liner Material Analyses*

Sample No.	pH	CEC (meq/100g)	Hydraul. Cond. (cur/min)
1	8.1	33.32	10^{-8}
2	8.4	35.77	7.23×10^{-6}
3	8.5	29.55	10^{-8}
4	8.4	29.65	10^{-8}
5	8.4	29.76	1.90×10^{-4}
6	8.8	23.48	8.83×10^{-5}

*Note: Washwater fines, approximately 100,000 cubic yards.

TABLE 4b

Land Reclamation, Inc.
Partical Size
Hydrometer Analysis (%)

Sample No.	2mm	2-.05mm	.05-.002	.002	Class
4	18.2	8.6	31.7	59.7	clay
5	----	17.0	52.5	30.5	silty clay loam
6	----	9.9	67.1	23.0	silt loam

4.3 Dust & Blowing Debris

The materials that would be disposed at the proposed site (soil spoils, building debris, etc.) are not generally susceptible to the effects of moderate winds or to the creation of large amounts of dust. Several methods would be employed, however, to combat any blowing dust or debris that might exist.

The demolition wastes, upon delivery, would be spread and compacted. If necessary, portable wind fences, of the type recommended by DEQ and EPA, would be set up to trap blowing debris. Also available as necessary will be the water collected from the leachate irrigation system and/or the on-site water supply. Periodic sprinkling could be done over the site to reduce blowing dust. During the summer months, water will be used to improve compaction on the wastes. Wastes will also routinely be covered with soil to prevent dust.

4.4 Road Mud

It is anticipated that the large number of trucks entering and leaving the site will generate a significant amount of mud on the site road. To combat this problem, the operator will use a sweeper-flusher at regular intervals to wash down the on-site road used by the disposal trucks.

4.5 Traffic

It is anticipated by the applicant that the impact on local traffic will be minimal. The anticipated traffic in and out of the site would be 65 vehicles per day, which is approximately double the existing traffic out of the pit. One of the boundary streets, 122nd, currently handles approximately 18,000 vehicles per day (two way). Thus the additional traffic generated by use of the site would have no effect on 122nd Street. The entrance to the proposed site will be approximately one hundred feet from 122nd on N.E. San Rafael (a minor collector), directly opposite a shopping center. There is currently a left hand turning lane from 122nd to N.E. San Rafael as well as a traffic light at the intersection. It is expected that virtually all traffic will be on 122nd Street.

These existing conditions then, are more than adequate to accommodate the generated traffic without major problems.

4.5a Air Traffic

According to the Resource Conservation and Recovery Act of 1976 (Part II Solid Waste Disposal Classifications - Rules and Regulations), landfill operations are required to be located in excess of 3048 meters of the nearest airport runway used by turbine engine aircraft and 1524 meters of runways used by piston type aircraft. The proposed site meets these requirements in that it is located 3 1/3 miles or 5366 meters from the nearest runway (at PIA) for turbine type planes. The other airport in the vicinity, at Troutdale, is well outside (approximately 12 miles) the required distance from the site.

4.6 Noise

An analysis of the site for potential noise impact has been performed and a copy of the resulting report is included in the appendix.

The essential points of the report are the following:

- 1) Site development must comply with DEQ industrial noise regulations, but no city regulations.
- 2) A six foot wall barrier will need to be erected on the west side of the pit (Site 1) when the fill is within 8' of street level.
- 3) When the fill reaches 60' below street level at Site 2, a 6-8' barrier will need to be built along the southeast side boarder.
- 4) On Site 3, a 6' barrier will need to be erected on the north-east corner of the pit prior to start up of operation.
- 5) All diesel equipment will need to be fitted with "residential" quality mufflers.

All of the above points have been discussed with the permit applicant, who agreed to undertake the necessary noise control and abatement measures.

5.1 Staff and Equipment

The proposed operator of the site at N.E. 122nd Street anticipates that the regular staff at the site will number seven people. Major equipment available at the site will consist of one tractor and one GMC compactor for compaction and cover at the site. The applicant for the permit plans to operate the site on a daily basis between 8 a.m. and 5 p.m.

5.2 Support Facilities

The office for the proposed site will be an 8' x 15' construction trailer. This receiving trailer will contain a chemical toilet for users of the site. The operator will have on site portable equipment for regular maintenance, as well as a building containing equipment for fire protection. The existing fuel storage capacity at the site will also be used for the operation. Employee parking will be provided at the proposed site, and will be reached through entrance gates separate from those gates designated for the haul trucks.

In addition to the 4000 gallon water storage tank with a pump capable of pumping 100 gallon/minute, which can be used to wash down the road, the operator will use a 1968 Chevrolet ex-City of Portland street sweeper at regular intervals to wash down the on-site road used by the disposal trucks.

5.3 Fire Protection

A number of sources and methods will be available for fire protection at the site. One of the features of the site will be the above mentioned 4000 gallon storage tank and accompanying generating pump. The sweeper cleaner which will be used to clean mud from the roads is equipped with a portable hose to provide fire protection if necessary. Fire extinguishers (as many as required) will be available in the fire equipment building. In addition fire protection is available from the County through the existing hydrants nearby on 122nd and San Rafael streets. In the summer months, the irrigation system described earlier and periodic sprinkling will assist in providing fire protection to the

TABLE 5b

OPERATION BARCHART*

AREA OF OPER- TION	YEAR									
	1	2	3	4	5	6	7	8	9	10
Fill in "A" (Partial)	XXXXXXXXXXXXXXXXXX									
Fill partial "B"			XXXXXXXXXXXXXXXXXX							
Fill area "C"				XXXXXXXXXXXXXXXXXXXXXX						
Fill roadway and remainder of "A" & "B"							XXXXXXXXXXXXXXXXXX			

* Assumes 125,000 cubic yards per year of compacted fill

site. The proposed site will thus meet County standards for adequate fire protection.

5.4 Landfilling

The landfill operation will be phased to 1) control runoff into the fill, 2) allow the maximum use of the existing clayey fines presently on the site and 3) allow the removal of approx. 200,000 yds. of gravel in the southeast section of the site.

At the start of operations at the proposed site the existing concrete batch plant will be shut down and removed. A haul road (see Plate 2) with a maximum grade of 12% and minimum inside radius of 30 foot to area "A" will be constructed which will require some fill on the north end of the pit. Simultaneously the existing gravel on the site will be removed.

After the road is constructed, leachate sump and gas collector #1 will be installed as shown and the 2 ft. clayey base seal will be applied (a discussion of the application of clayey material will be presented later in the section). After installation of the leachate water collector line the landfill operation will commence. Filling will be placed and compacted in 8 ft. lifts with the clayey side seal carried up in intermediate 4 ft. lifts along with the landfill material. Intermittent cover will be placed as needed. The western portion of area "A" (approx. half) will be filled and compacted to finish grade and the final cover placed while the eastern half will be sloped down to the haul road and a temporary clayey cover will be placed. This cover will increase the water runoff on the top of the garbage and thus limit the production of leachate water while maintaining the haul road for use for areas "B" & "C".

After partial filling of area "A", as described above, has been completed, the filling operation will move to area B which at this point will have been excavated to the 150 ft. elevation. The clayey base will be placed along with the sump and filling will be started in the area. The south side will be brought up to final grade.

While area "B" is being filled the clayey fines from area "C" will be stockpiled on area "A" and, towards the end of the available space in "B" the fines will be stockpiled on part of area "B" also. After area "B" has been filled as much as possible, area "C" will be filled, using the same access road as area "B". The clayey base seal will be the remainder of fines which were excavated approximately to the 155 foot level. Area "C" will then be filled to finish grade. After area "C" is filled to finish grade the roadway and areas "A" & "B" will be filled to capacity. The landfill operation will then essentially back itself out of the site using stockpiled clay fines for sidewall and final cover seals.

Three points of major concern during landfill operations will be 1) placement of the clayey fines 2) placement of leachate water collector lines and 3) placement of the gas collector lines.

The purpose of the clayey fines as base sidewall and cover seals is 1) to contain gas 2) to contain and direct leachate water to the collection lines and 3) to direct runoff from rainwater lines off the landfill. It will be necessary that the clayey fines have an adequate moisture content so that when placed they will consolidate to form a "seal". These clayey fines will be handled either with pumps or dragline and truck or a combination of both.

The leachate water collection lines will be placed sloping towards the collection sumps with the clayey base and sidewall seals sloping towards the collection lines. A 2 foot square gravel pocket as shown on Plate 2 will facilitate collection of the leachate water. A pump with a 50 GPM capacity with variable head up to 150 feet and 14 feet suction lift will be placed in each leachate water sump. The leachate water will be pumped to the top level for sampling and reinjection into the landfill through the top level of gas collection lines. If it becomes necessary, the leachate water will be pumped at the surface to the previously described filtering system.

The gas collection lines will be installed 30 ft. on center extending out to the sidewalls (or as shown on Plate 2 for interior lines). There will be three lines per level with an alternating layout with

particular attention paid to sidewall areas. The lines will be laid level and centered in a 2 foot square gravel pocket with pipe perforations as shown on Plate 2.

The landfill operation will thus be developed and operated through a series of carefully planned steps with appropriate consideration for environmental safe guards and future use of the site.

6. Final Use

The final topography and composition of the site will limit the final use of particular areas on the site to selected functions. Structures can be built upon the southern section of the site when filled as described below. The rest of the site will be suitable for parking lots, parks or landscaped areas. In general, most of the site will be left open and drainage shall be maintained to the sides of the site. If parking lots are placed on the site, temporary holding ponds for runoff water can be constructed for minimal costs.

Two areas (see figure for locations) on the site will be filled with select materials. The first is along the western border of the pit. At the present time the pit wall is in a collapsed state and has undermined S.E. 122nd St. The material and its compaction for this area has been specified by Multnomah Co. The other area of select material will be along the southern property line. Materials capable of high degrees of compaction (ie. material spoils, road demolition material, etc.) will be used in this area so that this area may be used in the future as a building site.

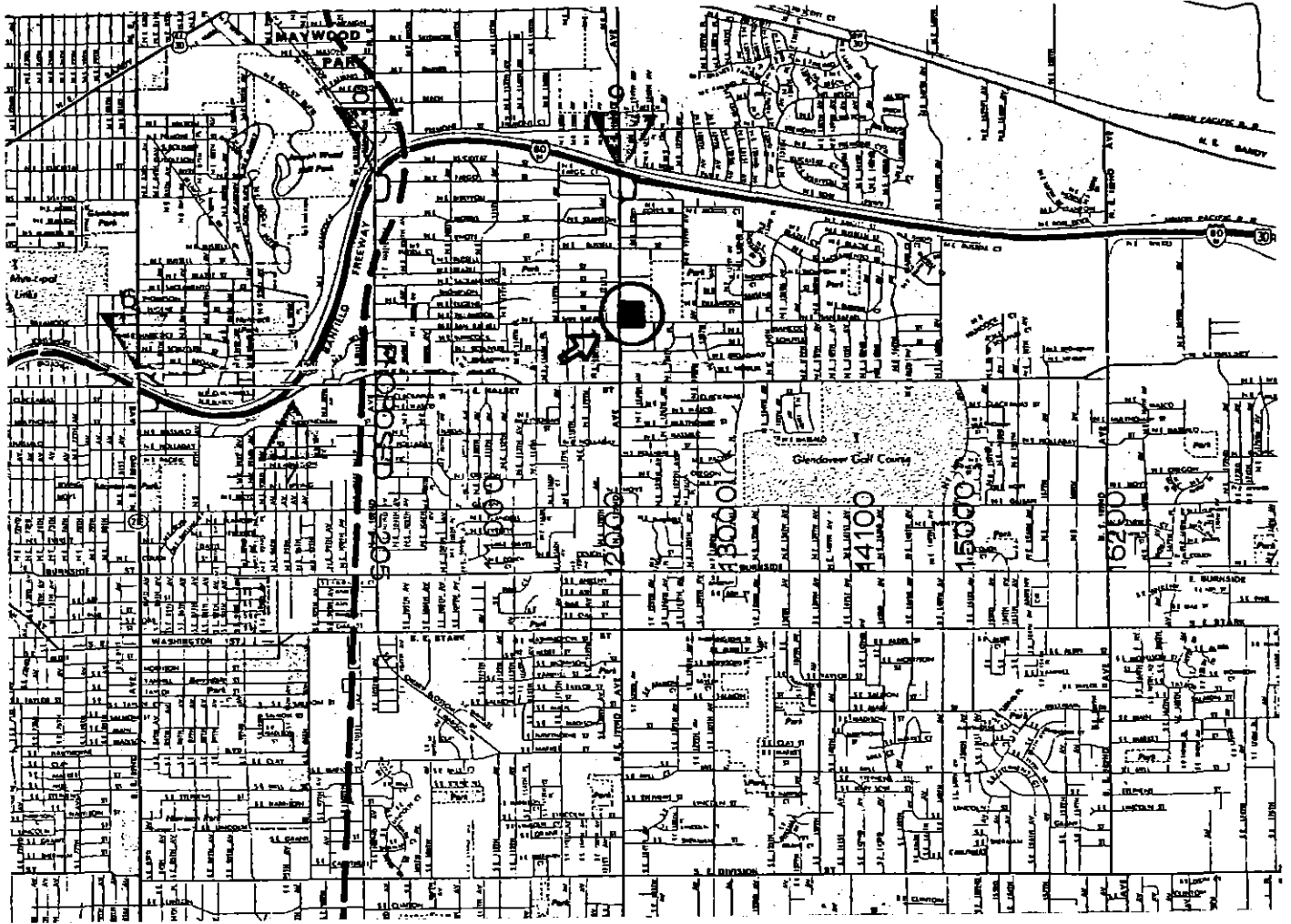
Table 5a

MATERIAL BALANCE

AREA	CAPACITY	COVER FINES	BASE FINES	SIDEWALL FINES	TOTAL FINES
A	400,000	15,000	6,000	15,000	36,000
B	320,000*	10,000	5,000	10,000	25,000
C	400,000**	10,000	3,000	11,000	24,000
Road- Way	80,000	10,000	3,000	2,000	15,000
TOTAL	1,200,000	45,000	17,000	38,000	100,000

* After removal of 200,000 yards of gravel

** After removal of 100,000 yards of clayey fines



PROPOSED LANDFILL SITE
COLUMBIA SAND & GRAVEL PIT
N.E. 122nd & N.E. San Rafael

APPENDIX

SITES EVALUATED
IN
"DISPOSAL SITING ALTERNATIVES"

<u>SITES</u>	<u>ACCESS</u>	<u>SITES</u>	<u>ACCESS</u>
Alford's Clackamas County	Clackamas River Dr., Spring Water Rd.	Obrist Multnomah County	Troutdale Road
Cipole Washington County	Highway 99-W	Oregon Asphaltic Multnomah County	S.E. Main St. Thru Residential
* Columbia Sand & Gravel Multnomah County	N.E. 122nd Off 80-N	Portland Sand & Gravel Multnomah County	Division Street
Durham Pits Washington County	S.W. Upper Boones Fry. Rd., S.W. 72 & Bridgeport	Rossmann's Expansion Clackamas County	Cascade Highway
Cooper Mountain Washington County	Farmington Road	Roselawn Multnomah County	74th & 75th off Killingsworth
Hidden Valley Multnomah County	Off Highway 30	Sexton Mountain Washington County	Thru Residential Area
Hayden Island Multnomah County	I-5 Thru Janten Beach Center	St. Johns Multnomah County	Columbia Boulevard
Nash Pit Multnomah	N.E. 72nd, N.E. 75th to Killingsworth	Sandy Delta Multnomah County	I-80N, <u>NO</u> Adjacent Off-Ramp
King Road Extension Clackamas County	King Road Off 82nd	Santosh Columbia County	West Lane Road Off U.S. 30
Newberg Landfill Yamhill County	River Road	Waybo Pit Multnomah County	N.E. Killingsworth
Old Pumpkin	Old Pumpkin Ridge Road	Porter-Yett Multnomah County	Cully Boulevard
		Grant Butte Pit Washington County	Mainly S.E. 194th & S.E. 190th

MSD STUDY

Table 15.1

LANDFILL SUMMARY

Site	Haul Cost (\$/ton)	Disposal Cost * (\$/ton)**	Total Cost (\$/ton)	Capacity (tons)
(1) Waybo-Roselawn	4.56	5.14	9.70	1,900,000
(2) Portland S & G	4.57	6.82	11.39	2,750,000
(3) Grant Butte Pits	5.74	5.88	11.62	950,000
(4) Oregon Asphaltic	4.80	7.35	12.15	1,400,000
(5) Columbia S & G	4.54	7.64	12.18	710,000
(6) Old Pumpkin	8.88	3.62	12.50	3,500,000
(7) St. Johns (Lateral)	6.18	6.67	12.86	1,700,000
(8) Durham	6.19	6.67	12.86	730,000
(9) Alford	9.68	3.29	12.97	8,800,000
(10) King Rd. Extension	5.90	7.55	13.45	1,900,000
(11) Hayden Island	6.46	7.92	14.38	10,700,000
(12) TR Sand Pit (Cipole)	6.75	8.17	14.92	950,000
(13) St. Johns (Up)	6.19	8.80	15.08	770,000
(14) Obrist	8.08	7.30	15.38	750,000
(15) Cooper Mountain	8.42	8.68	17.10	1,000,000

* Disposal Costs based on a volume of waste received of 730,000 tons per year (all of MSD's residential, and industrial and commercial waste plus 10% for public dumping).

** All costs 1977 dollars.

September 10, 1979

M E M O R A N D U M

TO: Bryan Johnson

FROM: Tom Arnold

SUBJECT: Columbia Sand & Gravel - Preliminary Noise Analysis

At your direction, we have reviewed the Columbia Sand & Gravel site for potential noise impact. The noise analysis is based upon the utilization of the empty gravel pit for land fill from building demolition. The analysis investigates the existing ambient noise levels, traffic noise specifically from N.E. 122nd and N.E. San Rafael and potential noise impact from "on-site" mobile equipment during land fill operations.

NOISE REGULATIONS

Site development must comply with the DEQ industrial noise regulations. The site is located outside of the City of Portland, therefore the city noise regulations do not apply. The DEQ noise regulations are listed in Table 1.

TABLE 1

Industrial Noise Regulations
Maximum Allowable dbA Sound Levels

<u>7AM-10PM</u>	<u>10PM-7AM</u>
L ₁ = 75	L ₁ = 60
L ₁₀ = 60	L ₁₀ = 55
L ₅₀ = 55	L ₅₀ = 50

It is my understanding that operations on the site will only occur between 7AM and 10PM. The primary sources of noise on the site during these hours will be mobile diesel equipment.

The noise from this equipment is regulated by the L₁₀ (10 percent of the time) noise levels. Maximum noise from trucks while on the site is also regulated to 60dbA during the day and 55dbA at night. This is the maximum noise level as measured at the nearest residential property.

ANALYSIS

The site and present adjacent land uses are shown on Figure 1. The Northeast corner of the site was selected as the most noise sensitive, as its residential use is furthest from noise and street traffic. Predictions of on-site noise were made to the residential area to the north. The site and adjacent land uses are identified on Figure 1. Figure 2 locates the noise monitoring site and the cross section locations used in projecting noise from the site.

Field ambient noise measurements were made at location M shown on Figure 2. Table 2 presents a statistical summary of the collected data, for comparison with predicted traffic noise levels and DEQ regulations.

TABLE 2
Measured Ambient Noise Levels

descriptor	all noise	ambient condition	
		w/o Airplane ⁽¹⁾	w/o Airplane & traffic ⁽²⁾
L ₁	60	53	53
L ₁₀	52	52	52
L ₅₀	50	49	49
L ₉₀	46	46	46

(1) Airplane arriving & departing PIA

(2) Street traffic on 122nd

Field measurements were not made on the mobile equipment to be used in the pit. File data from past SJO projects indicate maximum noise levels of 82-90dba from diesel equipment equipped with residential style exhaust mufflers. Based upon this data the noise levels were predicted to residential property north and east of the Pit. Typical cross sections showing mobile equipment and relation to the north residential property are shown on Figure 3. Noise from the pit was predicted to three sites.

Site 1 - front yard of home on N.E. 122nd

Site 2 - front yard of home on N.E. San Rafael

Site 3 - house on north edge of pit

Table 3 lists the predicted noise level from mobile pit equipment.

TABLE 3
Noise Level From Mobile Equipment

Location	Distance	dba
Site 1		
operating in bottom of pit	330'	52
operating at street level	330'	69
operating at street level	100'	78
Site 2		
operating in bottom of pit	710'	37
operating on second shelf	355'	57
operating at street level (far)	710'	62
operating at street level (near)	200'	72
Site 3		
operating in bottom of pit	100'	79
operating in bottom of pit	200'	73
operating at street level	50'	85

The maximum and minimum daytime L₁₀ sound levels from adjacent street traffic were predicted to each site.

Table 4 lists these values. The predictions are based upon hourly traffic volumes provided by Multnomah County.

TABLE 4

	Street Traffic L ₁₀ Noise Levels	
	<u>Maximum</u>	<u>Minimum</u>
Site 1	84	68
Site 2	59	59
Site 3	56	48

Site 1

Noise from equipment in the pit will not be detectable at Site 1 until the fill is near street level. At that time, the closest distance from the equipment to the site will be 100 feet. An 18 db reduction will be necessary to assure DEQ compliance. The existing minimum street traffic ambient however, is 68dba, abatement of noise below this level is not practical as it will not be noticeable. A 6 foot tall barrier wall should be erected on the west site of the pit when the fill is within 8 feet of street level.

Site 2

Noise from equipment in the pit will not be noticeable until the fill level has reached the present second shelf level (approximately 60 feet below street level). At this time a barrier should be erected along the southeast site border. The barrier should be 6 to 8 feet tall and extend 150 feet north and 100 feet west of the southeast corner.

Site 3

Noise from equipment in the pit will be noticeable and in violation of DEQ regulations to property on the northeast corner of the pit. A 20db reduction in noise level will be necessary for initial operations to be in compliance. A six foot tall barrier wall should be erected prior to start up.

Page -5-
Memo to Bryan Johnson
Sept. 10, 1979.

NOISE ABATEMENT

The barrier wall described for noise reduction may be constructed from 4 inch hollow concrete blocks, 4 inch solid wood, or composite wood wall of 3/4 inch plywood on 2 x 4 wood studs. The plywood wall should be capped and exterior grade plywood used.

All diesel equipment should be fitted with "residential" quality mufflers. A governor should be installed on each unit to prohibit over revving the engine beyond that necessary to perform normal operation.

TA/kgh



Figure 1 Adjacent Land Use

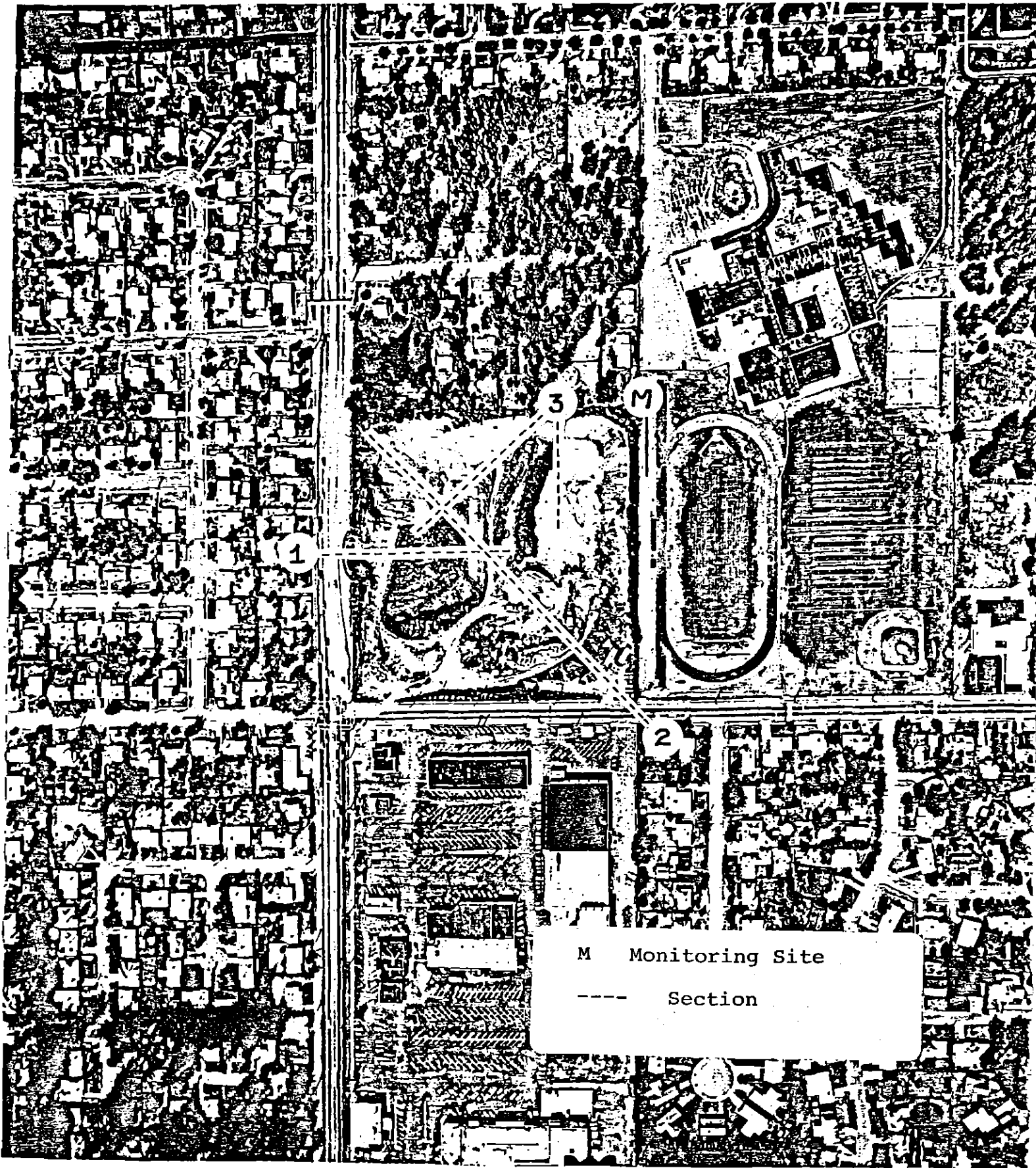


Figure 2 Site Sections

9-6-77

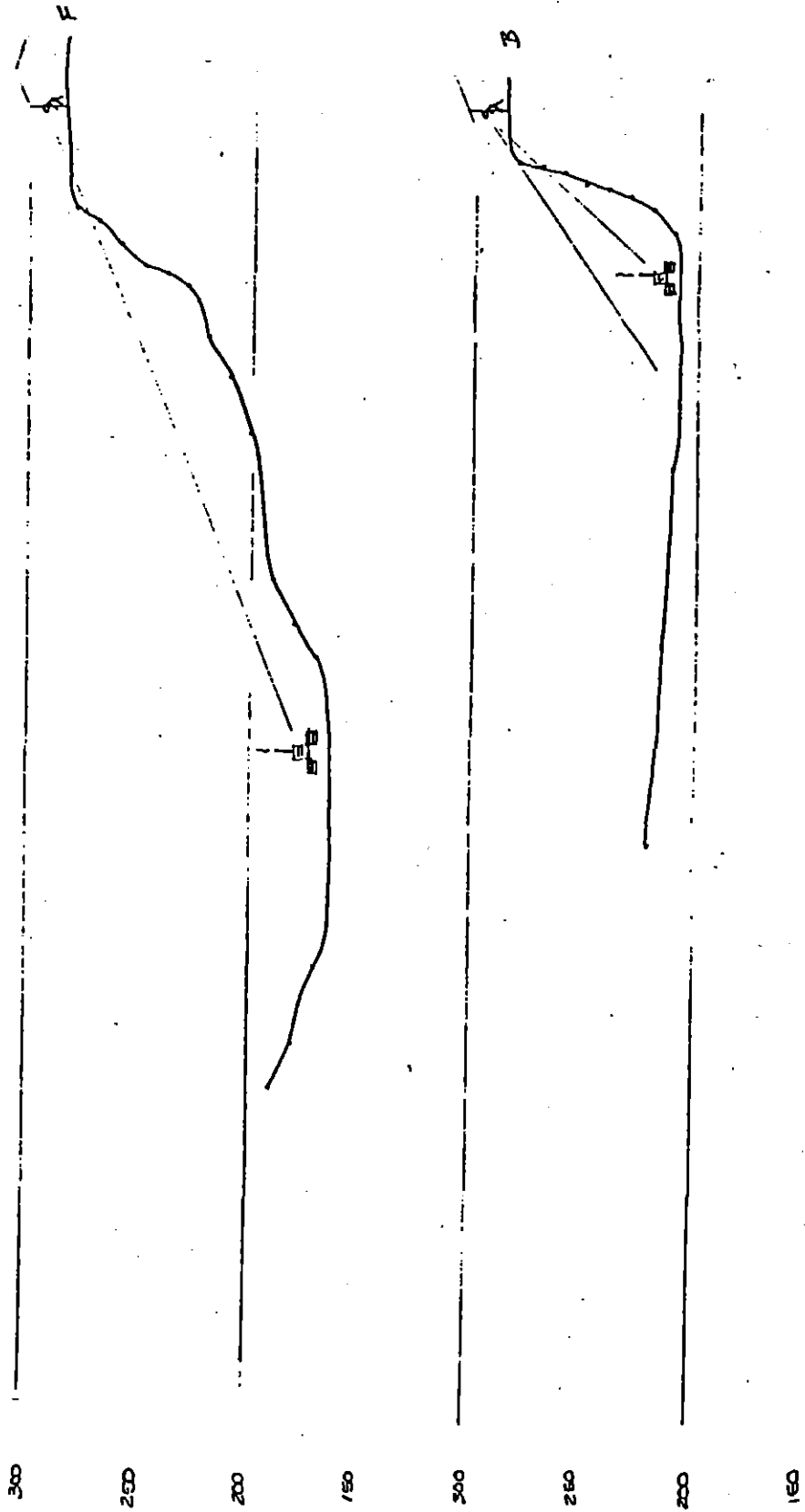
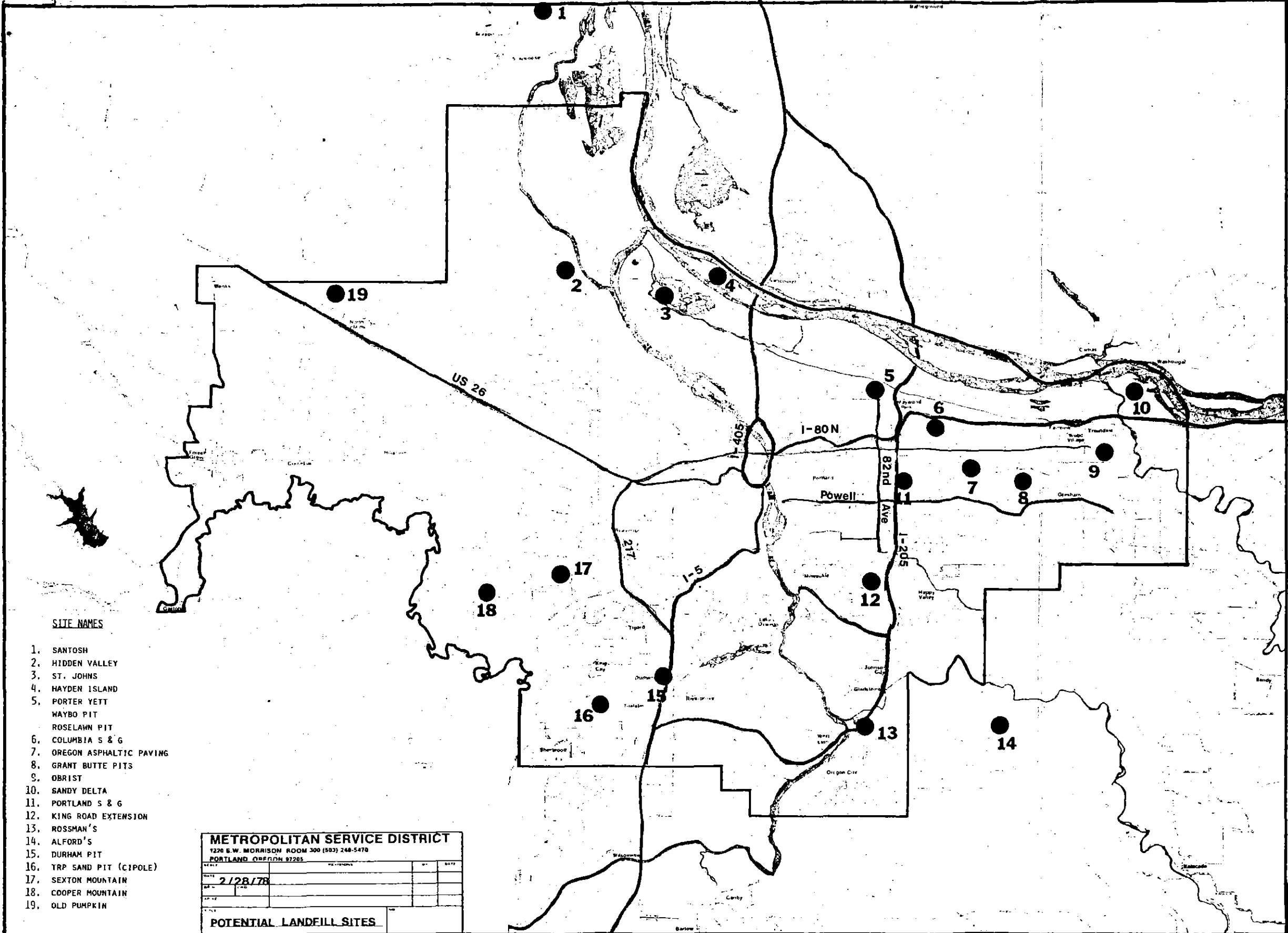


Figure 3 Typical Cross Sections (#3)



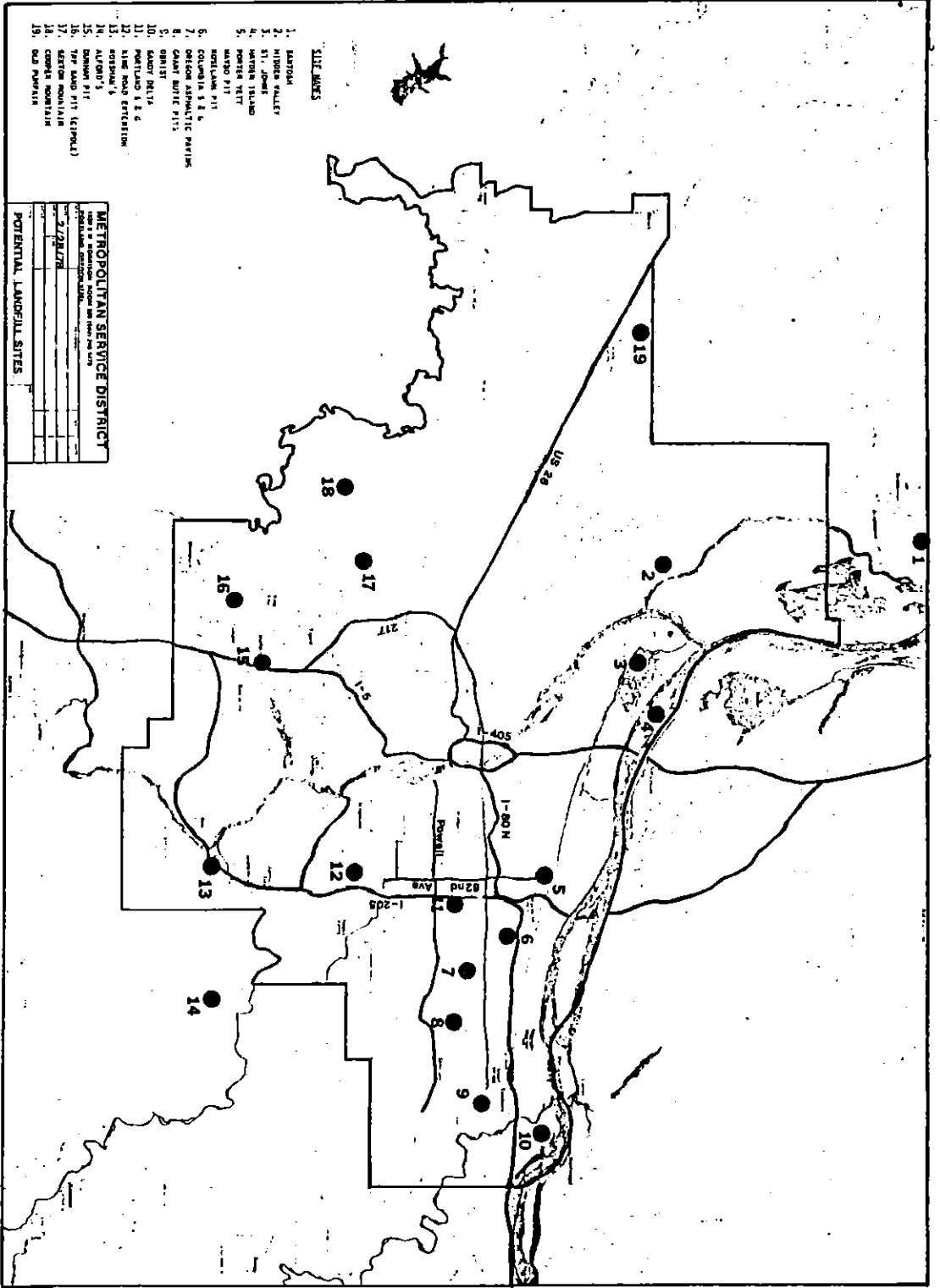
SITE NAMES

- 1. SANTOSH
- 2. HIDDEN VALLEY
- 3. ST. JOHNS
- 4. HAYDEN ISLAND
- 5. PORTER YETT
- 6. WAYBO PIT
- 7. ROSELAWN PIT
- 8. COLUMBIA S & G
- 9. OREGON ASPHALTIC PAVING
- 10. GRANT BUTTE PITS
- 11. OBRIST
- 12. SANDY DELTA
- 13. PORTLAND S & G
- 14. KING ROAD EXTENSION
- 15. ROSSMAN'S
- 16. ALFORD'S
- 17. DURHAM PIT
- 18. TRP SAND PIT (CIPOLE)
- 19. SEXTON MOUNTAIN
- 20. COOPER MOUNTAIN
- 21. OLD PUMPKIN

METROPOLITAN SERVICE DISTRICT
 1220 E.W. MORRISON ROOM 300 (503) 248-5470
 PORTLAND, OREGON 97205

DATE	2/28/78			
BY				
FOR				
BY				

POTENTIAL LANDFILL SITES



METROPOLITAN SERVICE DISTRICT

DATE: 2/28/78

POTENTIAL LANDFILL SITES

SITE NO.	DESCRIPTION	STATUS
1	BARTON	
2	WHITE SALTER	
3	WINDY HOLLOW	
4	WATERS ISLAND	
5	PORTER TRIT	
6	WATRO PIT	
7	MONTANA PIT	
8	COLUMBIA S & S	
9	OREGON ASPHALTIC PAVING	
10	OAKHART WHITE PITS	
11	OAKHART	
12	SANDY BELLS	
13	PORTLAND S & S	
14	WINE ROAD EXTENSION	
15	OGDEN #1	
16	ALBION #1	
17	DENSON PIT	
18	PPT ROAD PIT (KIPPOUL)	
19	GREENE MOUNTAIN	
20	OLD PAPER MILLS	

REFERENCES

- Elzy, E., F.T. Lindstrom, L. Boersma, H.R. Sweet and P.H. Wicks, 1974, Disposal of environmentally hazardous wastes in Wang, C.H. ed., Task Force Rpt., Env. Hlth. Serv. Center, Ore. St. Univ., Ch. 4, p. 111-210.
- Trimble, D.E., 1957, Geology of Portland, Oregon, and adjacent areas: U.S. Geol. Survey Bulletin 1119, 119 p.
- Willis, R.F., 1978, Pilot Well Study for City of Portland: Bureau of Water Works unpublished report, 150 pages and appendix.
- Willis, R.F., 1977, Ground Water Exploratory Program, Bureau of Water Works unpublished report.

APPENDIX 3-A

WELL LOG DATA

ENVIRONMENTAL GEOLOGY & GROUND WATER WELL DATA

Project Columbia P.T

Owner Lewis A. Hopwood State No. _____
 Address 11031 N.E. Beech Other No. _____
 Tenant _____
 Address _____

Type of Well: Hydrograph Key Index Semiannual Quality
 Location: County Multnomah Basin Columbia No. _____
 U.S.G.S. Quad. Mt. Tabor Quad. No. _____
SE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 22, Twp. 1N, Rgn. 2E Will. Meridian

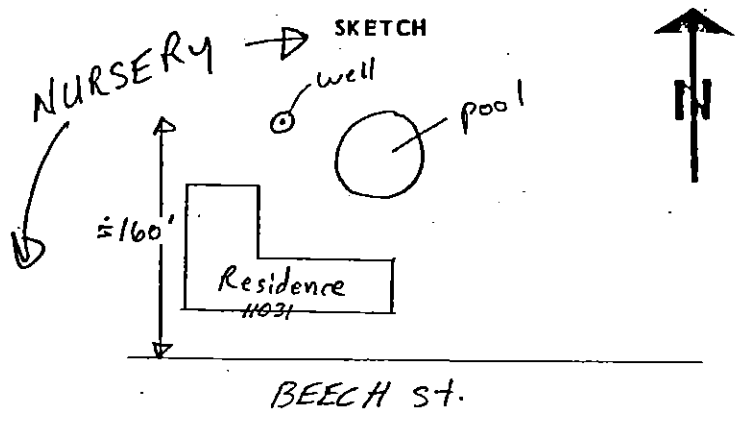
Description _____

Reference Point description _____

which is _____ ft. ^{above} land surface. Ground Elevation 150' (estimated from U.S.G.S.) ft.
 Reference Point Elev. _____ ft. Determined from _____
 Well: Use Irrigation Condition in use Depth 180 ft.
 Casing, size _____ In., perforations _____

Measurements By: DWR USGS USBR County Irr. Dist. Water Dist. Cons. Dist. Other
 Chief Aquifer Name _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____
 Type of Material _____ Perm. Rating _____ Thickness _____
 Gravel Packed? Yes No Depth to Top Gr. _____ Depth to Bot. Gr. _____
 Supp. Aquifer _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____
 Driller Calvin Bramm
 Date drilled 1969 Log, filed? ? open (1) _____ confidential (2) _____
 Equipment Pump, type Submersible make _____
 Serial No. _____ Size of discharge pipe _____ In.
 Power, Kind _____ Make Jacuzzi
 H. P. 5 Motor Serial No. _____
 Elec. Meter No. _____ Transformer No. _____
 Yield 50 gpm G.P.M. Pumping level _____ ft.

Water Analysis: Min. (1) _____ San. (2) _____ H.M. (3) _____
 Water Levels available: Yes (1) _____ No _____
 Period of Record: Begin _____ End _____
 Collecting Agency: _____
 Prod. Rec. (1) _____ Pump Test (2) _____ Yield (3) _____



REMARKS

commonly pumps 50 gpm in summer periodically

bail test
25 gpm 1 foot drawdown
immediate recovery

DEQ tests showed high Nitrate

Static level 131'
Surface E1 5' below K1

Recorded by: JIC
 Date: 7/18/79

ENVIRONMENTAL GEOLOGY & GROUND WATER WELL DATA

Project Columbia Pit

Owner <u>Park Rose Water District</u> Address <u>4800 NE 122nd</u> Tenant _____ Address _____	State No. _____ Other No. <u>Well No-2 (of 3)</u>
---	--

Type of Well: Hydrograph Key Index Semiannual Quality

Location: County Multnomah Basin Columbia No. _____

U.S.G.S. Quad. Mt. Tabor Quad. No. _____

SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 23, Twp. 1N, Rgn. 2E Will. Meridian

Description _____

Reference Point description _____

which is _____ ft. above land surface. Ground Elevation _____ ft.
 Reference Point Elev. 34.53 ft. Determined from Surveyed by district

Well: Use Under District Condition In Use Depth 63 ft.
 Casing, size 24" in., perforations 33 to 63 feet

Measurements By: DWR USGS USBR County Irr. Dist. Water Dist. Cons. Dist. Other

Chief Aquifer: Name _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____

Type of Material _____ Perm. Rating _____ Thickness _____

Gravel Packed? Yes No Depth to Top Gr. _____ Depth to Bot. Gr. _____

Supp. Aquifer _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____

Driller R. J. Strasser

Date drilled February 1965 Log, filed yes open (1) confidential (2) _____

Equipment Pump, type _____ make _____

Serial No. _____ Size of discharge pipe _____ in.

Power, Kind _____ Make _____

H. P. _____ Motor Serial No. _____

Elec. Meter No. _____ Transformer No. _____

Yield _____ G.P.M. Pumping level _____ ft.

Water Analysis: Min. (1) _____ San. (2) H.M. (3) _____

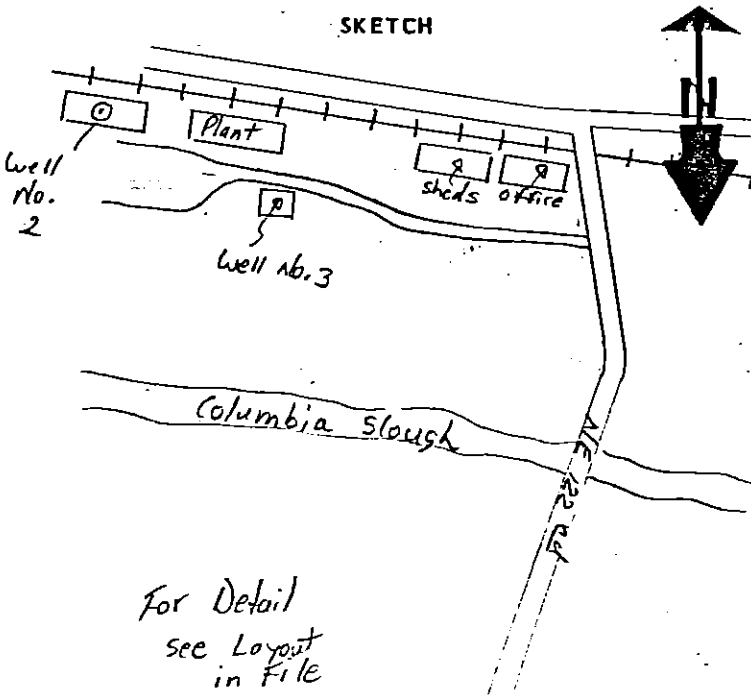
Water Levels available: Yes (1) pumping No _____

Period of Record: Begin _____ End _____

Collecting Agency: Park Rose Water District

Prod. Rec. (1) _____ Pump Test (2) yes Yield (3) 2450 gpm

SKETCH



REMARKS

Summer & Winter static levels approx. same

Recorded by: _____
 Date _____

ENVIRONMENTAL GEOLOGY & GROUND WATER WELL DATA

Project _____

Owner D.D. Lewis 4m 257-4520 State No. _____
 Address 4417 N.E. 136th OK-228-7404 Other No. _____
 Tenant _____
 Address _____

Type of Well: Hydrograph Key Index Semiannual Quality
 Location: County Multnomah Basin _____ No. _____
 U.S.G.S. Quad. Mount Tabor 7 1/2 min. Quad. No. _____
SW 1/4 NE 1/4 Section 23, Twp. 1N, Rge. 2E Will. Meridian

Description _____

Reference Point description Top of 6 inch diameter (inside) concrete casing

which is 1.25' (15") ft. ^(above)/_(below) land surface. Ground Elevation 35 FT. (estimated from U.S.G.S. Map) ft.
 Reference Point Elev. 36 1/4 ft. Determined from estimated
 Well: Use Domestic (two homes) Condition in use Depth ≈ 6.5-70 ft.
 Casing, size 6" diam. (I.D.) in., perforations unknown

Measurements By: DWR USGS USBR County Irr. Dist. Water Dist. Cons. Dist. Other

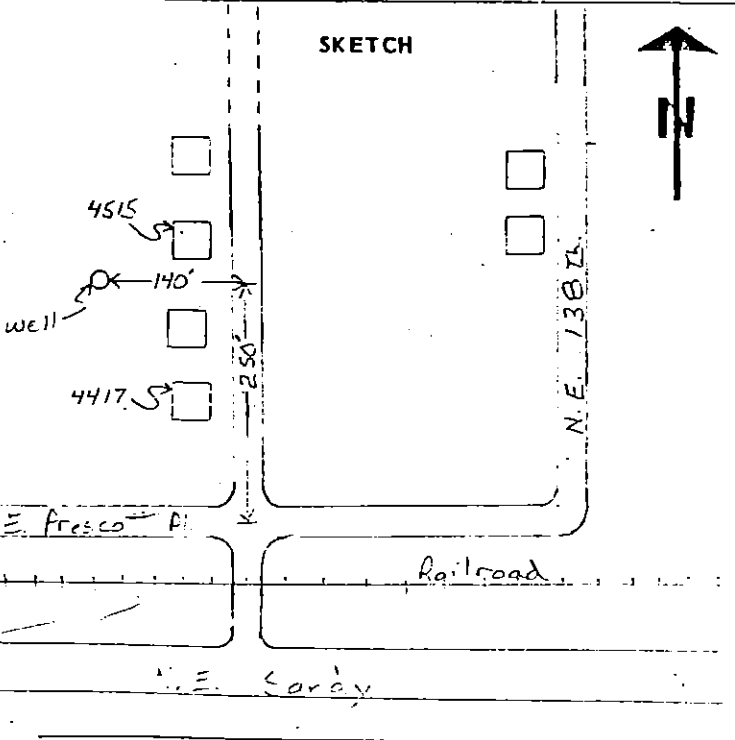
Chief Aquifer: Name _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____
 Type of Material _____ Perm. Rating _____ Thickness _____
 Gravel Packed? Yes No Depth to Top Gr. _____ Depth to Bot. Gr. _____
 Supp. Aquifer _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____
 Driller _____

Date drilled _____ Log, filed _____ open (1) _____ confidential (2) _____

Equipment Pump, type Jet make _____
 Serial No. _____ Size of discharge pipe _____ in.
 Power, Kind electric Make _____
 H. P. 3/4 Motor Serial No. _____
 Elec. Meter No. _____ Transformer No. _____
 Yield _____ G.P.M. Pumping level _____ ft.

Water Analysis: Min. (1) _____ San. (2) _____ H.M. (3) _____
 Water Levels available: Yes (1) _____ No _____
 Period of Record: Begin _____ End _____
 Collecting Agency: _____
 Prod. Rec. (1) _____ Pump Test (2) _____ Yield (3) _____

SKETCH



REMARKS

Water level 7-19-79 (not pumping)
21 ft. 8 inches below measuring
point (20 1/2 ft below ground surface)
Well is serving two homes owned
by Mr. Lewis. The well is in back
of 4515 N.E. 136th which is rented
out.
Water samples were taken for the
health department in the past. They
were not potable (according to the health
department).
The well is in a small wood building
at the back of the lot.
 Recorded by: C.E. ...
 Date: _____

ENVIRONMENTAL GEOLOGY & GROUND WATER WELL DATA

Project Columbia SSG

Owner Jack Kyle State No. _____
 Address 4511 138th Other No. _____
 Tenant _____
 Address _____

Type of Well: Hydrograph Key Index Semiannual Quality
 Location: County Multnomah Basin _____ No. _____
 U.S.G.S. Quad. Mt. Tabor 7 1/2 min. Quad. No. _____
 1/4 Section _____, Twp. _____, Rge. _____ Will. Meridian _____

Description _____

Reference Point description _____

which is _____ ft. above land surface. Ground Elevation 34 Ft. (estimated from U.S.G.S. map) ft.
 Reference Point Elev. _____ ft. Determined from _____
 Well: Use Domestic Condition in use Depth 90 ^{see remarks} ft.
 Casing, size 6 inch in., perforations see remarks

Measurements By: DWR USGS USBR County Irr. Dist. Water Dist. Cons. Dist. Other

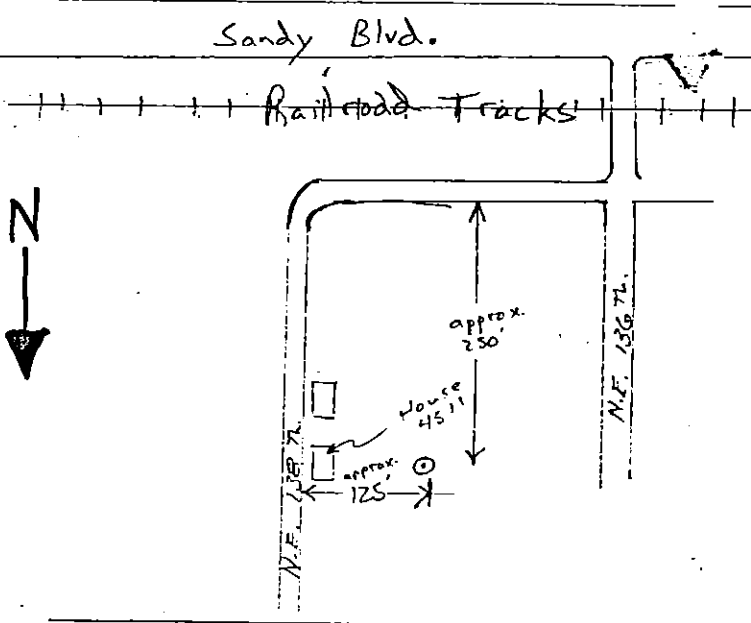
Chief Aquifer: Name _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____
 Type of Material _____ Perm. Rating _____ Thickness _____
 Gravel Packed? Yes No Depth to Top Gr. _____ Depth to Bot. Gr. _____
 Supp. Aquifer _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____

Driller _____
 Date drilled _____ Log, filed _____ open (1) _____ confidential (2) _____

Equipment: Pump, type submersible make _____
 Serial No. _____ Size of discharge pipe _____ in.
 Power, Kind: electric Make _____
 H. P. 1/2 Motor Serial No. _____
 Elec. Meter No. _____ Transformer No. _____
 Yield 30 G.P.M. Pumping level _____ ft.

Water Analysts: Min. (1) _____ San. (2) _____ H.M. (3) _____
 Water Levels available: Yes (1) _____ No _____
 Period of Record: Begin _____ End _____
 Collecting Agency: _____
 Prod. Rec. (1) _____ Pump Test (2) _____ Yield (3) _____

SKETCH



REMARKS

Note: Information was based on owners recollections. Previous owner had the well installed.
Gus Scritsmire
4339 N.E. 133rd.
Portland
253-6816
Mr. Scritsmire said the well was drilled in 1953-1954 and was about 70 feet deep. Static level was 26-30 feet.

Recorded by: CEW
 Date: 7-18-79

MUNICIPAL SUPPLY—

13. To supply the city of _____
in _____ county, having a present population of _____
and an estimated population of _____ in 19____

ANSWER QUESTIONS 14, 15, 16, 17 AND 18 IN ALL CASES

14. Estimated cost of proposed works, \$2,456.00 plus \$9.00 per ft. greater depth; less \$10.00 per ft. lesser depth.

15. Construction work will begin on or before _____ on approval of this application.

16. Construction work will be completed on or before 30 days thereafter.

17. The water will be completely applied to the proposed use on or before _____ as soon as well is operative.

18. If the ground water supply is supplemental to an existing water supply, identify any application for permit, permit, certificate or adjudicated right to appropriate water, made or held by the applicant. NO applicable.

Remarks:

*Public School Dist #3, Mult. Co.,
by Don J. Thompson, Supt*

STATE OF OREGON, }
County of Marion, }

This is to certify that I have examined the foregoing application, together with the accompanying maps and data, and return the same for _____ correction.

In order to retain its priority, this application must be returned to the State Engineer, with corrections on or before June 23, 1958.

WITNESS my hand this 21 day of April, 1958.

LEWIS A. STANLEY

STATE ENGINEER

By *James W. Carter, Jr.*
James W. Carter, Jr.

SEAL

Permit No. G-812

APPLICATION FOR A PERMIT

To Appropriate the Ground Waters of the State of Oregon

I, Parkrose School District #3 of 10613 N. E. Prescott Street, Portland, county of Multnomah

state of OREGON, do hereby make application for a permit to appropriate the following described ground waters of the state of Oregon, SUBJECT TO EXISTING RIGHTS:

If the applicant is a corporation, give date and place of incorporation

1. Give name of nearest stream to which the well, tunnel or other source of water development is situated Approximately two miles south of the Columbia tributary of

2. The amount of water which the applicant intends to apply to beneficial use is 250 cubic feet per second or 250 gallons per minute.

3. The use to which the water is to be applied is Irrigation of school grounds, lawns and athletic fields.

4. The well or other source is located 475 ft S. and 135 ft W. from the N.E. corner of Lot Thirty-one (31), HAZELWOOD, except that portion in Northeast San Raphael Street in the County of Multnomah and State of Oregon.

(2165 FT. N. 1185 FT. E. from the S.W. Corner of Sec. 26) being within the Northwest quarter of the Southwest quarter of Sec. 26, Twp. 1 North, R. 1 N. 2E., W. M., in the county of Multnomah

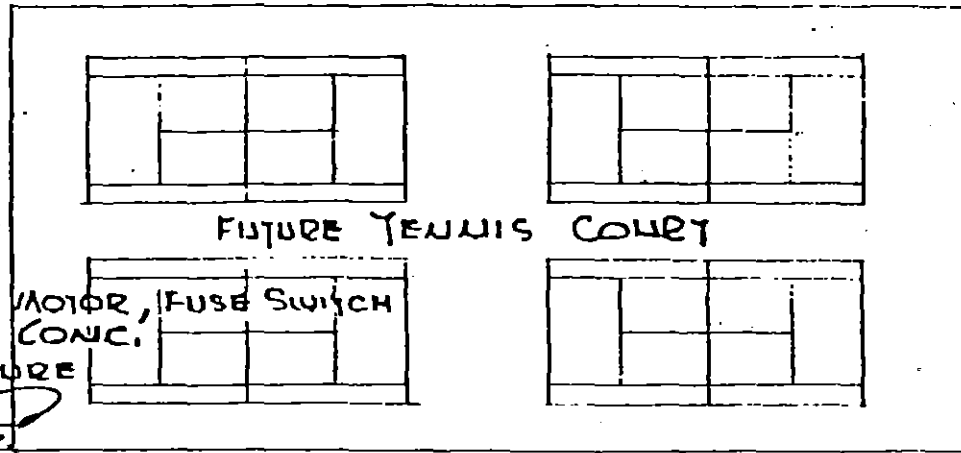
5. The to be in length, terminating in the of Sec. Twp. R., W. M., the proposed location being shown throughout on the accompanying map.

6. The name of the well or other works is Parkrose Heights Junior High School

DESCRIPTION OF WORKS

7. If the flow to be utilized is artesian, the works to be used for the control and conservation of the supply when not in use must be described.

8. The development will consist of 1 well having a diameter of 8 inches and an estimated depth of 250 feet. It is estimated that 250 feet of the well will require steel casing. Depth to water table is estimated 100



FUTURE TENNIS COURT

INSTALL PUMP, MOTOR, FUSE SWITCH
 & CONTROLS - CONC.
 SLAB & ENCLOSURE
 BY OTHERS

INSTALL PULL BOX AT END
 OF EXISTING CONDUIT &
 EXTEND 1 1/2" CONDUIT TO PUMP LOCATION

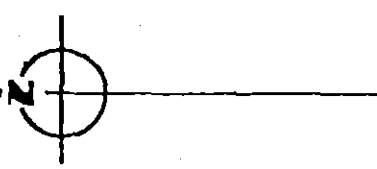
EXISTING 1 1/2" CONDUIT
 TO THIS POINT.

EXISTING
 PAVING

1 1/2" CONDUIT
 IN CRAWL
 SPACE UNDER
 GYM FLOOR

PULL 3 # 2 TW CONDUCTORS FROM
 PUMP THRU EXISTING BREAKER
 TO GUTTER IN FAU DOOR

EXISTING SCHOOL BLDG.
 N.E. 124TH & BRALEE ST.



PUMP PLAN

SCALE 1" = 50'-0"

31-JULY-1958

PARKROSE HEIGHTS JR HIGH SCHOOL
 SCHOOL DISTRICT No 3
 MULTNOMAH COUNTY, OREGON

ANNAND, BOONE & LEI

2070

WATER WELL REPORT

State Well No. _____

STATE OF OREGON

State Permit No. _____

Original and
not Copy with the
STATE ENGINEER,
ALLEN, OREGON

1) OWNER:

Name PARKROSE SCHOOL DISTRICT #3, Mult. County
Address 10613 N. E. Prescott
Portland 20, Oregon

2) LOCATION OF WELL:

County Multnomah Owner's number, if any: _____

Section 1/4 Section 1/4 T. T. R. R. W.M. _____

Bearing and distance from section or subdivision corner _____

(11) WELL TESTS:

Drawdown is amount water level is lowered below static level **BOTTNER**

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

Yield: 150 gal./min. with 4 1/2 ft. drawdown after 1/2 hrs.

" 200 " " 6 " " 1 "

" 250 " " 7 1/2 " " 1 1/2 "

~~XXXXXX~~ 350 gal./min. with 8 1/2 ft. drawdown after 4 hrs.

~~XXXXXXXXXX~~ 450 " " 9 " " 5 "

Temperature of water 49° Was a chemical analysis made? Yes No

(12) WELL LOG:

Diameter of well 10 inches.

Depth drilled 415 ft. Depth of completed well back filled to 410 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
Top Soil	0	3
Gravel & Boulders	3	10
Boulders	10	16
Br. Clay, Sand & Gravel	16	26
Boulders	26	32
Gray Clay, Sand & Gravel	32	42
Real Large Boulders	42	46
Cemented Gravel	46	54
Boulders	54	58
Cemented Gravel	58	74
Loose Pea Gravel	74	81
Cemented Gravel & Boulders	81	94
Loose Gravel & Boulders	94	120
Cemented Gravel	120	130
Loose & Cemented Gravel	130	145
Very Loose Gravel & Sand	145	209
Cemented Gravel	209	223
Gravel (w. Bearing) Batter test approx. 100gpm	223	225
Cemented Gravel	225	245
Sandy Yellow Clay	245	265
Bluish Sandy Clay	265	275
Cemented Gravel	275	299
Yellow Sand	299	300
Cemented Gravel (water br. Large & Small Grv. some sand)	300	386
Real Tight C. Gravel	386	412
Gravel & Blue Clay	412	415

Work started May 7 19 58 Completed July 23 19 58

3) TYPE OF WORK (check):

New Well Deepening Reconditioning Abandon
If 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:

10 " Diam. from 0 ft. to 399' 10" ft. Gage STANDARD
" Diam. from _____ ft. to _____ ft. Gage _____
" Diam. from _____ ft. to _____ ft. Gage _____

7) PERFORATIONS:

Perforated? Yes No
Type of perforator used STAR 4 Way Drive Down
No. of perforations 3/8 in. by 1 1/4 in.
96 perforations from 222 ft. to 226 ft.
268 perforations from 374 ft. to 386 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:

Is well gravel packed? Yes No Size of gravel: _____
Level placed from _____ ft. to _____ ft.
Is a surface seal provided? Yes No To what depth? 30 ft.
Material used in seal— Sand Gravel & Cement
Do any strata contain unusable water? Yes No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

10) WATER LEVELS:

Static level 236 ft. below land surface Date 7/23/58
 Artesian pressure _____ lbs. per square inch Date _____

Accepted by:

Signed] _____ Date _____, 19 _____
(Owner)

(13) PUMP:

Manufacturer's Name _____
Type: _____ H.P. _____

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 MAKON I. BOTTNER WELL DRILLING:
(Person, firm, or corporation) (Type of print)

Address 11544 N. E. Glisan St.

Driller's well number _____

I Signed] _____
(Well Driller)

License No. 109 Date Aug. 12, 19 58

(1) OWNER: SALEM, OREGON
Name PARKROSE SCHOOL DISTRICT #3, Mult. County
Address 10613 N. E. Prescott
Portland 20, Oregon

(2) LOCATION OF WELL: 12456 N. E. Brazee
County Multnomah Owner's number, if any—
Bearing and distance from section or subdivision corner

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

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

(6) CASING INSTALLED: Threaded Welded
10" Diam. from 0 ft. to 399810 ft. Gage STANDARD
" Diam. from ft. to ft. Gage
" Diam. from ft. to ft. Gage

(7) PERFORATIONS: Perforated? Yes No
Type of perforator used STAR 1/4 Way Drive Down
SIZE of perforations 3/8 in. by 1 1/2 in.
96 perforations from 222 ft. to 226 ft.
268 perforations from 374 ft. to 386 ft.

(8) 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.

(9) INSTRUCTION: Gravel packed? Yes No Size of gravel:
Gravel placed from ft. to ft.
Was a surface seal provided? Yes No To what depth? 30 ft.
Material used in seal— Sand Gravel & 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 236 ft. below land surface Date 7/23/58
Artesian pressure lbs. per square inch Date

Log Accepted by: Parkrose Public Schools
[Signed] _____ Date _____, 19____
by _____ Owner

(11) WELL TESTS: Drawdown is amount water level is lowered below static level BOTTN:
Was a pump test made? Yes No If yes, by whom? WELL, DRILLI
Yield: 150 gal./min. with 4 1/2 ft. drawdown after 1/2 hrs.
" 200 " 6 " 1 "
" 250 " 7 1/2 " 1 1/2 "
Bailer test 350 gal./min. with 8 1/2 ft. drawdown after 4 hrs.
Artesian flow 450 g.p.m. Date " " 5
Temperature of water 49° Was a chemical analysis made? Yes No

(12) WELL LOG: Diameter of well 10 inches
Depth drilled 415 ft. Depth of completed well back filled to 410 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
Top Soil	0	3
Gravel & Boulders	3	10
Boulders	10	16
Br. Clay, Sand & Gravel	16	26
Boulders	26	32
Gray Clay, Sand & Gravel	32	42
Real Large Boulders	42	46
Cemented Gravel	46	54
Boulders	54	58
Cemented Gravel	58	74
Loose Pea Gravel	74	81
Cemented Gravel & Boulders	81	94
Loose Gravel & Boulders	94	120
Cemented Gravel	120	130
Loose & Cemented Gravel	130	145
Very Loose Gravel & Sand	145	209
Cemented Gravel	209	223
Gravel (w. Bearing) approx. 100 gpm	223	225
Cemented Gravel	225	245
Sandy Yellow Clay	245	265
Bluish Sandy Clay	265	275
Cemented Gravel	275	299
Yellow Sand	299	300
Cemented Gravel (water br.)	300	371
Large & Small Grv. some sand)	371	386
Real Tight C. Gravel	386	412
GRAY started BLUE CLAY Completed	412	415

(13) PUMP: started May 7 58 Completed July 23/58
Manufacturer's Name
Type: H.P.

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 HAAKON I. BOTTNER WELL DRILLING
(Person, firm, or corporation) (Type or print)
Address 21544 N. E. GLISAN ST.
Driller's well number
[Signed] Haakon I. Bottner (Well Driller)
License No. 109 Date AUG. 12, 1958

ENVIRONMENTAL GEOLOGY & GROUND WATER WELL DATA

Project Columbia Pit

Owner Park Rose School District State No. _____
 Address 12456 W.F. Brazee Other No. _____
 Tenant _____
 Address _____

Type of Well: Hydrograph Key Index Semiannual Quality
 Location: County Multnomah Basin Columbia No. _____
 U.S.G.S. Quad. Mt. Tabor Quad. No. _____
NW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 26, Twp. 1N, Rgn. 2E Will. Meridian

Description _____

Reference Point description _____

which is _____ ft. ^{above} land surface. Ground Elevation _____ ft.

Reference Point Eley. 271' ft. Determined from U.S.G.S Topo map (estimated)

Well: Use Irrigation Condition In Use Depth 399' ft.

Casing, size 10" In., perforations _____

Measurements By: DWR USGS USBR County Irr. Dist. Water Dist. Cons. Dist. Other

Chief Aquifer: Name _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____

Type of Material _____ Perm. Rating _____ Thickness _____

Gravel Packed? Yes No Depth to Top Gr. _____ Depth to Bot. Gr. _____

Supp. Aquifer _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____

Driller Maakon I. Bottner Drilling

Date drilled Aug '58 Log, filed _____ open (1) _____ confidential (2) _____

Equipment Pump, type Turbine make Lane Bowler

Serial No. BCH 20 Size of discharge pipe _____ In. Water Analysts: Min. (1) _____ San. (2) _____ H.M. (3) _____

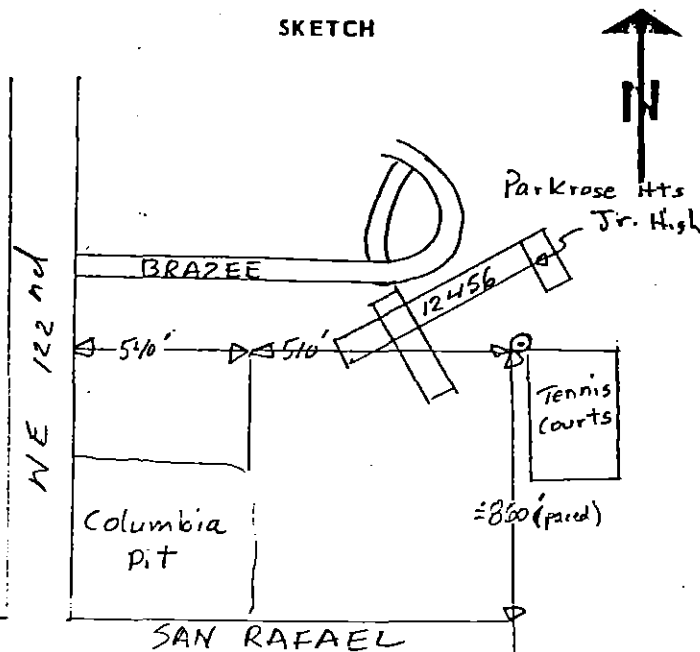
Power, Kind Electric Make _____ Water Levels available: Yes (1) _____ No _____

H. P. 20? Motor Serial No. _____ Period of Record: Begin _____ End _____

Elec. Meter No. _____ Transformer No. _____ Collecting Agency: _____

Yield 350 gpm? G.P.M. Pumping level _____ ft. Prod. Rec. (1) _____ Pump Test (2) Yield (3) 450 gpm

SKETCH



REMARKS

See Shane, the Custodian
Turbine pump has airline
which may need new gauge
and needs pressure source

Recorded by: [Signature]
 Date: 7/18/79

RECEIVED JUN 1 1961

STATE ENGINEER WATER WELL REPORT SALEM, OREGON STATE OF OREGON

State Well No. IN/2 E-26M State Permit No. 61562

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

(1) OWNER: (Wm. Stoker) Columbia Sand & Gravel Name Address 2234 N.E. 122 Av. Portland Oregon

(2) LOCATION OF WELL: County Mult. Owner's number, if any - 1/4 Section T. R. W.M. Bearing and distance from section or subdivision corner

(3) TYPE OF WORK (check): Well [X] Deepening [] Reconditioning [] Abandon []

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

(6) CASING INSTALLED: Threaded [] Welded [X] 8" Diam. from 0 ft. to 313 ft. Gage 330 6" Diam. from 305 ft. to 377 ft. Gage

(7) PERFORATIONS: Perforated? [X] Yes [] No Type of perforator used Star drive down SIZE of perforations 3/8 in. by 1-1/4 in. 200 perforations from 305 ft. to 315 ft. 100 perforations from 365 ft. to 370 ft.

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

(9) CONSTRUCTION: Was well gravel packed? [] Yes [X] No Size of gravel: Gravel placed from ft. to ft. Was a surface seal provided? [X] Yes [] No To what depth? 27 ft. Material used in seal - SAND & cement Did any strata contain unusable water? [] Yes [X] No Type of water? Depth of strata Method of sealing strata off

(10) WATER LEVELS: Static level 203 ft. below land surface Date 4/15/61 Artesian pressure lbs. per square inch Date

Log Accepted by: [Signed] Date 19

(11) WELL TESTS: Drawdown is amount water level is lowered below static level Was a pump test made? [X] Yes [] No If yes, by whom? Bottner Yield: 140 gal./min. with 23 ft. drawdown after 24 hrs. Baller test gal./min. with ft. drawdown after hrs. Artesian flow g.p.m. Date Temperature of water 53 Was a chemical analysis made? [] Yes [] No

(12) WELL LOG: Diameter of well 8 inches. Depth drilled 388 ft. Depth of completed well 377 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.

Table with columns MATERIAL, FROM, TO. Rows include Gravel & boulders, Clay & gravel, Sand & gravel, Gravel & Boulders, Cemented Gravel, Yellow Sand, Sand & Gravel (water), Clay & Gravel, Gravel (water), Blue Clay.

Work started 19 Completed 19

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

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 Bottner Drilling Co. (Type or print) Address 11544 N.E. Glicen Portland Ore. Driller's well number [Signed] H. Bottner (Well Driller) License No. 100 Date May 19

ENVIRONMENTAL GEOLOGY & GROUND WATER WELL DATA

Project Columbia Pit

Owner Columbia Sand and Gravel State No. _____
 Address 2234 N.E. 122nd Other No. _____
 Tenant _____
 Address _____

Type of Well: Hydrograph Key Index Semiannual Quality
 Location: County Multnomah Basin Columbia No. _____
 U.S.G.S. Quad. Mt. Tabor Quad. No. _____
NW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 26, Twp. 1N, Rge. 2E Will. Meridian

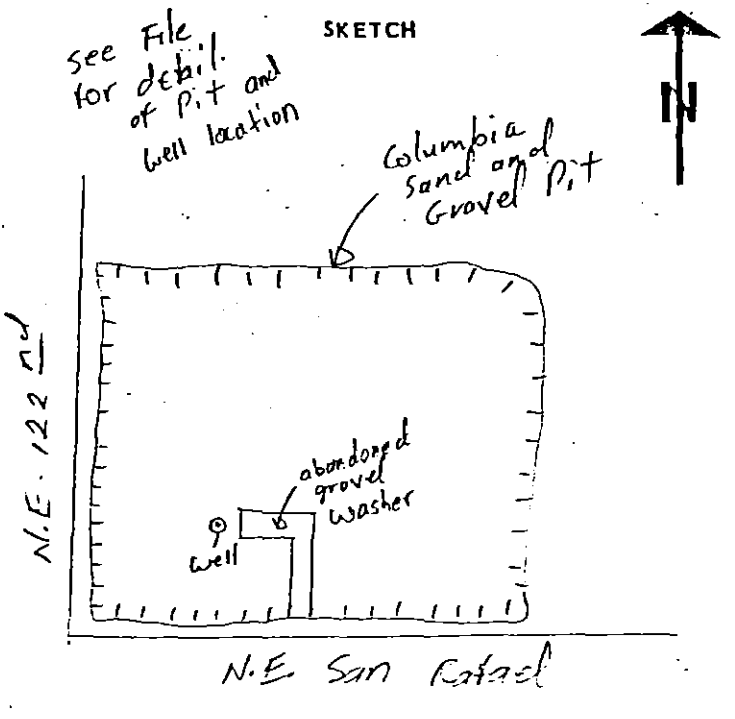
Description _____

 Reference Point description _____

which is _____ ft. ^{above}/_{below} land surface. Ground Elevation _____ ft.
 Reference Point Elev. _____ ft. Determined from _____
 Well: Use Industrial (Rock crusher) Condition IN Use Depth 370 ft.
 Casing, size 8" and 6" In., perforations from 305 to 370 feet

Measurements By: DWR USGS USBR County Irr. Dist. Water Dist. Cons. Dist. Other
 Chief Aquifer: Name _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____
 Type of Material _____ Perm. Rating _____ Thickness _____
 Gravel Packed? Yes No Depth to Top Gr. _____ Depth to Bot. Gr. _____
 Supp. Aquifer _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____
 Driller Bottner Drilling Co.
 Date drilled May 1961 Log, filed yes open (1) confidential (2) _____
 Equipment: Pump, type Submersible make _____
 Serial No. _____ Size of discharge pipe _____ in.
 Power, Kind: _____ Make _____
 H. P. _____ Motor Serial No. _____
 Elec. Meter No. _____ Transformer No. _____
 Yield _____ G.P.M. Pumping level _____ ft.

Water Analysis: Min. (1) _____ San. (2) _____ H.M. (3) _____
 Water Levels available: Yes (1) _____ No _____
 Period of Record: Begin _____ End _____
 Collecting Agency: _____
 Prod. Rec. (1) _____ Pump Test (2) yes Yield (3) 140 gpm



REMARKS

Pit no longer in operation
only using it to make concrete; not mining gravel.
Water is only used for making concrete

Elevation estimated at 220 by Portland Water Bureau Study.

Recorded by: _____
 Date: 7/19/79

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)

State Well No. _____

State Permit No. _____

(1) OWNER:

Name Parkrose Water District
Address 10424 N.E. Fremont Portland, Oregon

(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

(5) CASING INSTALLED:

Threaded Welded
24" Diam. from +4 ft. to 41 ft. Gage 375
22" Diam. from 39 ft. to 41 ft. Gage 375
22" Diam. from 61 ft. to 65 ft. Gage 375

(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.
perforations from _____	ft. to _____	ft.
perforations from _____	ft. to _____	ft.

(7) SCREENS:

Well screen installed? Yes No

Manufacturer's Name V.O.P. Johnson
Type Stainless Steel Model No. _____
Diam. 24 Slot size 10 Set from 41 ft. to 61 ft.
Diam. _____ Slot size _____ Set from _____ ft. to _____ ft.

(8) WATER LEVEL: Completed well.

Static level 17 ft. below land surface Date 2/18/70
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 No If yes, by whom? Strasser
Yield: 2000 gal./min. with 17 ft. drawdown after 22 hrs.
- 2250 - - 20 - - 23 -
- 2325 - - 24.5 - - 26 -

Baller test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water 50° Was a chemical analysis made? Yes No

(10) CONSTRUCTION:

Well seal—Material used Concrete
Depth of seal 0-20 ft.
Diameter of well bore to bottom of seal 36 in.
Were any loose strata cemented off? Yes No Depth _____
Is a drive shoe used? Yes No
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.

(11) LOCATION OF WELL: Well 3

County Mult. Driller's well number 5235
NE 1/4 NW 1/4 Section 23 T. 1N R. 2E W.M.
Bearing and distance from section or subdivision corner _____

(12) WELL LOG:

Diameter of well below casing _____

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 as drilling proceeds. Note drilling rates.

MATERIAL	From	To	SWL
<u>Top Soil</u>	<u>0</u>	<u>4</u>	
<u>Boulders and Gravel</u>	<u>4</u>	<u>20</u>	
<u>Gravel Boulders</u>			
<u>And Clay</u>	<u>20</u>	<u>27</u>	
<u>Loose Sand Gravel</u>			
<u>And Boulders</u>	<u>27</u>	<u>60</u>	
<u>Cemented Gravel</u>	<u>60</u>	<u>65</u>	

Work started Dec. 27 1969 Completed Feb. 24 1970

Date well drilling machine moved off of well Feb. 24 1970

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 Johnson Date Feb. 26 1970
(Pam R.) Machine Operator

Drilling Machine Operator's License No. 56

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 R. J. Strasser Drilling Co.
(Person, firm or corporation) (Type or print)

Address 8110 S.E. Sunset Lane Portland, Ore.

[Signed] Robert J. Strasser (Pam R.)
(Water Well Contractor)

Contractor's License No. 10 Date Feb. 26 1970

ENVIRONMENTAL GEOLOGY & GROUND WATER WELL DATA

Project Columbia P.T

Owner Park Rose Water District State No. _____
 Address 4800 NE 122nd Other No. Well No. 3 (of 3)
 Tenant _____
 Address _____

Type of Well: Hydrograph Key Index Semiannual Quality
 Location: County Multnomah Basin Columbia No. _____
 U.S.G.S. Quad. mt Tabor Quad. No. _____
S1/2 1/4 NW 1/4 Section 23, Twp. 1N, Rgn. 2E Will. Meridian

Description _____

Reference Point description _____

which is _____ ft. ^{above}/_{below} land surface. Ground Elevation _____ ft.
 Reference Point Elev. 32.41 ft. Determined from Surveyed by District
 Well: Use Water District Condition In Use Depth 61 ft.
 Casing, size 24" in., perforations Johnson Stainless Steel Screen
slot size 10 from 41 to 61 feet

Measurements By: DWR USGS USBR County Irr. Dist. Water Dist. Cons. Dist. Other
 Chief Aquifer: Name _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____
 Type of Material _____ Perm. Rating _____ Thickness _____
 Gravel Packed? Yes No Depth to Top Gr. _____ Depth to Bot. Gr. _____
 Supp. Aquifer _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____
 Driller R. T. Strasser
 Date drilled February 1970 Log, filed open (1) confidential (2)

Equipment: Pump, type _____ make _____
 Serial No. _____ Size of discharge pipe _____ in.
 Power, Kind _____ Make _____
 H. P. _____ Motor Serial No. _____
 Elec. Meter No. _____ Transformer No. _____
 Yield _____ G.P.M. Pumping level _____ ft.
 Water Analysts: Min. (1) _____ San. (2) H.M. (3) _____
 Water Levels available: Yes (1) pumping No _____
 Period of Record: Begin _____ End _____
 Collecting Agency: Park Rose Water District
 Prod. Rec. (1) _____ Pump Test (2) yes Yield (3) 2325 gpm

SKETCH



see well No. 2 sketch

REMARKS

Winter and Summer
Static levels approx.
are same

Recorded by: _____
 Date _____

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) Well 2

State Well No. _____

State Permit No. _____

(1) OWNER:

Name PARKROSE WATER DISTRICT
Address 10424 NE FREEMONT ST.
PORTLAND ORE.

(2) LOCATION OF WELL:

County MULT Driller's well number 4119A
NE 1/4 HW 1/4 Section 23 - T. 1N R. 2E W.M.
Bearing and distance from section or subdivision corner _____

(3) TYPE OF WORK (check): CAPPED AND NOT COMPLETED

New 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
24 Diam. from 0 ft. to 63 ft. Gage 375
Diam. from _____ ft. to _____ ft. Gage _____
Diam. from _____ ft. to _____ ft. Gage _____

(7) PERFORATIONS:

Perforated? Yes No
Type of perforator used CUTTING TORCH
Size of perforations 3/8 in. by 4 in.
540 perforations from _____ ft. to 63 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. _____
Diam. _____ Slot size _____ Set from _____ ft. to _____ ft.
Diam. _____ Slot size _____ Set from _____ ft. to _____ ft.

(9) CONSTRUCTION:

Well seal—Material used in seal CEMENT GROUT
Depth of seal 90 ft. Was a packer used?
Diameter of well bore to bottom of seal 30 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 24 ft. below land surface Date 1/22/62
Artesian pressure _____ lbs. per square inch Date _____

(11) WELL TESTS:

Drawdown is amount water level is lowered below static level STRASSER
Was a pump test made? Yes No If yes, by whom? WILLIAMS CO.
Yield: 1800 gal./min. with 8 ft. drawdown after 8 hrs.
2450 " " 13 " " 16 "

Baller test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water 57 Was a chemical analysis made? Yes No

(12) WELL LOG:

Diameter of well below casing _____
Depth drilled 63 ft. Depth of completed well 63 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
<u>SILT CLAY AND SAND</u>	<u>0</u>	<u>7</u>
<u>BOULDERS</u>	<u>7</u>	<u>21</u>
<u>GRAVEL LOBBLES AND SAND</u>	<u>21</u>	<u>43</u>
<u>COARSE COBBLE STONE</u>	<u>43</u>	<u>48</u>
<u>COARSE GRAVEL</u>	<u>48</u>	<u>58</u>
<u>CEMENTED GRAVEL</u>	<u>58</u>	<u>63</u>

Work started DEC 23 1961 Completed JAN 26 1962

Date well drilling machine moved off of well JAN 26 1962

(13) PUMP:

Manufacturer's Name _____
Type _____ H.P. _____

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 R. STRASSER DRILLING Co
(Person, firm or corporation) (Type or print)

Address 8110 SE SUNSET LANE PORT ORE

Drilling Machine Operator's License No. 57

[Signed] Robert J. Strasser
(Water Well Contractor)

Contractor's License No. 10 Date FEB 22 1965

ENVIRONMENTAL GEOLOGY & GROUND WATER WELL DATA

Project _____

Owner Glendover Golf Course
Address 14015 N.E. Glisan
Tenant _____
Address _____

State No. _____
Other No. Glendover Golf Course-Eastwell

Type of Wells: Hydrograph Key Index Semiannual Quality
Location: County Multnomah Basin _____ No. _____
U.S.G.S. Quad. Mount Tabor Quad. No. _____
1/4 _____ 1/4 Section _____, Twp. _____, Rge. _____ Will. Meridian _____

Description The well is located in a barn, east of the east water tower.

Reference Point description _____

which is _____ ft. ^{above}/_{below} land surface. Ground Elevation 340' (estimated from U.S.G.S. Quad.) ft.
Reference Point Elev. _____ ft. Determined from _____
Well: Use Irrigation Condition In Use Depth 219 # ft.
Casing, size _____ In., perforations _____

Measurements By: DWR USGS USBR County Irr. Dist. Water Dist. Cons. Dist. Other

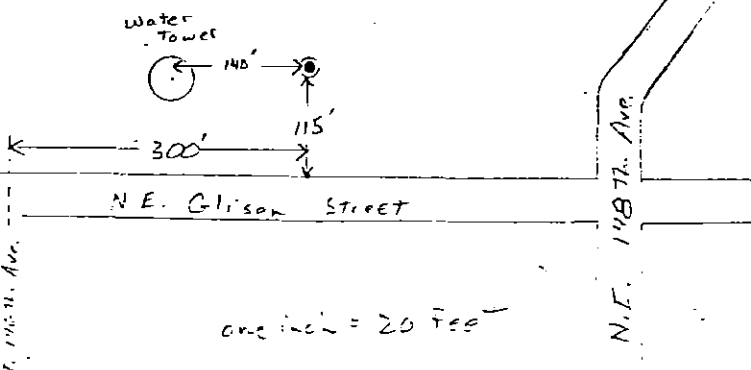
Chief Aquifer: Name _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____
Type of Material _____ Perm. Rating _____ Thickness _____
Gravel Packed? Yes No Depth to Top Gr. _____ Depth to Bot. Gr. _____
Supp. Aquifer _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____

Driller _____
Date drilled before 1940 Log, filed _____ open (1) _____ confidential (2) _____
Equipment: Pump, type Turbine make Sterling Unit type
Serial No. _____ Size of discharge pipe _____ In. Water Analysts: Min. (1) _____ San. (2) _____ H.M. (3) _____
Power, Kind: Electric Make G.E. Water Levels available: Yes (1) _____ No _____
H. P. 50 Motor Serial No. _____ Period of Record: Begin _____ End _____
Elec. Meter No. _____ Transformer No. _____ Collecting Agency: _____
Yield 550 G.P.M. Pumping level _____ ft. Prod. Rec. (1) _____ Pump Test (2) _____ Yield (3) _____

SKETCH



Glendover Golf Course



REMARKS

Jim Griffith Maint. Super. 253-7508

* Well depth is based on recollection of Mr. Griffith. The well has been in continuous use since before he was first employed by the golf course in 1940.
Well yield as per Mr. Griffith

Recorded by: CEW
Date: 7-15-73

ENVIRONMENTAL GEOLOGY & GROUND WATER WELL DATA

Project _____

Owner Glendover Golf Course State No. _____
 Address 14015 N.E. Glisan Other No. Glendover Golf Course - West well
 Tenant _____
 Address _____

Type of Well: Hydrograph Key Index Semiannual Quality
 Location: County _____ Basin _____ No. _____
 U.S.G.S. Quad. _____ Quad. No. _____
 _____ 1/4 _____ 1/4 Section _____, Twp. _____, Rgs. _____ Will. Meridian _____

Description Well is located under a bolted down steel plate approximately 20 Feet east of pump house.

Reference Point description _____

which is _____ ft. ^{above}/_{below} land surface. Ground Elevation 298 (estimated from U.S.G.S. Quad.) ft.
 Reference Point Elev. _____ ft. Determined from _____
 Well: Use Irrigation Condition In Use Depth 248 ft.
 Casing, size _____ in., perforations _____

Measurements By: DWR USGS USBR County Irr. Dist. Water Dist. Cons. Dist. Other

Chief Aquifer: Name _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____
 Type of Material _____ Perm. Rating _____ Thickness _____
 Gravel Packed? Yes No Depth to Top Gr. _____ Depth to Bot. Gr. _____
 Supp. Aquifer _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____

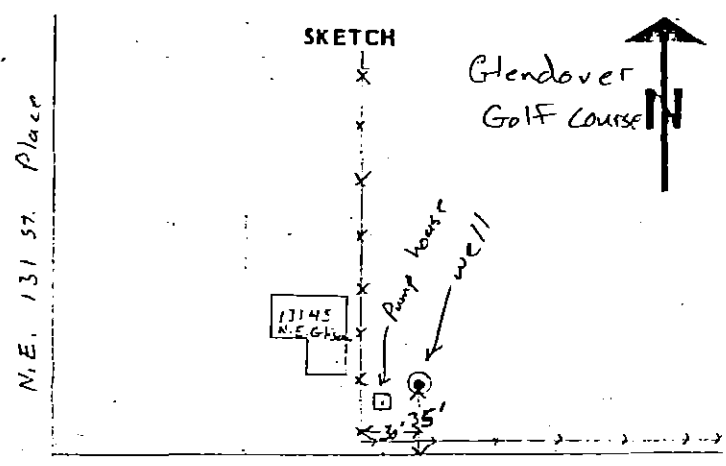
Driller _____
 Date drilled before 1940 Log, filed _____ open (1) _____ confidential (2) _____

Equipment Pump, type Submersible make _____
 Serial No. _____ Size of discharge pipe _____ in.

Power, Kind: Electric Make _____
 H. P. 75 Motor Serial No. _____

Elec. Meter No. _____ Transformer No. _____
 Yield 550 G.P.M. Pumping level _____ ft.

Water Analysts: Min. (1) _____ San. (2) _____ H.M. (3) _____
 Water Levels available: Yes (1) _____ No _____
 Period of Record: Begin _____ End _____
 Collecting Agency: _____
 Prod. Rec. (1) _____ Pump Test (2) _____ Yield (3) _____



N.E. Glisan Street
 N.E. 131st Place
 one inch = 10 feet

REMARKS

Pump recently installed by:
Adrian Fisher
D & A Pump and Supply

This well has been put back in use after being abandoned for about 30 years. It was abandoned because it pumped sand and gravel. It still pumps sand and gravel.

Video Inspection conducted March 20, 1970 by P.C.E.

Static Water Level 138.5 feet. Pumped 550 gpm with 7 foot drawdown. (for PG&E records, ran a camera down the well at the time pump was installed.)

Recorded by: SEW
 Date: 8-18-70

ENVIRONMENTAL GEOLOGY & GROUND WATER WELL DATA

Project _____

Owner Glendover Golf Course State No. _____
 Address 14015 N.E. Glisan Other No. _____
 Tenant _____
 Address _____

Type of Well: Hydrograph Key Index Semiannual Quality
 Location: County Multnomah Basin _____ No. _____
 U.S.G.S. Quad. Mount Tabor Quad. Quad. No. _____
 1/4 Section _____ Twp. _____ Rge. _____ Will. Meridian _____

Description The well is located under a storage shed, filled with fertilizer.
The well is inaccessible

Reference Point description _____

which is _____ ft. above land surface. Ground Elevation 310 (estimated from U.S.G.S. Quad.) ft.
 Reference Point Elev. _____ ft. Determined from _____
 Well: Use irrigation Condition abandoned prior to 1940 Depth 700 ± ft.
 Casing, size _____ In., perforations _____

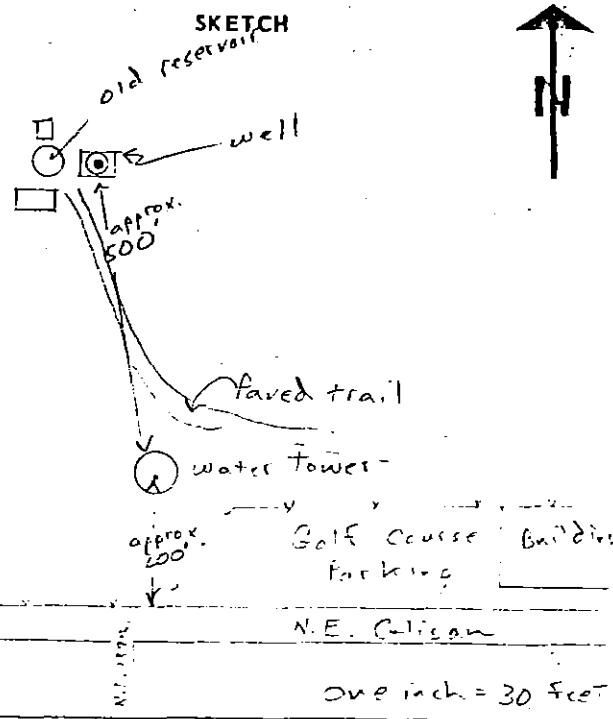
Measurements By: DWR USGS USBR County Irr. Dist. Water Dist. Cons. Dist. Other

Chief Aquifer: Name _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____
 Type of Material _____ Perm. Rating _____ Thickness _____
 Gravel Packed? Yes No Depth to Top Gr. _____ Depth to Bot. Gr. _____
 Supp. Aquifer _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____

Driller _____
 Date drilled 1926? Log, filed _____ open (1) _____ confidential (2) _____

Equipment: Pump, type _____ make _____
 Serial No. _____ Size of discharge pipe _____ in.
 Power, Kind _____ Make _____
 H. P. _____ Motor Serial No. _____
 Elec. Meter No. _____ Transformer No. _____
 Yield _____ G.P.M. Pumping level _____ ft.

Water Analysis: Min. (1) _____ San. (2) _____ H.M. (3) _____
 Water Levels available: Yes (1) _____ No _____
 Period of Record: Begin _____ End _____
 Collecting Agency: _____
 Prod. Rec. (1) _____ Pump Test (2) _____ Yield (3) _____



REMARKS
* well depth is per recollection
of Jim Fisher, maintenance supervisor.
He was told it was this deep, but
doesn't know for sure, since the well was
abandoned before he started at the golf
course in 1940.

Recorded by: CEW
 Date: 5-15-70

ENVIRONMENTAL GEOLOGY & GROUND WATER WELL DATA

Project _____

Owner Sark Rose School District #3 State No. _____
 Address 10636 N.E. Prescott Other No. _____
 Tenant Fremont Jr. High
 Address 11800 N.E. Shaver

Type of Well: Hydrograph Key Index Semiannual Quality
 Location: County Multnomah Basin _____ No. _____
 U.S.G.S. Quad. Mount Labor Quad. No. _____
 1/4 _____ 1/4 Section _____, Twp. _____, Rgn. _____ Will. Meridian _____

Description Pump is located inside a 6'x6' chain link enclosure on a concrete pad. Its located at the south west corner of the tennis courts, on the west side of the school (Fremont Jr. High)

Reference Point description _____

which is _____ ft. ^{above}/_{below} land surface. Ground Elevation 135 Ft. (estimated from U.S.G.S. Quad) ft.
 Reference Point Elev. _____ ft. Determined from _____

Well: Use Irrigation Condition In Use Depth 350 ft.
 Casing, size _____ In., perforations _____

Measurements By: DWR USGS USBR County Irr. Dist. Water Dist. Cons. Dist. Other

Chief Aquifer: Name _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____

Type of Material _____ Perm. Rating _____ Thickness _____

Gravel Packed? Yes No Depth to Top Gr. _____ Depth to Bot. Gr. _____

Supp. Aquifer _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____

Driller A.M. Jannsen Drilling Co.
 Date drilled 1962: Log, filed _____ open (1) _____ confidential (2)

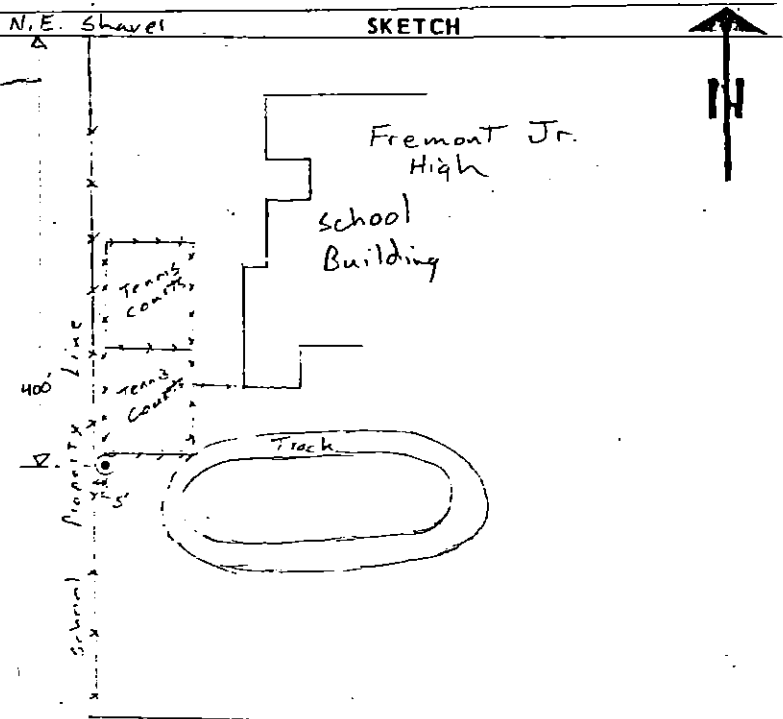
Equipment Pump, type Vert. Turbin make Floway
 Serial No. _____ Size of discharge pipe _____ In.

Power, Kind Electric Make A.O. Smith Corp.
 Water Analysts: Min. (1) _____ San. (2) _____ H.M. (3) _____

H. P. 50 Motor Serial No. _____
 Water Levels available: Yes (1) _____ No _____

Elec. Meter No. _____ Transformer No. _____
 Period of Record: Begin _____ End _____

Yield _____ G.P.M. Pumping level _____ ft.
 Collecting Agency: _____
 Prod. Rec. (1) _____ Pump Test (2) _____ Yield (3) _____



REMARKS

Airline Gauge is present, length of airline is marked as 150 Feet.

George Wegner, Dist. Maintenance supervisor is best contact person. (we can use the airline gauge if we want.)

Recorded by: CEW
 Date 8-15-70

ENVIRONMENTAL GEOLOGY & GROUND WATER WELL DATA

Project _____

Owner Parkrose School District #3 State No. _____
 Address 10636 N.E. Prescott Other No. _____
 Tenant Parkrose Sr. High School
 Address 11717 N.E. Shaver

Type of Well: Hydrograph Key Index Semiannual Quality
 Location: County Multnomah Basin _____ No. _____
 U.S.G.S. Quad. Mount Tabor Quad. No. _____
 1/4 Section _____, Twp. _____, Rgn. _____ Will. Meridian _____

Description Well is located at the east end of the swimming pool lobby, near the southwest corner of the pool, in a small room with access to the lobby.

Reference Point description _____

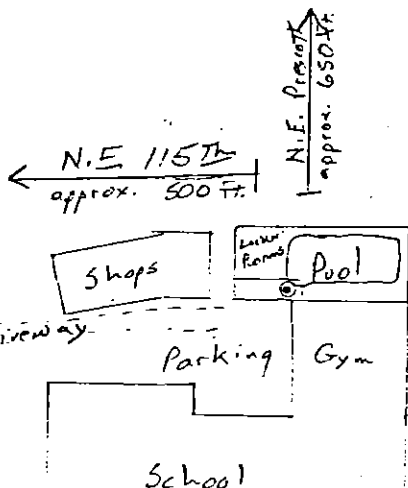
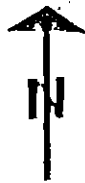
which is _____ ft. ^{above}/_{below} land surface. Ground Elevation 90 Ft. (estimated from U.S.G.S. Quad) ft.
 Reference Point Elev. _____ ft. Determined from _____
 Well: Use Irrigation and Swimming Pool Condition in use. Depth unknown ft.
 Casing, size _____ in., perforations _____

Measurements By: DWR USGS USBR County Irr. Dist. Water Dist. Cons. Dist. Other
 Chief Aquifer: Name _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____
 Type of Material _____ Perm. Rating _____ Thickness _____
 Gravel Packed? Yes No Depth to Top Gr. _____ Depth to Bot. Gr. _____
 Supp. Aquifer _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____
 Driller _____

Date drilled 1950 Log, filed _____ open (1) _____ confidential (2) _____
 Equipment: Pump, type Vert. Turbine make Bowler
 serial No. _____ Size of discharge pipe _____ in.
 Power, Kind Electric Make U.S. Motor
 H. P. 15 Motor Serial No. _____
 Elec. Meter No. _____ Transformer No. _____
 Yield _____ G.P.M. Pumping level _____ ft.

Water Analysts: Min. (1) _____ San. (2) _____ H.M. (3) _____
 Water Levels available: Yes (1) _____ No _____
 Period of Record: Begin _____ End _____
 Collecting Agency: _____
 Prod. Rec. (1) _____ Pump Test (2) _____ Yield (3) _____

SKETCH



REMARKS

No Airline

George Wegner, Dist. Maintenance Supervisor is best contact person.

Recorded by: CEW
 Date: 2-12-70

Well #3
Hazelwood
Water Dist.

Strasser (CH₂M F. 1)

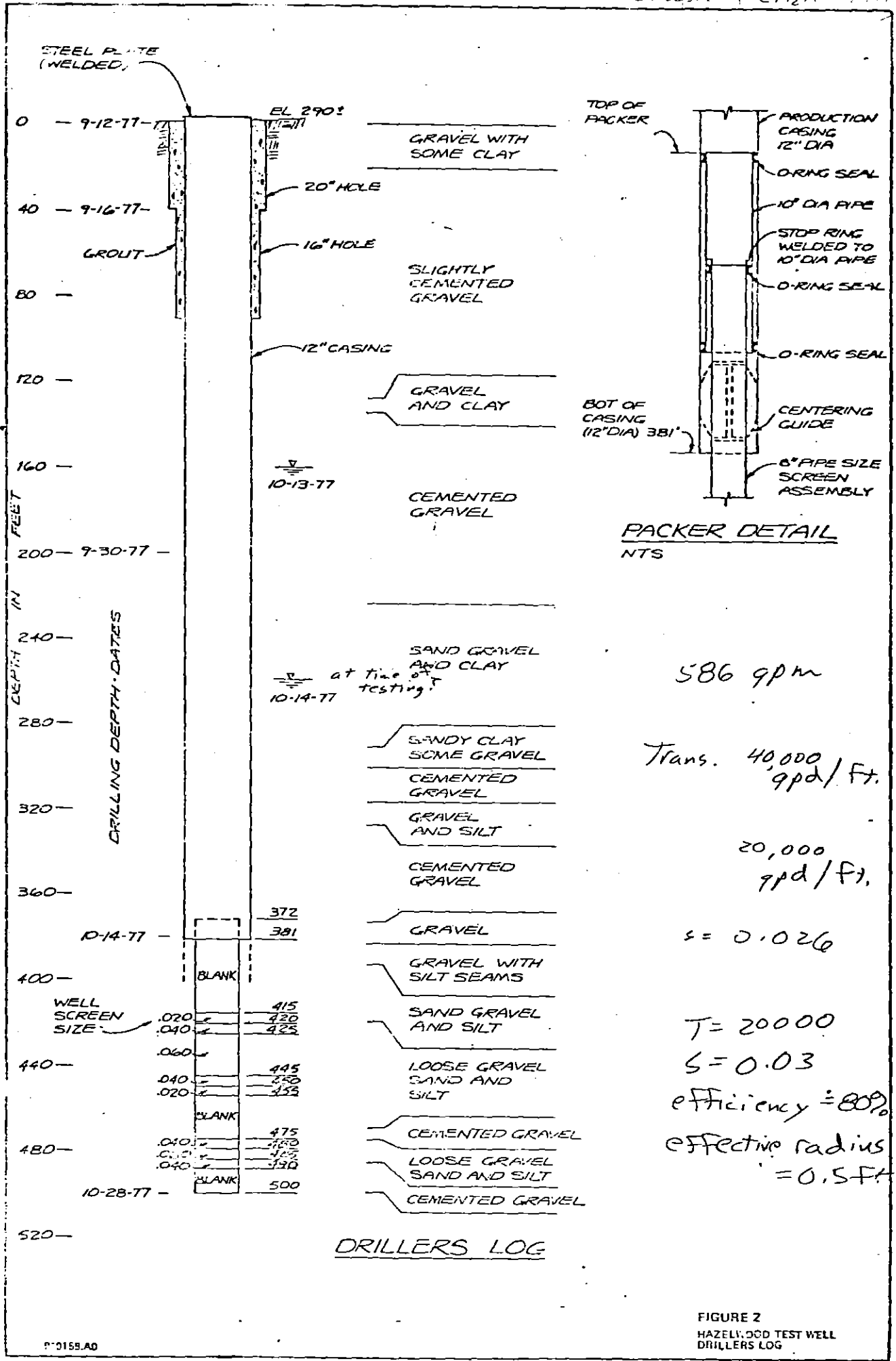


FIGURE 2
HAZELWOOD TEST WELL
DRILLERS LOG

ENVIRONMENTAL GEOLOGY & GROUND WATER WELL DATA

Project Columbia SEG

Owner Hazelwood Water District State No. _____
 Address 1017 NE. 117th Other No. Hazelwood Water Dist. #2
 Tenant _____
 Address _____

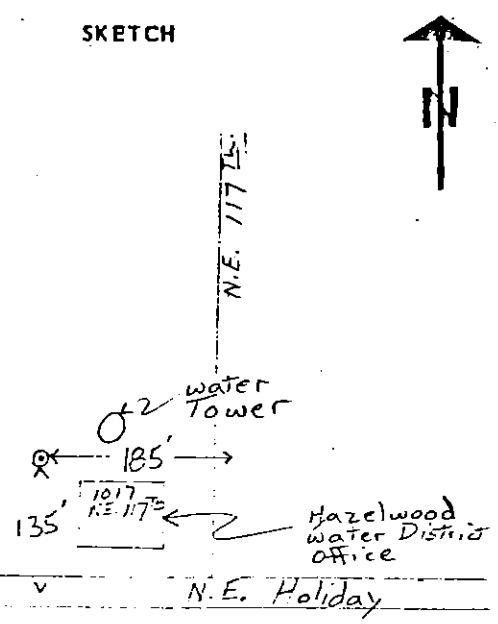
Type of Well: Hydrograph Key Index Semiannual Quality
 Location: County Multnomah Basin _____ No. _____
 U.S.G.S. Quad. Mount Tabor 7 1/2 minute Quad. No. _____
NW 1/4 NE 1/4 Section 34, Twp. 1N, Rge. 2E Will. Meridian

Reference Point description Top of 12 inch diameter steel casing with hinged and locked steel cap. (Casing sticks 24" above a 4 ft. x 4 ft. x 6 in thick concrete pad.)
 which is 2 1/2 ft. ^{above} land surface. Ground Elevation ~290 ft. (estimated from U.S.G.S. map)
 Reference Point Elev. 292 1/2 ft. Determined from estimated from U.S.G.S. map
 Well: Use Municipal Condition not yet in use Depth 500 ft.
 Casing, size see remarks in., perforations _____

Measurements By: DWR USGS USBR County Irr. Dist. Water Dist. Cons. Dist. Other
 Chief Aquifer: Name _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____
 Type of Material _____ Perm. Rating _____ Thickness _____
 Gravel Packed? Yes No Depth to Top Gr. _____ Depth to Bot. Gr. _____
 Supp. Aquifer _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____
 Driller Strasser
 Date drilled Sept.-Oct. 1977 Log, filed _____ open (1) _____ confidential (2) _____
 Equipment Pump, type none make _____
 Serial No. _____ Size of discharge pipe _____ in.
 Power, Kind: _____ Make _____
 H. P. _____ Motor Serial No. _____
 Elec. Meter No. _____ Transformer No. _____
 Yield _____ G.P.M. Pumping level _____ ft.

Water Analysis: Min. (1) _____ San. (2) _____ H.M. (3) _____
 Water Levels available: Yes (1) _____ No _____
 Period of Record: Begin _____ End _____
 Collecting Agency: _____
 Prod. Rec. (1) _____ Pump Test (2) _____ Yield (3) _____

SKETCH



REMARKS

Casing size: 12" diam. From 0' to 381'
8" diam. From 372 to 500
Depth to water 7-23-79:
248 Feet below reference point
245 1/2 feet below ground surface
Pump will probably be installed
Fall 1979.
Water district Supt. is Mr. Phoenix

Recorded by: CEW
 Date: 7-23-79

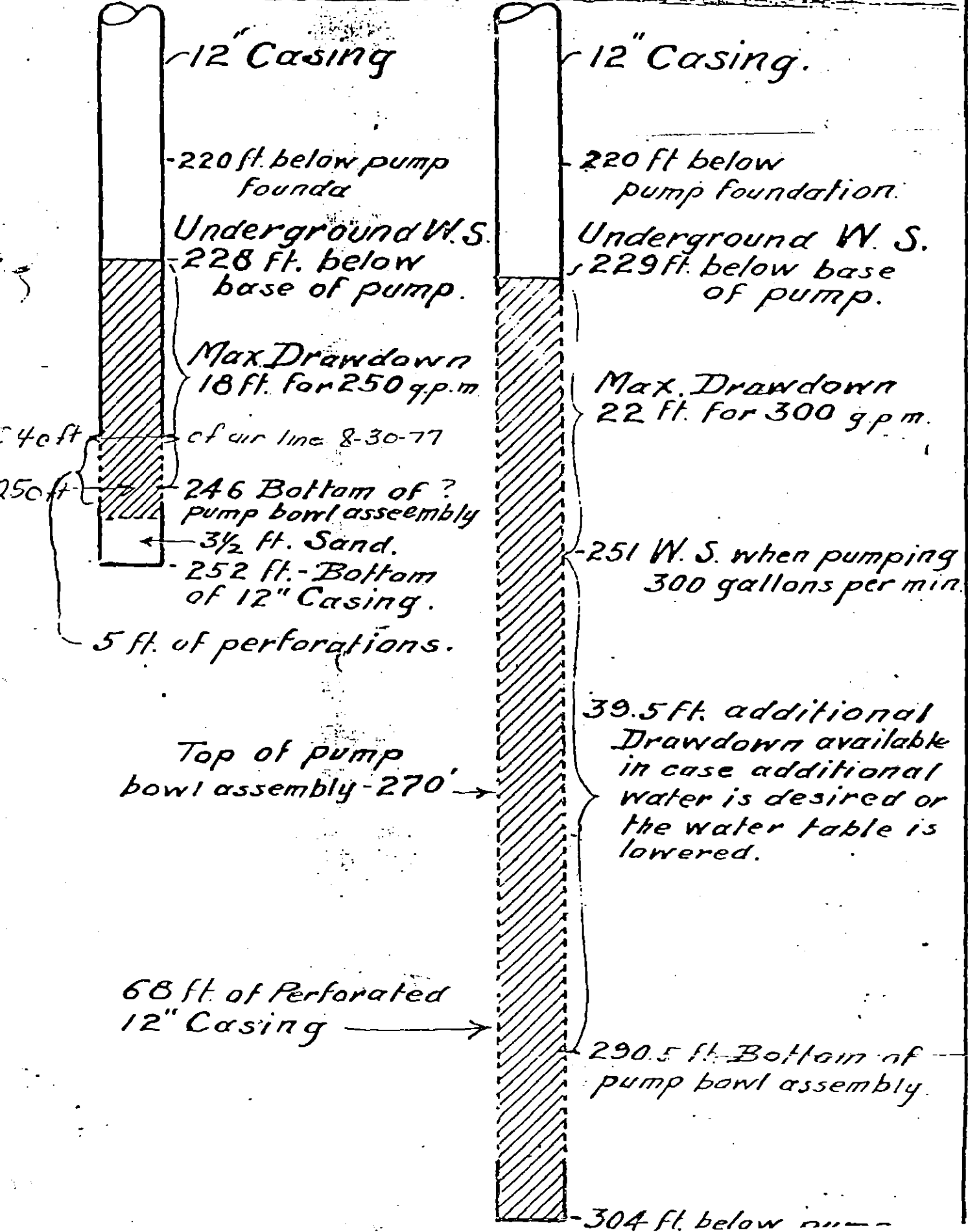
Well No. 1

elev. 289

Well No. 2

elev. 288

These wells are about 100 feet apart near the corner (S.W. corner) of N.E. 100th. and Glisan.



ENVIRONMENTAL GEOLOGY & GROUND WATER WELL DATA

Project _____

Owner Hazelwood Water District
Address 1017 N.E. 117th
Tenant _____
Address _____

State No. _____
Other No. Hazelwood Water Dist. #2

Type of Well: Hydrograph Key Index Semiannual Quality
Location: County Multnomah Basin _____ No. _____
U.S.G.S. Quad. Mount Tabor Quad. No. _____

NE 1/4 SE 1/4 Section 33, Twp. 1N, Rge. 2E Will. Meridian
Description The well is located inside a concrete block building on the east side of N.E. 100th Ave. 300 feet south of N.E. Glican.

Reference Point description _____

which is _____ ft. ^{above}/_{below} land surface. Ground Elevation 289 FT. (Estimated from U.S.G.S. Quad.) ft.
Reference Point Elev. _____ ft. Determined from _____

Well: Use Municipal Condition In use Depth 304 ft.
Casing, size 12 in., perforations 68 feet of perforated casing assumed to be the bottom 68 feet - 236 to 304

Measurements By: DWR USGS USBR County Irr. Dist. Water Dist. Cons. Dist. Other

Chief Aquifer: Name _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____

Type of Material _____ Perm. Rating _____ Thickness _____

Gravel Packed? Yes No Depth to Top Gr. _____ Depth to Bot. Gr. _____

Supp. Aquifer _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____

Driller _____
Date drilled 1942? Log, filed _____ open (1) _____ confidential (2) _____

Equipment: Pump, type Turbine make _____
Serial No. _____ Size of discharge pipe _____ in.

Power, Kind Electric Make _____
H. P. _____ Motor Serial No. _____

Elec. Meter No. _____ Transformer No. _____
Yield _____ G.P.M. Pumping level _____ ft.

Water Analysis: Min. (1) _____ San. (2) _____ H.M. (3) _____
Water Levels available: Yes (1) _____ No _____
Period of Record: Begin _____ End _____
Collecting Agency: _____
Prod. Rec. (1) _____ Pump Test (2) _____ Yield (3) _____

SKETCH



See sketch
For Hazelwood Water Dist
well #1 (33 dab (1))

REMARKS

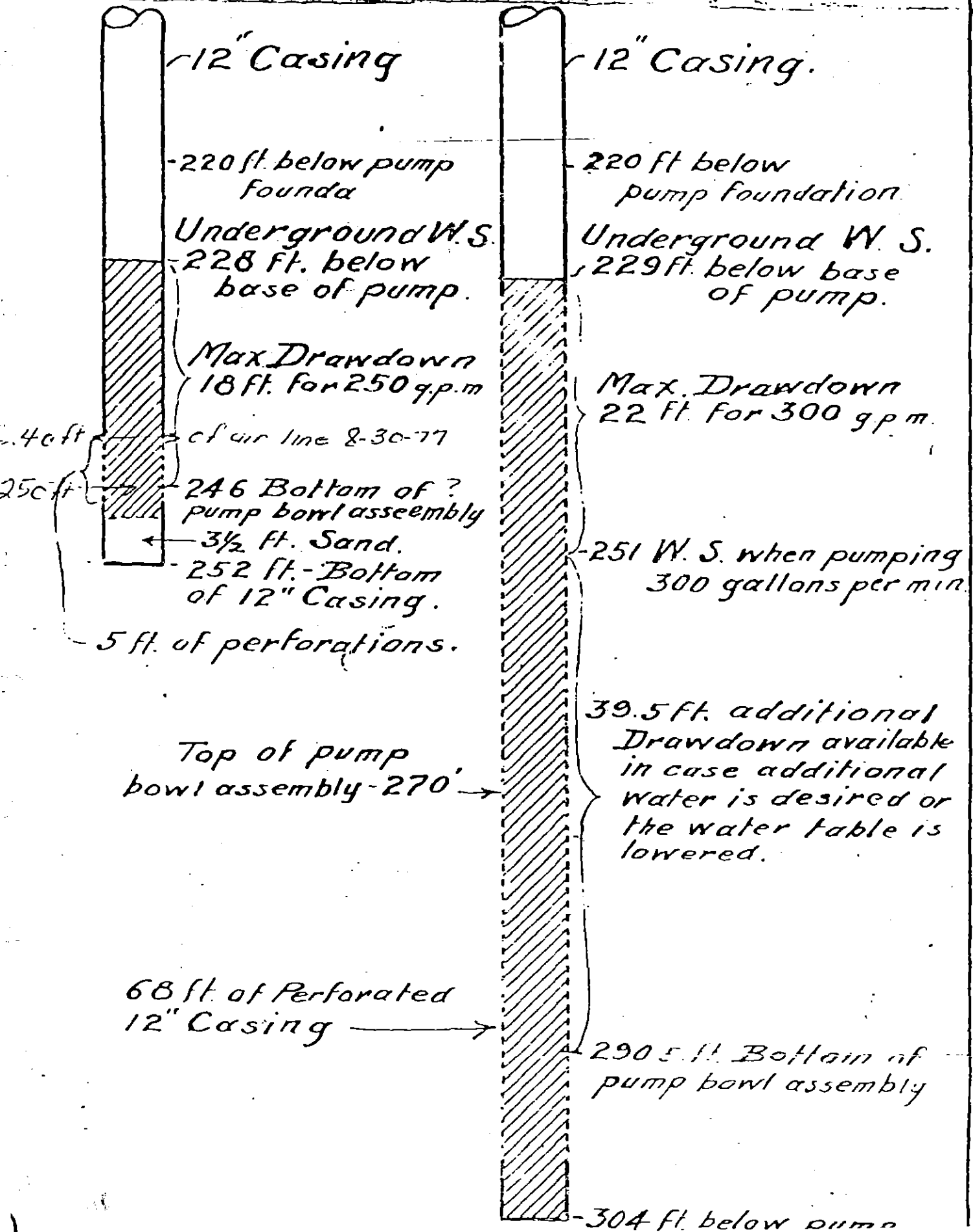
static water level (according to undated graphic well description) was 289 feet below base of pump (assumed to be ground surface)

Information is based on the attached sheet and verbal communication with water district cust.

Recorded by: _____
Date: 2-2-78

Well
No. 1

Well
No. 2



ENVIRONMENTAL GEOLOGY & GROUND WATER WELL DATA

Project _____

Owner Hazelwood Water District
Address 1017 N.E. 117th
Tenant _____
Address _____

State No. _____
Other No. Hazelwood Water Dist #1

Type of Wells: Hydrograph Key Index Semiannual Quality
Location: County Multnomah Basin _____ No. _____
U.S.G.S. Quad. Mount Taber Quad. No. _____
NE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 33, Twp. 1N, Rgn. 2E Will. Meridian

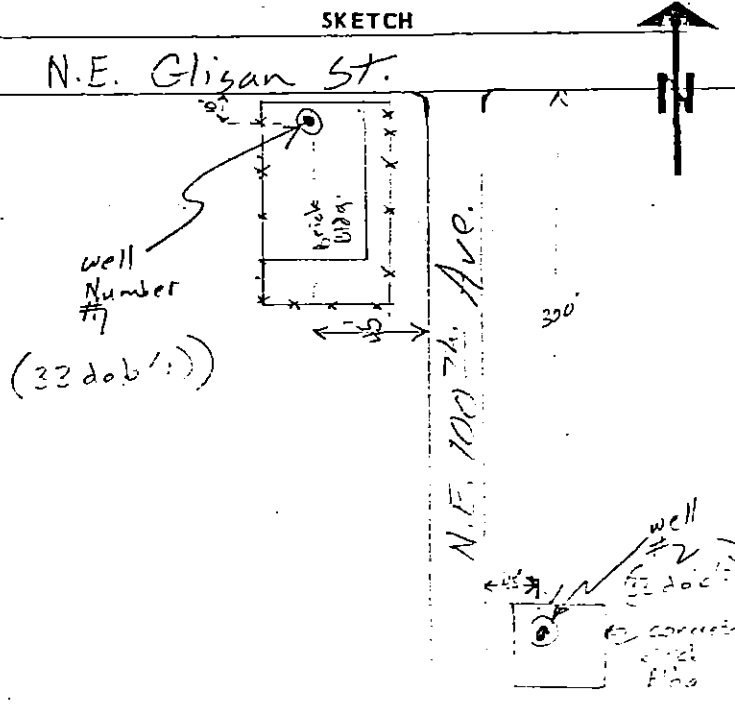
Reference Point description 12" inch high concrete pump foundation on the floor of the building. The slab floor is at ground level.

which is one ft. ^(above)/_{below} land surface. Ground Elevation 289 Ft. (estimated from U.S.G.S. Quad).
Reference Point Elev. 289 ft. Determined from estimated from U.S.G.S. Quad.
Well: Use municipal Condition in use Depth 252 ft.
Casing, size 12" In., perforations 5 Feet of perforations?

Measurements By: DWR USGS USBR County Irr. Dist. Water Dist. Cons. Dist. Other
Chief Aquifer: Name _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____
Type of Material _____ Perm. Rating _____ Thickness _____
Gravel Packed? Yes No Depth to Top Gr. _____ Depth to Bot. Gr. _____
Supp. Aquifer _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____
Driller _____
Date drilled 1942? Log, filed _____ open (1) _____ confidential (2) _____
Equipment: Pump, type Turbine make _____
Serial No. _____ Size of discharge pipe _____ In.
Power, Kind electric Make _____
H. P. _____ Motor Serial No. _____
Elec. Meter No. _____ Transformer No. _____
Yield _____ G.P.M. Pumping level _____ ft.

Water Analysis: Min. (1) _____ San. (2) _____ H.M. (3) _____
Water Levels available: Yes (1) _____ No _____
Period of Record: Begin _____ End _____
Collecting Agency: _____
Prod. Rec. (1) _____ Pump Test (2) _____ Yield (3) _____

SKETCH



REMARKS

Static water level 8-13-79
approx. 219 feet below ground surface
(Pump had been off about 30 minutes
at time of water level reading. The
well was still recovering at the rate
of about one inch every 5-10 minutes.

Recorded by: C.E.W
Date: 8-13-79

8-10-79

Piezometer completed at 229 feet ($\frac{1}{2}$ " pipe inside 2" pipe inside 8" casing)
water level 42' or 208' Feet below measuring
point (top of 2" pipe) measuring point is 7" below ground

Piezometer completed at 442' Feet ($\frac{1}{2}$ " pipe inside 2" pipe inside 8" casing)
water level 253' Ft. below measuring point (top of
2" pipe); measuring point is 6" below ground.

Note: The accuracy of both these measurements is questionable. The probe contacted the sides of the $\frac{1}{2}$ " pipe as it went down, and contact with condensation in the pipe caused continual false readings.

ENVIRONMENTAL GEOLOGY & GROUND WATER WELL DATA

Project _____

Owner Bureau of Water Works (Portland) State No. _____
 Address _____ Other No. _____
 Tenant _____
 Address _____

Type of Well: Hydrograph Key Index Semiannual Quality
 Location: County Multnomah Basin _____ No. _____
 U.S.G.S. Quad. Mount Tabor Quad. No. _____
SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 27, Twp. 1N, Rgn. 2E Will. Meridian

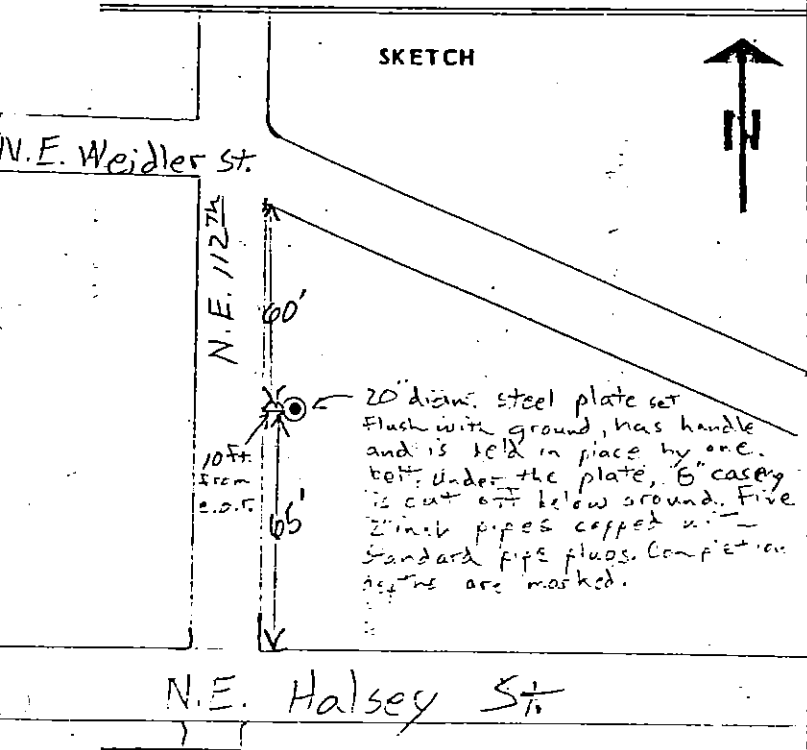
Description _____

Reference Point description _____

which is _____ ft. ^{above} / _{below} land surface. Ground Elevation 292.27 (City of Portland) 294.7 (U.S.G.S.) ft.
 Reference Point Elev. _____ ft. Determined from City of Portland Bureau of Waterworks study
 Well: Use Exploratory Condition unknown Depth 835 ft.
 Casing, size _____ In., perforations multiple completion (5) 80', 229', 442', 708', 780'

Measurements By: DWR USGS USBR County Irr. Dist. Water Dist. ^{Water Bureau} Cons. Dist. Other
 Chief Aquifer: Name _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____
 Type of Material _____ Perm. Rating _____ Thickness _____
 Gravel Packed? Yes No Depth to Top Gr. _____ Depth to Bot. Gr. _____
 Supp. Aquifer _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____
 Driller Hansen Drilling Co.
 Date drilled 1976 Log, filed _____ open (1) _____ confidential (2) _____
 Equipment Pump, type _____ make _____
 Serial No. _____ Size of discharge pipe _____ In.
 Power, Kind _____ Make _____
 H. P. _____ Motor Serial No. _____
 Elec. Meter No. _____ Transformer No. _____
 Yield _____ G.P.M. Pumping level _____ ft.

Water Analysts: Min. (1) _____ San. (2) _____ H.M. (3) _____
 Water Levels available: Yes (1) _____ No _____
 Period of Record: Begin _____ End _____
 Collecting Agency: Bureau of Water Works
 Prod. Rec. (1) _____ Pump Test (2) _____ Yield (3) _____



REMARKS

City of Portland Bureau of Water Works exploratory well. East Portland water study.

water level (elevation) April 5, 1978
36.15 (City of Portland Datum) = 37.6 (USGS)

Troutdale Gravel contact
Troutdale sandstone at HEE view area

All information from City of Portland Water Bureau study.

Recorded by: CEJ
 Date: 5-2-78

ENVIRONMENTAL GEOLOGY & GROUND WATER WELL DATA

Project Columbia Pit

Owner Park Rose Water District State No. _____
 Address 4800 NE 122nd Other No. Well No. 1 (of 3)
 Tenant _____
 Address _____
 Type of Well: Hydrograph Key Index Semiannual Quality
 Location: County Multnomah Basin Columbia No. _____
 U.S.G.S. Quad. mt. Tabor Quad. No. _____
NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 27, Twp. 1N, Rge. 2E Will. Meridian _____
 Description _____

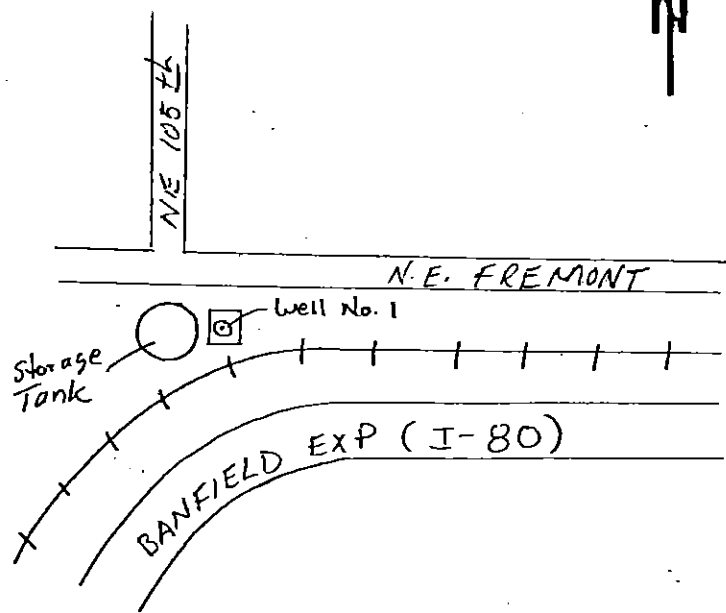
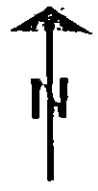
Reference Point description _____

which is _____ ft. ^{above} land surface. Ground Elevation _____ ft.
 Reference Point Elev. 211 ft. Determined from Surveyed by District
 Well: Use Water District Condition Standby Depth 265 ft.
 Casing, size ? in., perforations Depth 217-247

Measurements By: DWR USGS USBR County Irr. Dist. Water Dist. Cons. Dist. Other
 Chief Aquifer: Name _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____
 Type of Material _____ Perm. Rating _____ Thickness _____
 Gravel Packed? Yes No Depth to Top Gr. _____ Depth to Bot. Gr. _____
 Supp. Aquifer _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____
 Driller Haakon I. Bottner
 Date drilled March 1952 Log, filed No ? (private log) on file open (1) _____ confidential (2) _____
 Equipment: Pump, type _____ make _____
 Serial No. _____ Size of discharge pipe _____ in.
 Power, Kind _____ Make _____
 H. P. _____ Motor Serial No. _____
 Elec. Meter No. _____ Transformer No. _____
 Yield _____ G.P.M. Pumping level _____ ft.

Water Analysts: Min. (1) _____ San. (2) ? H.M. (3) _____
 Water Levels available: Yes (1) _____ No
 Period of Record: Begin _____ End _____
 Collecting Agency: _____
 Prod. Rec. (1) _____ Pump Test (2) _____ Yield (3) _____

SKETCH



REMARKS

Pump has air line
but District does
not take static levels
since this is a standby
well

Recorded by: 437
 Date: 7/18/79

abandoned

RECEIVED
APR 8 1960

Machine Copy Well # 4

Don. White Supt. 11N/2-26R Multnomah

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

STATE ENGINEER WATER WELL REPORT
SALEM, OREGON STATE OF OREGON

State Well No. **TEST HOLE**
State Permit No.

(1) OWNER:
Name RICHLAND WATER DISTRICT
Address 11514 N. E. GLISAN ST. PORTLAND 30, OREGON

(2) LOCATION OF WELL:
County _____ Owner's number, if any—
T. R. W.M.
Bearing and distance from section or subdivision corner

(3) TYPE OF WORK (check):
New Well Deepening Reconditioning Abandon
If 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:
16" Diam. from 0 ft. to 194 ft. Gage 5/16
8" Diam. from 180 ft. to 250 ft. Gage Std.
Liner Diam. from _____ ft. to _____ ft. Gage _____

(7) PERFORATIONS:
Type of perforator used Torch
SIZE of perforations 3/16 in. by 8 in.
275 perforations from 195 ft. to 250 ft.

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

(9) CONSTRUCTION:
Washed 3/8 & 1/4 Minus
Was well gravel packed? Yes No Size of gravel: _____ ft.
Gravel placed from _____ ft. to _____ ft.
Was a surface seal provided? Yes No To what depth? 30 ft.
Material used in seal— Sand, Gravel & 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 140 ft. below land surface Date _____
Artesian pressure _____ lbs. per square inch Date _____
Log Accepted by _____
[Signed] _____ Date _____ 1960
(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? The DRILLER
yield: 100 gal./min. with 25 ft. drawdown after 8 hrs.
" 150 " " 40 " " 8 " "
" 195 " " 51 " " 14 " "
Bailer test gal./min. with _____ ft. drawdown after _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water 49 Was a chemical analysis made? Yes No

(12) WELL LOG:
Diameter of well 16 inches
Depth drilled 250 ft. Depth of completed well 250 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
Top soil & Brown Clay	0	7
Boulders & Gravel	7	60
Loose Water bearing gravel approx. 3 to 5 GPM	60	67
Yellow Clay & Gravel	67	80
Cemented yellow Gravel	80	122
Yellow Sandy Clay	122	128
Cemented Gravel	128	137
Sand & Scattered Gravel	137	160
(Water Bearing, Bailed 70 GPM W/no draw down, if gravel packed & developed will estimate from 150 to 200 GPM)		
Cemented Gravel	160	209
Layers of sand & G. Gravel	209	223
Cemented Gravel w/ seams of Water bearing Gravel & Sand	223	250

227'6"
to Pump

Work started March 24, 1960. Completed May 21, 1960

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

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 HAakon I. BOTNER DRILLING CO.
(Person, firm, or corporation) (Type or print)
Address 11514 N. E. GLISAN ST.
Driller's well number _____
[Signed] Haakon I. Botner
(Well Driller)
License No. 109 Date May 25, 1960

May 31st 1960

ENVIRONMENTAL GEOLOGY & GROUND WATER WELL DATA

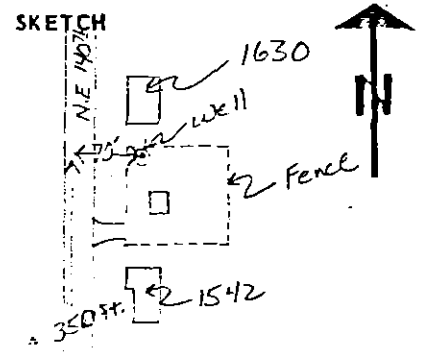
Project Columbia

Owner Richland Water District State No. _____
 Address 14151 N.E. San Rafael Other No. Richland Water District #4
 Tenant _____
 Address _____
 Type of Well: Hydrograph Key Index Semiannual Quality
 Location: County Multnomah Basin _____ No. _____
 U.S.G.S. Quad. Mount Taber 7 1/2 min Quad. No. _____
SE 1/4 SE 1/4 Section 26, Twp. 1N, Rgn. 2E Will. Meridian
 Description _____

Reference Point description Top of 16 inch diameter casing which is capped with a welded steel plate. Well is in a concrete pit at the northeast corner of the fence lot
 which is 3 1/2 ft. ^{above}/_{below} land surface. Ground Elevation 258 Feet (estimated from U.S.G.S) ft.
 Reference Point Elev. 258 ft. Determined from estimated from U.S.G.S. map
 Well: Use Municipal Condition Abandoned Depth 250 ft.
 Casing, size See Remarks in., perforations 3/16 X 8" torch cut slots. 275 slots from 195 feet to 250 feet.

Measurements By: DWR USGS USBR County Irr. Dist. Water Dist. Cons. Dist. Other
 Chief Aquifer: Name _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____
 Type of Material _____ Perm. Rating _____ Thickness _____
 Gravel Packed? Yes No Depth to Top Gr. ? Depth to Bot. Gr. ?
 Supp. Aquifer _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____
 Driller Hooker I. Berger Drilling Company
 Date drilled March 22, 1960 Log, filed April 1966 open (1) confidential (2)
 Equipment: Pump, type none make _____
 Serial No. _____ Size of discharge pipe _____ in.
 Power, Kind: _____ Make _____
 H. P. _____ Motor Serial No. _____
 Elec. Meter No. _____ Transformer No. _____
 Yield _____ G.P.M. Pumping level _____ ft.

Water Analysts: Min. (1) _____ San. (2) _____ H.M. (3) _____
 Water Levels available: Yes (1) _____ No _____
 Period of Record: Begin _____ End _____
 Collecting Agency: _____
 Prod. Rec. (1) _____ Pump Test (2) _____ Yield (3) _____



N.E. Halsey

REMARKS

Casing size: 16 inch diam from 0' to 194'
8 inch diam from 190' to 250'
Well is capped with welded steel cap.
Water level 7-25-79 was 151' 4" below measuring point (154' 4" below ground). adjacent municipal well was shut down at the time the water level measurement was taken

Recorded by: REW
 Date: 7-19-79

RECEIVED

JAN 8 1960

WATER WELL REPORT

STATE ENGINEER STATE OF OREGON

1N/2-26 R 1

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

State Well No. 3 State Permit No.

(1) OWNER: Name RICHLAND WATER DISTRICT Address 1919 N.E. 142nd. Portland Oregon

(2) LOCATION OF WELL: (No. of Halsey on N.E. 140th. East side) County Multnomah Owner's number, if any

Bearing and distance from section or subdivision corner

(3) TYPE OF WORK (check): No Well [x] Deepening [] Reconditioning [] Abandon []

(4) PROPOSED USE (check): Domestic [] Industrial [] Municipal [x] Irrigation [] Test Well [] Other []

(6) CASING INSTALLED: Threaded [] Welded [x] 12" Diam. from 0 ft. to 354.15 ft. Gage 5/16"

(7) PERFORATIONS: Perforated? [x] Yes [] No Type of perforator used 12" w/ 4 way drive down

(8) SCREENS: Well screen installed [] Yes [x] No Manufacturer's Name Type Model No.

(9) CONSTRUCTION: Was well gravel packed? [] Yes [x] No Size of gravel: Gravel placed from ft. to ft.

(10) WATER LEVELS: Static level 199 ft. below land surface Date 7/15/59

Log Accepted by: [Signature] Date 1-7-60, 19

(11) WELL TESTS: Drawdown is amount water level is lowered below static level. Yield: 150 gal./min. with 36 ft. drawdown after 1 hrs.

(12) WELL LOG: Diameter of well 12 inches. Depth drilled 470 ft. Depth of completed well 445 ft.

Table with columns MATERIAL, FROM, TO. Rows include Yellow clay, Gravel & Clay, Boulders, Yellow clay & gravel, Yellow sandy silt, Cemented Gravel, etc.

Work started May 11 1959. Completed 7/17/ 19 59

(13) PUMP: Purchased from and installed By BYRON JACKSON (Bottner Drill Co.)

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 HAAKON I. BOTTNER DRILLING CO. Address 11514 N. E. GLISAN ST. Driller's well number []

ENVIRONMENTAL GEOLOGY & GROUND WATER WELL DATA

Project Columbia S & S

Owner <u>Richland Water District</u>	State No. _____
Address <u>14151 N.E. San Rafael</u>	Other No. <u>Richland Water Dist. #3</u>
Tenant _____	_____
Address _____	_____
Type of Well: Hydrograph <input type="checkbox"/> Key <input type="checkbox"/> Index <input type="checkbox"/> Semiannual <input type="checkbox"/> Quality <input type="checkbox"/>	
Location: County <u>Multnomah</u> Basin _____ No. _____	
U.S.G.S. Quad. <u>MT. Tabor 7 1/2 min.</u> Quad. No. _____	
SE 1/4 SE 1/4 Section <u>26</u> , Twp. <u>1N</u> , Rge. <u>2E</u> Will. Meridian	
Description _____	

Reference Point description _____

which is _____ ft. above land surface. Ground Elevation 258 Ft. (estimated from U.S.G.S.) ft.

Reference Point Elev. _____ ft. Determined from _____

Well: Use Municipal Condition in use Depth 445 ft.

Casing, size See Remarks In., perforations 120 ea. 3/8" x 1 1/2" from 315 Ft. to 320 Feet. 192 ea. 3/8" x 1 1/2" from 330 Ft. to 338 Ft. 340 ea. 1/4" x 6" from 355 Ft. to 440 Feet.

Measurements By: DWR USGS USBR County Irr. Dist. Water Dist. Cons. Dist. Other

Chief Aquifer: Name _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____

Type of Material _____ Perm. Rating _____ Thickness _____

Gravel Packed? Yes No Depth to Top Gr. _____ Depth to Bot. Gr. _____

Supp. Aquifer _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____

Driller Haakon I. Bottner Drilling Company

Date drilled May-July 1959 Log. filed January 1960 open (1) _____ confidential (2) _____

Equipment: Pump, type Submersible make _____

Serial No. _____ Size of discharge pipe _____ in.

Power, kind electric make _____

H. P. 60 Motor Serial No. _____

Elec. Meter No. _____ Transformer No. _____

Yield _____ G.P.M. Pumping level _____ ft.

Water Analysis: Min. (1) _____ San. (2) _____ H.M. (3) _____

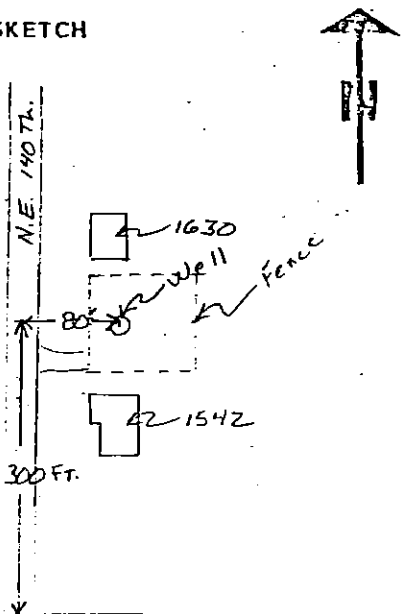
Water Levels available: Yes (1) _____ No _____

Period of Record: Begin _____ End _____

Collecting Agency: _____

Prod. Rec. (1) _____ Pump Test (2) _____ Yield (3) _____

SKETCH



REMARKS

Casing size: 12" diam from 0ft. to 354ft.
8" diam. From 344ft. to 445ft.

Air line is available. Condition of gauge and length of airline is unknown.

Well is below ground level in front of small wooden building.

N.E. - 140th St.

Recorded by: C.E.W.

Date 7-18-79

STATE ENGINEER
Salem, Oregon

State Well No. 1N/2-2631

County Multnomah

Application No. _____

Chemical Analysis

OWNER Richland Water District

OWNER'S NO. 1

ANALYST USGS Address _____

Date of Collection 4/22/58

Point of Collection _____

	P.P.M.	F.P.M.
Silica (SiO ₂)	64.	
Iron (Fe) Total	.09	
Manganese (Mn)	.00	
Calcium (Ca)	16.	
Magnesium (Mg)	7.8	
Sodium (Na)	7.2	
Potassium (K)	1.2	
Bicarbonate (HCO ₃)	101.	
Carbonate (CO ₃)	0.	
Sulfate (SO ₄)	4.1	
Chloride (Cl)	2.	
Fluoride (F)	.1	
Nitrate (NO ₃)	0.	
Boron (B)		
Dissolved Solids	151.	
Hardness as CaCO ₃	72.	
Specific Conductance (Micromhos at 25°C)	167.	
pH	7.2	
Percent Sodium	18.	
Sodium Absorption Ratio (S.A.R.)		
CLASS		

ENVIRONMENTAL GEOLOGY & GROUND WATER WELL DATA

Project Columbia SEG

Owner Richland Water District State No. _____
 Address 14151 N.E. San Rafael Other No. Richland Water District #1
 Tenant _____
 Address _____

Type of Well: Hydrograph Key Index Semiannual Quality
 Location: County Multnomah Basin _____ No. _____
 U.S.G.S. Quad. Mount Tabor 7 1/2 min. Quad. No. _____
SE 1/4 SE 1/4 Section 26, Twp. 7N, Rge. 2E Will. Meridian

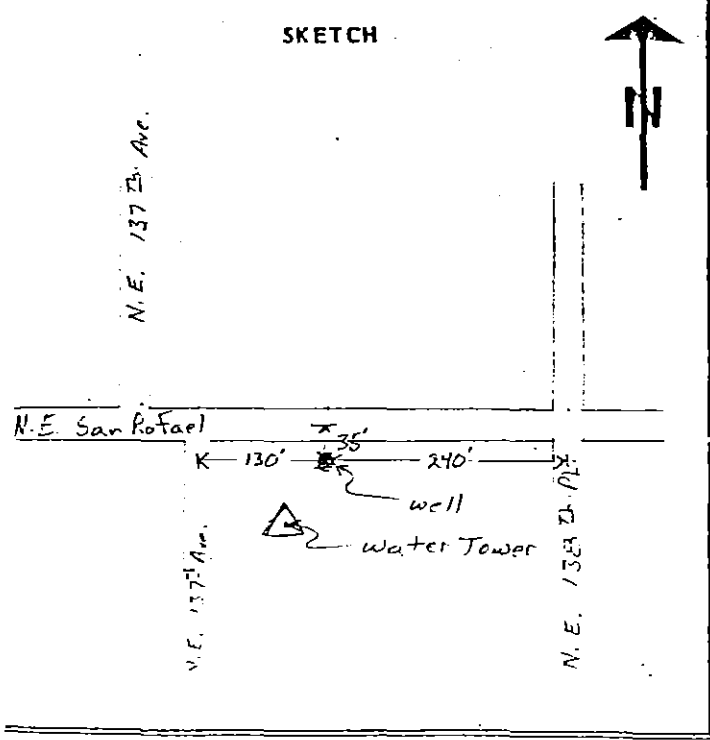
Description _____

 Reference Point description _____

which is _____ ft. ^{above}/_{below} land surface. Ground Elevation 255 (estimated from U.S.G.S. map) ft.
 Reference Point Elev. _____ ft. Determined from _____
 Well: Use Municipal Condition in use Depth 400 ft.
 Casing, size see remarks in., perforations 3/8 inch X 1 1/2 inch - 8 rows each from 165 to 180, from 252 to 263, from 300 to 315, from 371 to 383 feet.

Measurements By: DWR USGS USBR County Irr. Dist. Water Dist. Cons. Dist. Other
 Chief Aquifer: Name _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____
 Type of Material _____ Perm. Rating _____ Thickness _____
 Gravel Packed? Yes No Depth to Top Gr. ? Depth to Bot. Gr. ?
 Supp. Aquifer? _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____
 Driller ?
 Date drilled 1946 Log, filed April 1959 open (1) confidential (2)
 Equipment Pump, type M Submersible make _____
 Serial No. _____ Size of discharge pipe _____ in.

Power, kind electric Make _____
 H. P. 20 Motor Serial No. _____
 Elec. Meter No. _____ Transformer No. _____
 Yield 165 G.P.M. Pumping level _____ ft.
 Water Analysts: Min. (1) _____ San. (2) _____ H.M. (3) _____
 Water Levels available: Yes (1) _____ No _____
 Period of Record: Begin _____ End _____
 Collecting Agency: _____
 Prod. Rec. (1) _____ Pump Test (2) _____ Yield (3) _____



REMARKS

Casing size: 12" inch diam. from 0' ft. to 270 ft.
10" inch diam. from 270 ft. to 385 ft.

The well is below the ground level inside a wooden building.

An air line and gauge is present, but the length of the air line and condition of the gauge is unknown.

Recorded by: CEW
 Date: 7-19-79

ENVIRONMENTAL GEOLOGY & GROUND WATER WELL DATA

Project Columbia

Owner Richland Water District State No. _____
 Address 14151 N.E. San Rafael Other No. Richland Water District #2
 Tenant _____
 Address _____

Type of Well: Hydrograph Key Index Semiannual Quality
 Location: County Multnomah Basin _____ No. _____
 U.S.G.S. Quad. Mount Tabor 7 1/2 min. Quad. No. _____
NE 1/4 SE 1/4 Section 26, Twp. 1N, Rge. 2E Will. Meridian
 Description _____

Reference Point description _____

which is _____ ft. ^{above}/_{below} land surface. Ground Elevation 251 Feet (From U.S.G.S. Quad.) ^{estimated} ft.

Reference Point Elev. _____ ft. Determined from _____

Well: Use Municipal Condition in use Depth 490 ft.
 Casing, size See Remarks In., perforations Size 3/8" X 1 1/2" From 145 to 200, From 240 to 270,
 From 270 to 280, From 300 to 310, From 312 to 330

Measurements By: DWR USGS USBR County Irr. Dist. Water Dist. Cons. Dist. Other

Chief Aquifer: Name _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____

Type of Material _____ Perm. Rating _____ Thickness _____

Gravel Packed? Yes No Depth to Top Gr. _____ Depth to Bot. Gr. _____

Supp. Aquifer _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____

Driller: Haakon I. Botner Well Drilling
 Date drilled June-Sept. 1956 Log, filed: Nov. 1956 open (1) _____ confidential (2) _____

Equipments: Pump, type _____ make _____

Serial No. _____ Size of discharge pipe _____ in. Water Analysis: Min. (1) _____ Son. (2) _____ H.M. (3) _____

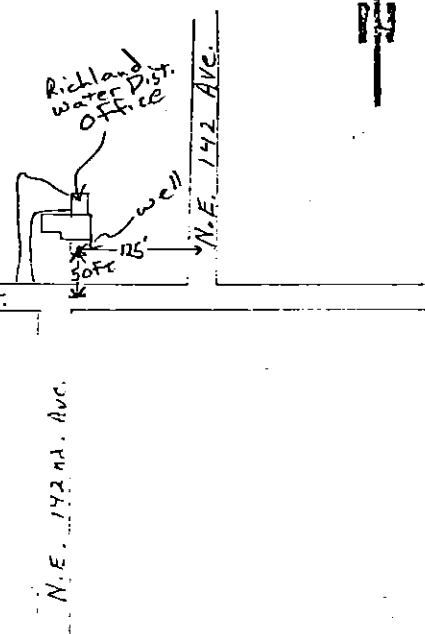
Power, Kind: electric Make _____ Water Levels available: Yes (1) _____ No _____

H. P. _____ Motor Serial No. _____ Period of Record: Begin _____ End _____

Elec. Meter No. _____ Transformer No. _____ Collecting Agency: _____

Yield _____ G.P.M. Pumping level _____ ft. Prod. Rec. (1) _____ Pump Test (2) _____ Yield (3) _____

SKETCH



REMARKS

Casing, size: 12" diam. From 0' to 334'
 8" diam. from 334' to 490'
 Air line ^{may be} available, condition of
 gauge and length of line are unknown.
 well is below ground level under a
 steel cover in front of water Dist.
 office.

Recorded by: _____
 Date _____

STATE OF OREGON,

PERMIT

County of Marion,

This is to certify that I have examined the foregoing application and do hereby grant the same, SUBJECT TO EXISTING RIGHTS and the following limitations and conditions:

The right herein granted is limited to the amount of water which can be applied to beneficial use and shall not exceed 0.56 cubic feet per second measured at the point of diversion from the well or source of appropriation, or its equivalent in case of rotation with other water users, from a well

The use to which this water is to be applied is Irrigation.

If for irrigation, this appropriation shall be limited to 1/80 of one cubic foot per second or its equivalent for each acre irrigated and shall be further limited to a diversion of not to exceed 2 1/2 acre feet per acre for each acre irrigated during the irrigation season of each year;

and shall be subject to such reasonable rotation system as may be ordered by the proper state officer.

The Well shall be cased as necessary in accordance with good practice and if the flow is artesian the works shall include proper capping and control valve to prevent the waste of ground water.

The works constructed shall include an air line and pressure gauge or an access port for measuring line, adequate to determine water level elevation in the well at all times.

The permittee shall install and maintain a weir, meter, or other suitable measuring device, and shall keep a complete record of the amount of ground water withdrawn.

The priority date of this permit is April 10, 1958

Actual construction work shall begin on or before May 6, 1959 and shall thereafter be prosecuted with reasonable diligence and be completed on or before October 1, 1959

Complete application of the water to the proposed use shall be made on or before October 1, 1960

WITNESS my hand this 6th day of May 1958

Lewis A. Stanley STATE ENGINEER

Application No. G-9271

Permit No. G-812

PERMIT

TO APPROPRIATE THE GROUND WATERS OF THE STATE OF OREGON

This instrument was first received in the office of the State Engineer at Salem, Oregon, on the 10th day of April 1958, at 1:00 o'clock P.M.

Returned to applicant:

Approved:

May 6, 1958

Recorded in book No. 3

Ground Water Permits on page 812

LEWIS A. STANLEY STATE ENGINEER

Drainage Basin No. 3 page 25

State Engineer

1800

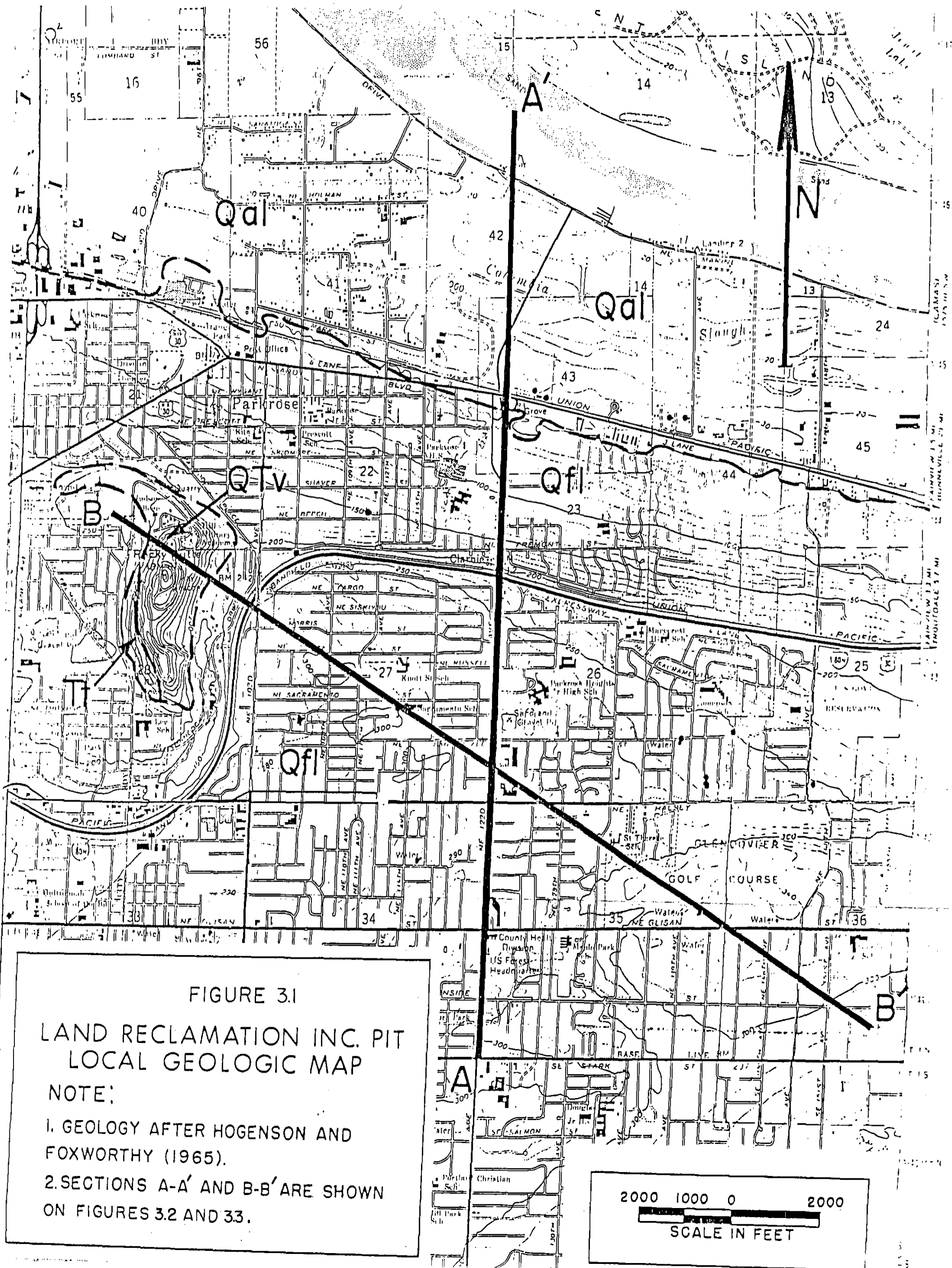


FIGURE 3.1

LAND RECLAMATION INC. PIT
LOCAL GEOLOGIC MAP

NOTE:

1. GEOLOGY AFTER HOGENSON AND FOXWORTHY (1965).
2. SECTIONS A-A' AND B-B' ARE SHOWN ON FIGURES 3.2 AND 3.3.

2000 1000 0 2000
SCALE IN FEET

LAND RECLAMATION, INC.

Qal

YOUNGER ALLUVIUM

Gravel, sand, silt, and clay; slightly stratified. Mostly well sorted beneath flood plains of larger rivers; less sorted near smaller streams. Thickness generally a few feet near small streams, about 20 or 30 feet along Sandy and Clackamas Rivers, 75 to 100 feet along Willamette River, and as much as 200 feet along Columbia River. Layers of well-sorted gravel and sand yield large amounts of water to wells; less sorted and finer grained materials yield smaller amounts.

Qf1

FLUVIOLACUSTRINE DEPOSITS

Unconsolidated gravel, sand, silt, and clay; slightly stratified. Generally bouldery and coarser grained to the east and progressively finer grained to the west side of the area but contains some gravel layers throughout most of the area. Thickness generally less than 100 feet; locally, it may be as great as 150 feet. Gravel and sand beds are permeable but are mostly above regional water table and are unsaturated or yield only small amounts to wells from perched water. Where permeable beds extend below the regional water table, they yield moderate to large quantities to wells.

Qtv

BORING LAVA

Mostly gray massive basaltic lava; contains lesser amounts of tuff and volcanic cinders. The lava occurs mostly as flow layers but includes sills and feeder dikes. Total thickness ranges from 5 to about 800 feet. Generally is above regional water table and yields only small to moderate amounts to wells and springs from perched water.

Tt

TROUTDALE FORMATION

Unconsolidated and partly consolidated gravel, sand, silt, and clay, commonly in the form of well-indurated sandy conglomerate. Thickness generally more than 100 and locally more than 800 feet. Layers of permeable gravel and sand below regional water table yield moderate to large amounts of water to wells and springs; similar beds above regional water table yield smaller less dependable supplies from perched ground water.

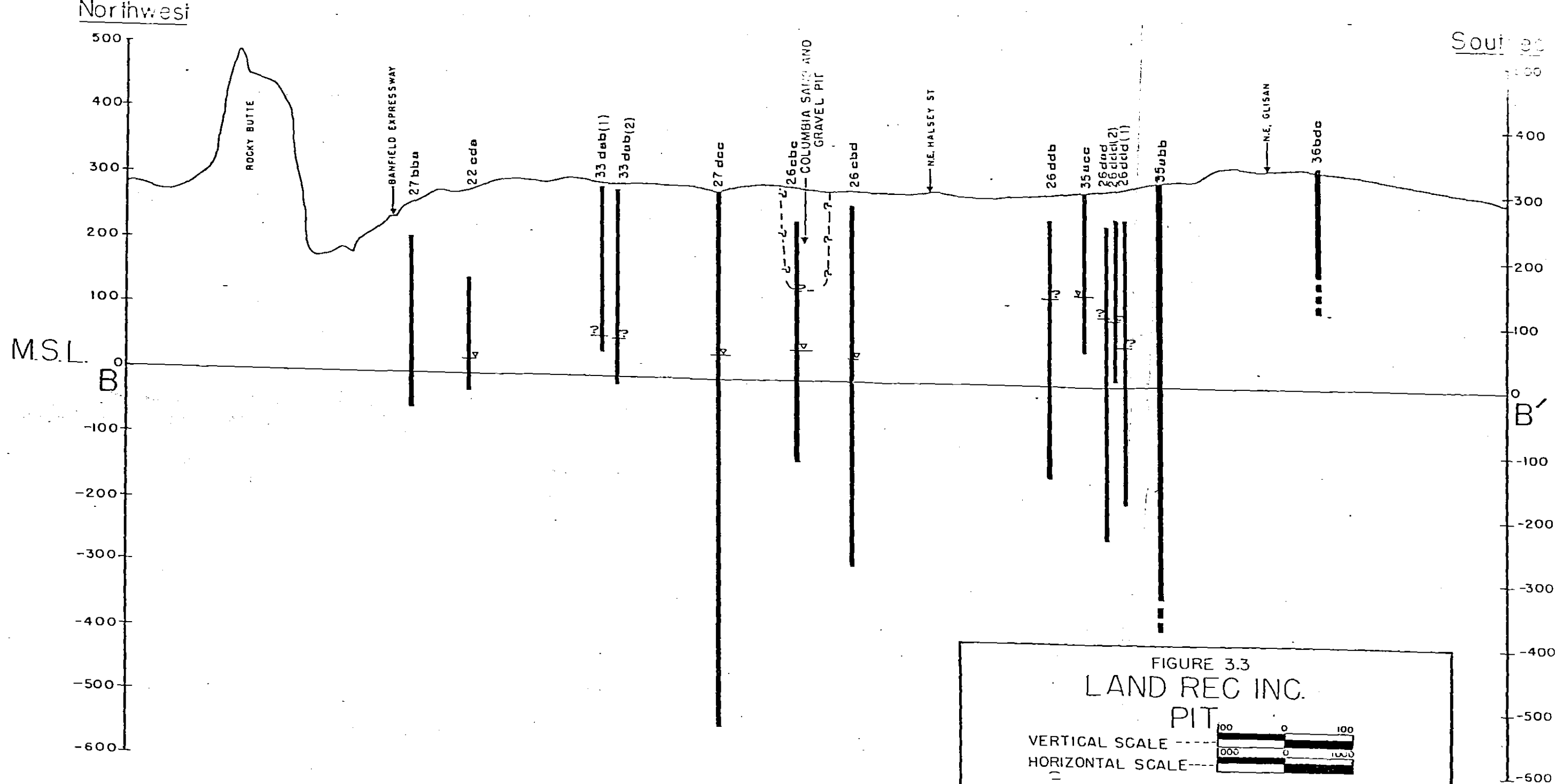


FIGURE 3.3
LAND REC INC.
PIT

VERTICAL SCALE -----

HORIZONTAL SCALE -----

100 0 100
1000 0 1000

26 ddd(1) WELL NUMBER

GROUND SURFACE

▽ STATIC WATER LEVEL (MEASURED BY E.G.G.W. OR OTHERS)

? STATIC WATER LEVEL (BASED ON GRILLERS MEASUREMENT INDICATED ON THE WELL LOG)

NOTES:

- ALL WELL LOCATIONS ARE PROJECTED.
- THE VARIATIONS IN DEPTH TO WATER AS SHOWN ARE DUE TO:
 - a SEASONAL VARIATIONS IN WATER LEVEL MEASUREMENTS, AND
 - b NOT ALL WELLS ARE SCREENED IN THE SAME AQUIFER.

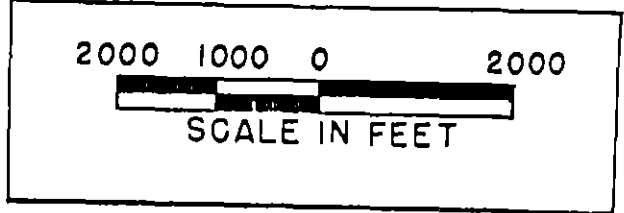


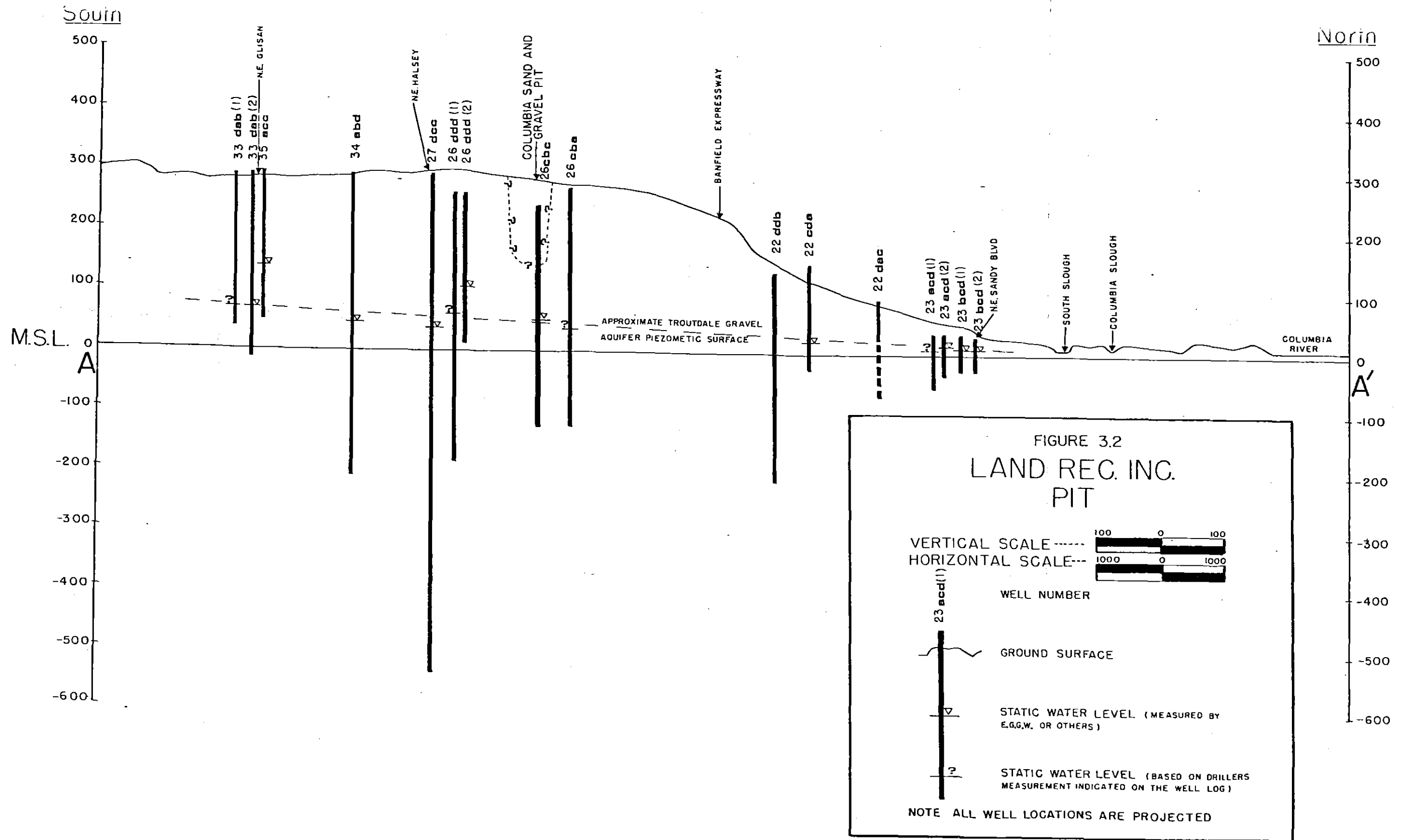
FIGURE 31

LAND RECLAMATION INC. PIT
LOCAL GEOLOGIC MAP

NOTE:

1. GEOLOGY AFTER HOGENSON AND FOXWORTHY (1965).
2. SECTIONS A-A' AND B-B' ARE SHOWN ON FIGURES 3.2 AND 3.3.





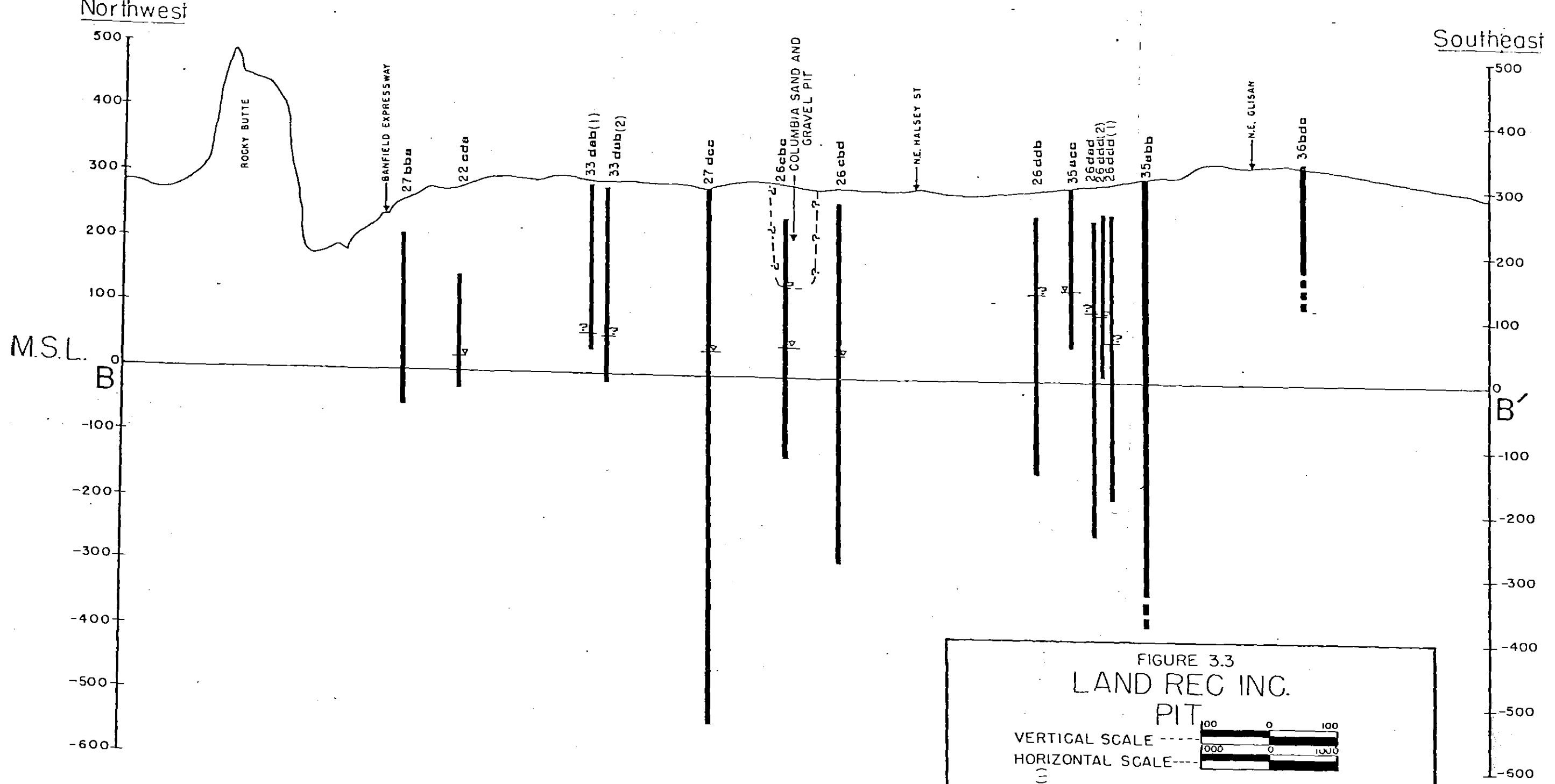


FIGURE 3.3
 LAND REC INC.
 PIT

VERTICAL SCALE -----

HORIZONTAL SCALE -----

26 ddd(1)

WELL NUMBER

GROUND SURFACE

STATIC WATER LEVEL (MEASURED BY E.G.G.W. OR OTHERS)

STATIC WATER LEVEL (BASED ON DRILLERS MEASUREMENT INDICATED ON THE WELL LOG)

NOTES:

1. ALL WELL LOCATIONS ARE PROJECTED.

2. THE VARIATIONS IN DEPTH TO WATER AS SHOWN ARE DUE TO:

a SEASONAL VARIATIONS IN WATER LEVEL MEASUREMENTS, AND

b NOT ALL WELLS ARE SCREENED IN THE SAME AQUIFER.

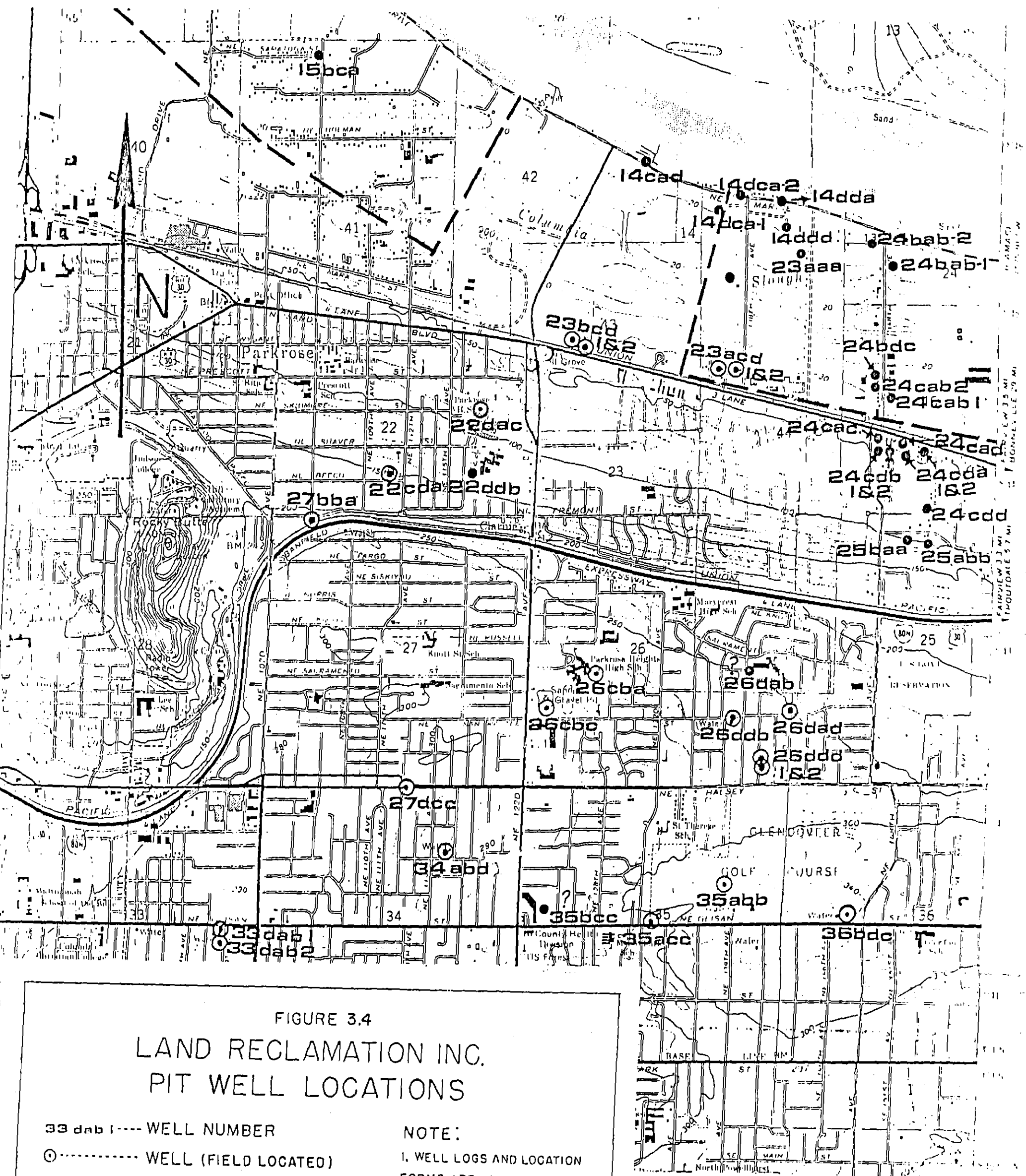


FIGURE 3.4
 LAND RECLAMATION INC.
 PIT WELL LOCATIONS

- 33 dab 1 ---- WELL NUMBER
- ⊙ ---- WELL (FIELD LOCATED)
- ---- WELL (FROM REFERENCES)
- WELL FIELD BOUNDARY - PORTLAND BUREAU OF WATER WORKS

NOTE:
 1. WELL LOGS AND LOCATION FORMS ARE IN THE APPENDIX.
 2. WELLS LOCATED WITH THIS SYMBOL ● ARE PRIMARILY TAKEN FROM WILLIS, R.F. (1978).

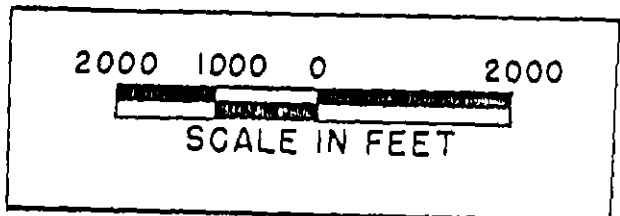
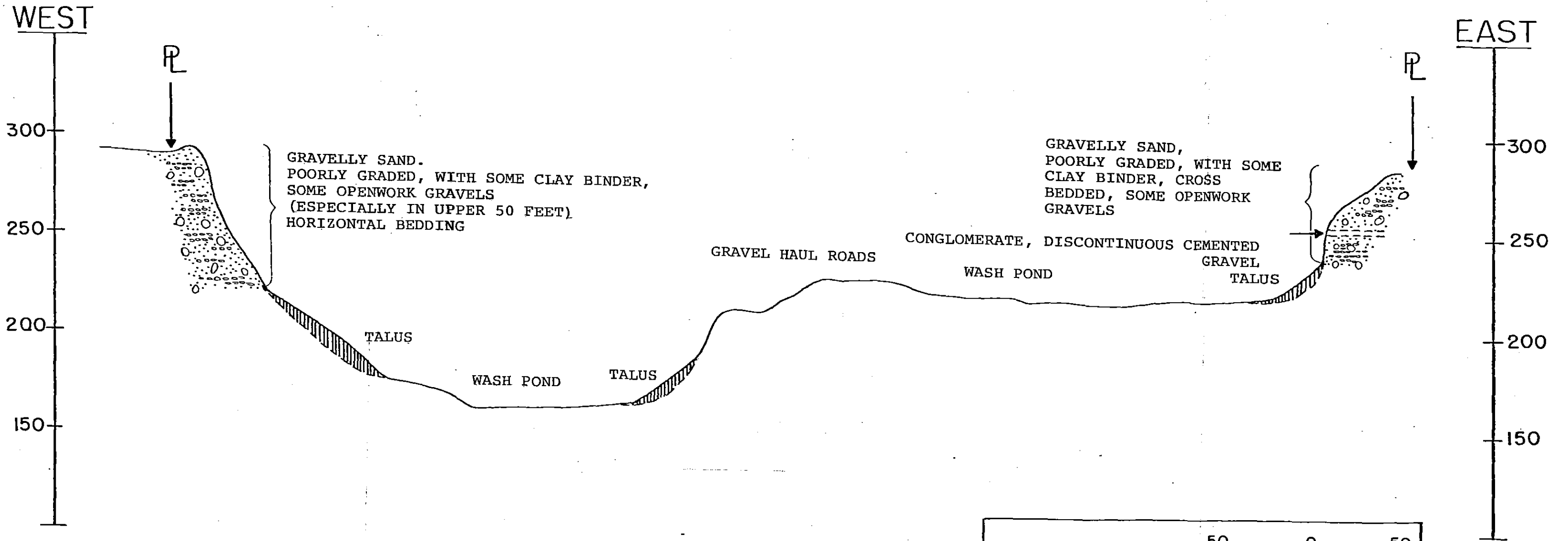


FIGURE 3.5
PIT PROFILE C-C'

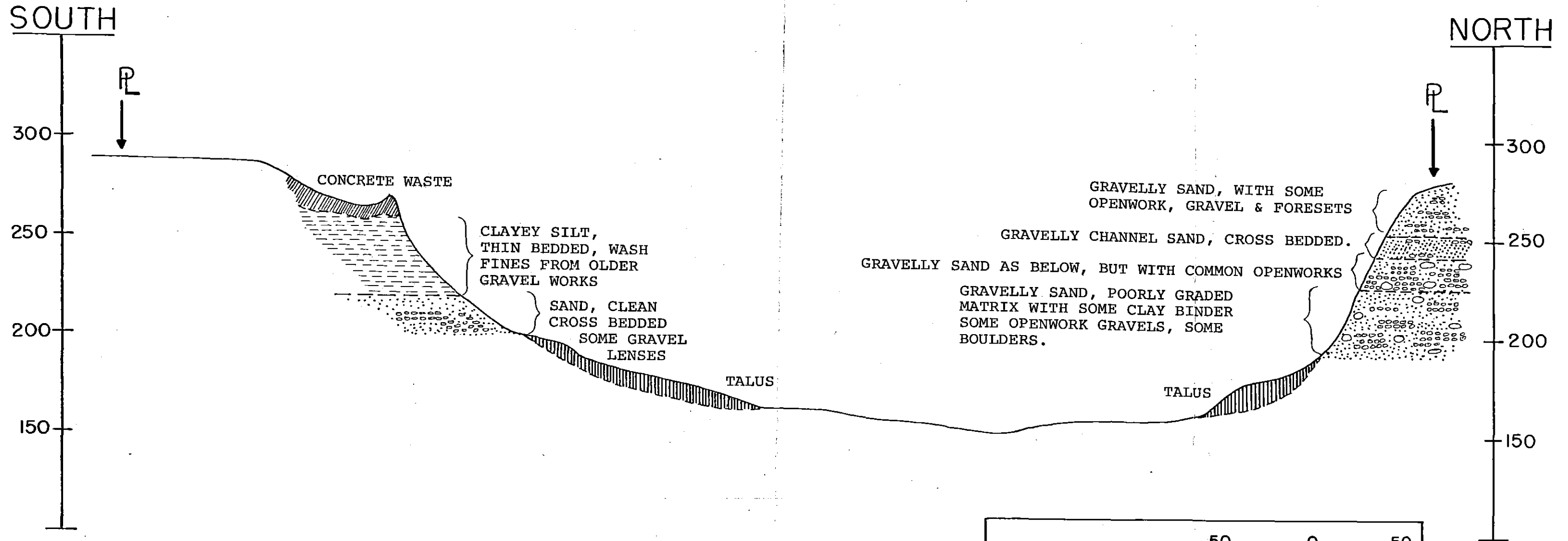


VERTICAL SCALE ----- 50 0 50

HORIZONTAL SCALE ----- 50 0 50

NO VERTICAL EXAGGERATION
NOTE:
GEOLOGIC CONTACTS APPROXIMATE
AND DISCONTINUOUS.

FIGURE 36
PIT PROFILE D-D'



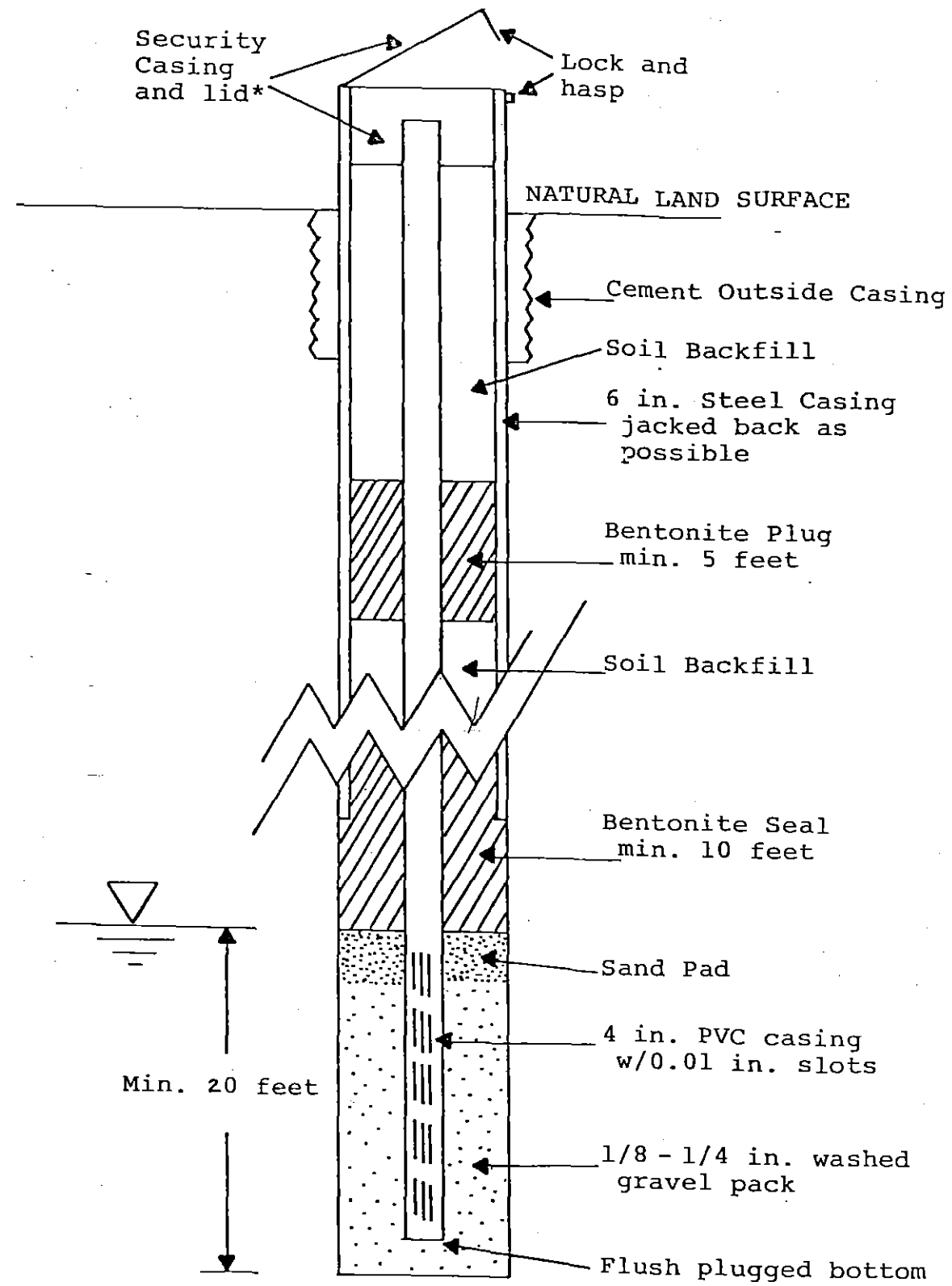
VERTICAL SCALE----- 50 0 50
HORIZONTAL SCALE----- 50 0 50

NO VERTICAL EXAGGERATION
NOTE:
GEOLOGIC CONTACTS APPROXIMATE
AND DISCONTINUOUS.

LAND RECLAMATION, INC.

FIGURE 4.1

MONITORING WELL DIAGRAM



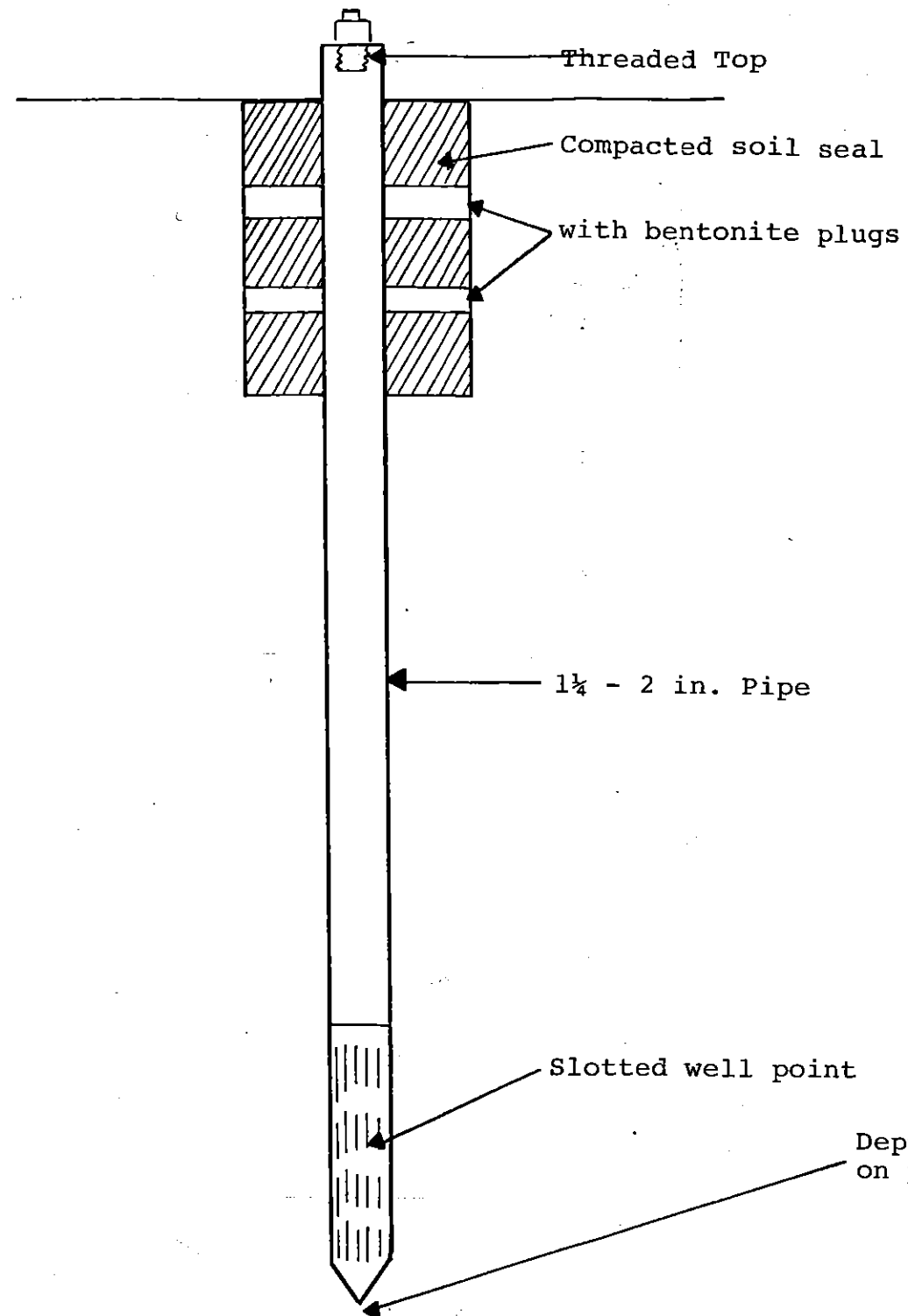
Submersible pump to be installed:
RED JACKET 1/3 hp; 9 AD (5 gpm series); single phase 115 or 230 V; Two wire unit with control box built into pump base; and Dole flow valve set for 4 gpm to increase head.

*NOTE: Security casing for northeast installation with 4 in. PVC riser to be used inside gas vent rings on northwest well.

LAND RECLAMATION, INC.

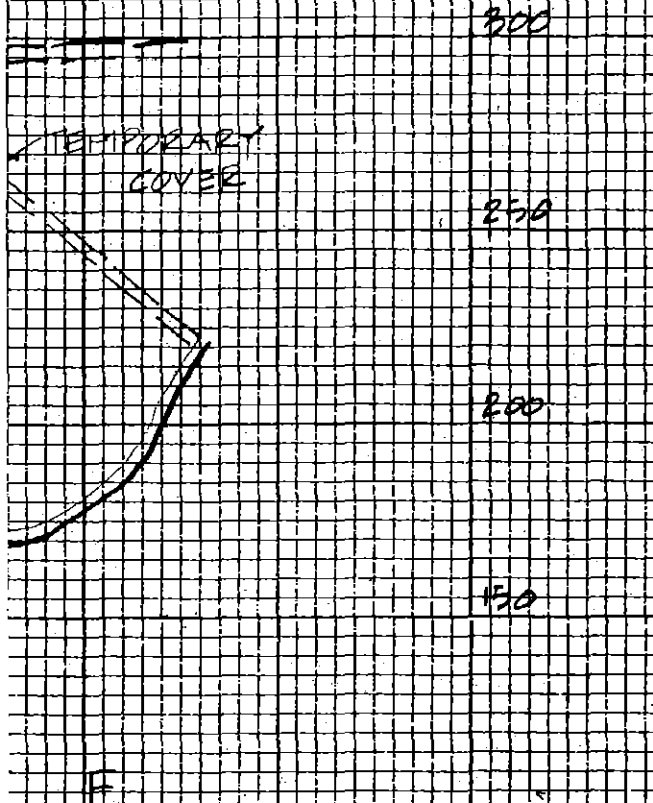
FIGURE 4.2

GAS MONITORING WELL



Note: Should the well volume prove excessive, hydro-tips w/ granular backfill and small diameter risers can be installed.

E D



FEB 0-6 1980

no	date	by	revisions
seton, johnson & odell inc. consulting engineers portland, oregon			
project COLUMBIA SAND & GRAVEL			
dwg. title EXIST. GRADES & SECTIONS			
designed		date	
KM		9-6-79	
drawn		date	
EEB/KR		9-7-79	
approved		date	
project no.		2-0017	
drawing no.		PLATE 1	

February 28, 1978

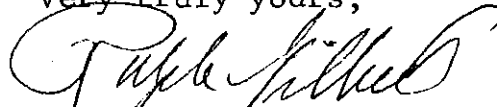
Department of Environmental Quality
Yeon Building
Portland, Oregon

Re: Application for Solid Waste Permit
The Columbia Sand & Gravel Pit,
N. E. 122nd and San Rafael

Dear Sirs:

Please be advised that the writer, Ralph Gilbert, and Western Pacific, a joint enterprise, has entered into a lease with Land Reclamation, Inc. of the above premises for the purposes of a solid waste operation landfill, and upon the assurance of a permit, they will have authority to enter upon and control the site for the operation of the purpose of a landfill.

Very truly yours,



Ralph Gilbert
Columbia Sand & Gravel Co.
12401 N. E. San Rafael
P. O. Box 20096
Portland, Oregon 97220

PROPOSED SOLID WASTE DISPOSAL SITE

EXHIBIT A-C

NAME OF SITE Columbia Sand and Gravel Pit
 ADDRESS OR GENERAL LOCATION OF SITE 12401 N. E. San Rafael Street
Portland, Oregon 97230
 COUNTY Multnomah

CHECK APPROPRIATE
 BOX OR FILL IN
 REQUESTED INFORMATION

1. SITE OWNED BY - Public Agency Private
 Name Ralph Gilbert and Western Pacific (joint venture)
 Address 12401 N. E. San Rafael St., Portland, OR 97230
2. PERSON RESPONSIBLE FOR OPERATION OF SITE
 Name Land Reclamation, Inc.
 Title by William J. Plew, President
 Address 10345 N. E. 13th, Portland, Oregon 97211
 Phone 289-7833
3. SITE DESCRIPTION - S. SW 1/4 26 T. 1 N R. 2 E Total Acreage 10 Total Acreage Available for Land Disposal Distance from Nearest Community within
 Name of Community Multnomah County Distance from Nearest Residence adjacent
 Name of Nearest Public Road 122nd Distance from Public Road adjacent
 Distance to Nearest Well or Spring Site ^{OR} Feet. Distance to Nearest Stream or Lake 2 miles
Feet. Name of Stream or Lake Columbia River (approx.)
4. GENERAL CHARACTER OF SITE - (OPERATIONAL AREA) - Quarry or Barrow Pit Level
 Gully-Canyon Hillside Marsh, Tideland or Flood Plain
 Other
5. ZONING - Is the Property Zoned? Yes No Present Land Use Zone R 7
 Restrictions
 Enforcement Agency
6. HAS A PUBLIC HEARING ON THE PROPOSED SITE BEEN HELD? Yes No Is a Public Hearing planned Before the Site is Operated? Yes No
7. POPULATION DATA - Estimated Population to Be Served by Site 450,000
8. ESTIMATED LIFE EXPECTANCY OF SITE - Number of Years 3 years
9. PLANNED USE OF COMPLETED SITE - Not Determined Park or Recreational Area
 Agriculture Light Construction Other Potential Recycle Center
10. ACCESS ROAD - Existing To Be Constructed
 Maintained By Operator
 Type of Road Surface Gravel Width 24' Length as required
11. WILL SITE BE OPEN TO PUBLIC? Yes No Fee Charged? Yes No Open for Use 7 Day per Week, Hours of Operation 8:30 am to 4:30 pm. 24 hours ---
12. WILL CARETAKER BE ON DUTY DURING OPERATIONAL HOURS? Yes No
 Planned Facilities for Caretaker - Suitable Shelter Toilet Handwashing
 None
13. (FOR INDUSTRIAL WASTE DISPOSAL SITES ONLY)
 - A. OTHER INDUSTRIES TO UTILIZE THE SITE FOR DISPOSAL All
 - B. ESTIMATED TOTAL SOLID WASTE TO BE DEPOSITED ANNUALLY 425,000 Cubic yards
 - C. TYPES OF SOLID WASTE TO BE DEPOSITED 1. _____, % of Total;
 2. _____, % of Total; 3. _____, % of Total;
 4. _____, % of Total; 5. _____, % of Total.

D. PERMITS - DO YOU HAVE A DEQ WATER OR AIR POLLUTION CONTROL PERMIT, Yes No
Identify DEQ Air Quality Permit
DO YOU HAVE A FEDERAL NPDES PERMIT, Yes No Permit No. _____
IS THE DISPOSAL SITE LICENSED OR FRANCHISED BY THE COUNTY OR CITY, Yes No
Identify _____

14. SURFACE WATER - Is Surface Water Diverted Away from Operation Area, Yes No
Proposed Method of Control _____

Is Site Subject to Flooding Yes No (If yes, explain under REMARKS below.)

15. ESTIMATED GROUND WATER LEVEL - Have Test Holes Been Dug, Yes No Date 1958
Number of Holes _____ Average Depth 280' Ground Water Encountered,
Yes No Average Depth of Water from Surface 220' Sketch of Test
Holes Attached, Yes No Groundwater Monitoring Wells Planned, Yes No

16. MARK ITEMS WHICH ARE TO BE EXCLUDED - None All Putrescible Wastes Bulky
Combustible Material Dead Animals Waste Oil Sewage Solids Junk
Automobiles Large Appliances Demolition Wastes Tires Hazardous
Materials Other _____

17. ARE BULKY COMBUSTIBLES TO BE BURNED - Yes No (Burning must be conducted
in separate area 500 feet minimum distance from operation area.)

18. PLANNED FIRE PROTECTION - Firebreak Water Under Pressure Other _____

19. PLANNED SOURCE OF WATER UNDER PRESSURE DURING EQUIPMENT OPERATION - Surface
Well 300 Gallon or Larger Storage Tank Other _____

20. PLANNED FREQUENCY OF COMPACTION AND COVER - Daily Twice Weekly _____
Weekly _____ Monthly _____ Other _____

21. COVER MATERIAL - Adequate Cover Material Available on Site, Yes No
(If no, Explain under REMARKS) Estimated Depth of Soil in Operational Area _____
Characteristics of Soil - Loam Sand Clay Sandy-Clay Gravel
Other Troutdale Glacial Formation

22. EQUIPMENT TO BE USED AT SITE (Specify Type and Size) (1) Compactor
(2) 1 TD 25 C

23. REMARKS: A Designed Recycle System for concrete bricks and asphalt
to produce ASTM specification saleable product and thereby conserving
a depleting natural resource.

LAND RECLAMATION, INC.

Signature of Person Completing Form William J. Flew

Title President William J. Flew Date February 14, 1978

Phone 289-7833

MSD METROPOLITAN SERVICE DISTRICT

527 S.W. HALL PORTLAND, OREGON 97201 503/221-1646

April 18, 1979

Mr. Robert Gilbert
Regional Manager
Department of Environmental Quality
P O Box 1760
Portland, Oregon 97207

Dear Bob:

As you know, Ron Watson, attorney for Plew's Land Reclamation, has requested MSD's comments regarding the proposed utilization of the Columbia Sand and Gravel Pit, located at NE 122nd Avenue and San Rafael, as a sanitary landfill. This issue was discussed by the MSD Solid Waste-Public Facilities Council Committee at their meeting on Tuesday, April 17, 1979. As a result of this meeting, I have been requested to furnish DEQ with the following comments:

Rick Gustafson,
Executive Officer

MSD Council

Mike Burton,
Presiding Officer
District 12

Donna Stuhr,
Deputy Presiding
Officer
District 1

Charles Williamson
District 2

Craig Berkman
District 3

Corky Kirkpatrick
District 4

Jack Deines
District 5

Jane Rhodes
District 6

Betty Schedeen
District 7

Caroline Miller
District 8

Cindy Banzer
District 9

Gene Peterson
District 10

Marge Kaloury
District 11

1. The Columbia Sand and Gravel Pit has been identified by MSD as a potential site, as noted in the Disposal Siting Alternatives report, dated September, 1978.
2. The Columbia Sand and Gravel Pit needs to be reclaimed to complement surrounding properties.
3. MSD does not regulate the disposal of inert material such as concrete, bricks, asphalt, stones, etc. Therefore, the utilization of this type of material to fill the pit and to stabilize the slide which occurred along 122nd Avenue can commence immediately without the necessity of an MSD certificate.
4. If the material to be accepted at the site could modify the biological or chemical drinking water quality properties of existing surface or groundwater, or normal air quality indices, a certificate would be required from MSD. Prior to providing comments regarding this site, it is necessary that MSD receive a completed application. We have received a copy of the application submitted by Plew's Land Reclamation to DEQ. However, we feel it is incomplete since it did not contain the feasibility study report required in OAR Chapter 340-61-030 and Section 20.02.100 of the MSD Code. As soon as we are in receipt of a completed application, MSD will be in a position to provide the necessary comments.

4/19/79 - [Signature] Bell

Mr. Robert Gilbert
April 18, 1979
Page 2

I would take this opportunity to request that a correction be made to the letter from Charles H. Gray, DEQ, to Mr. Ronald A. Watson, dated April 17, 1979. Mr. Gray stated that the solid waste disposal application submitted by Mr. Watson is incomplete until a written recommendation is received from MSD. At such time, the 60 day time period for the DEQ to act upon the application would begin. It is my understanding that a feasibility study report as required in OAR Chapter 340-61-030 must be submitted before an application is considered complete and ready for processing. Mr. Gray informs me that this feasibility study report was not included in the application. However, the tone of his April 17 letter is that the only additional requirement to make the application complete is MSD's comments. I would appreciate your notifying Mr. Watson that before his application is considered complete, he must also submit the feasibility study report in addition to MSD's comments.

Sincerely,



Merle Irvine
Acting Director, Solid Waste Division

MI:kk

cc: File 120B. 4.25
Rick Gustafson
Coun. Craig Berkman
Coun. Jack Deines
Coun. Jane Rhodes
Coun. Gene Peterson
Dick Howard, Mult. Co. Dept. of Environmental Services
Ron Watson



MULTNOMAH COUNTY OREGON

EXHIBIT A-E

Department of Environmental Services/Division of Planning and Development/2115 S.E. Morrison St./Portland, Oregon 97214 • 248-3043.

DECISION OF MULTNOMAH COUNTY HEARINGS COUNCIL

Meeting of February 6, 1978⁹

IN THE MATTER OF:

CS 9-78, #369 Community Service Approval
(Solid Waste Land Fill)

Applicant requests Community Service classification for this property to permit a solid waste land fill operation, to reclaim the existing gravel pit. Applicant proposes that the land fill be open only to commercial hauling. Length of time required to fill the site is estimated to be three years by the applicant.

Property owner plans to continue the existing non-conforming mining, gravel crushing and ready mix concrete operations now on the property during the filling period.

Applicant and property owners further request approval to recycle concrete and brick demolition material as ancillary to its current non-conforming use.

This request was originally heard on May 2, 1978 and tabled by the Hearings Council to allow time to develop additional information. It is being brought back at this time for further consideration.

LOCATION: 12401 N. E. San Rafael Street

LEGAL: Lot 30, Section 26, 1N-2E, 1977 Assessor's Map

SITE SIZE: 10 Acres

SIZE REQUESTED: Same

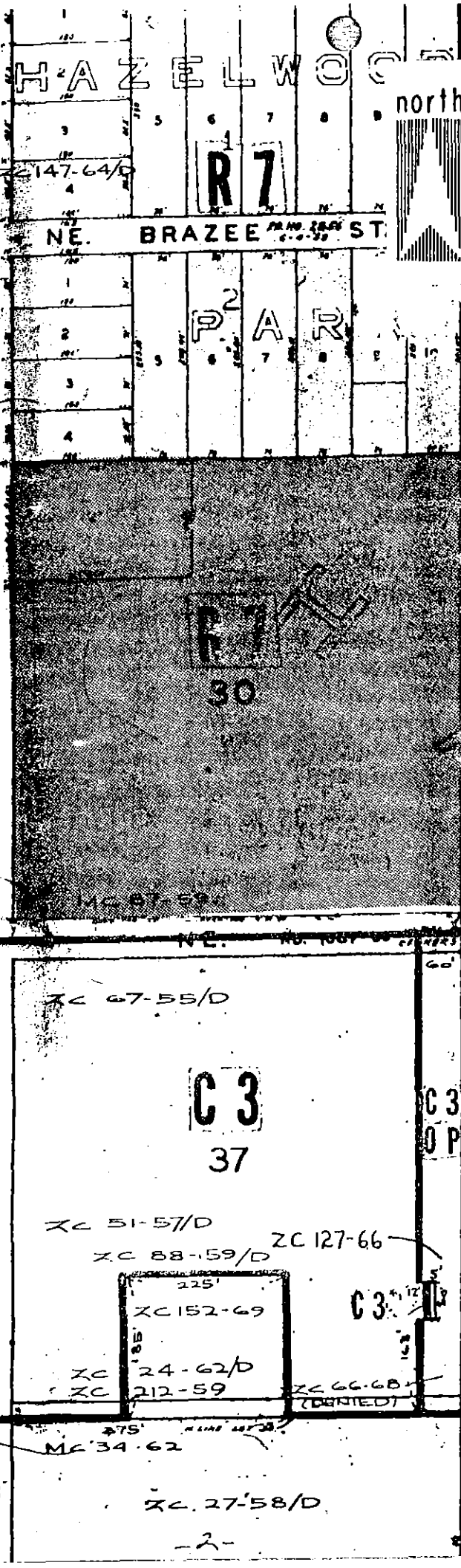
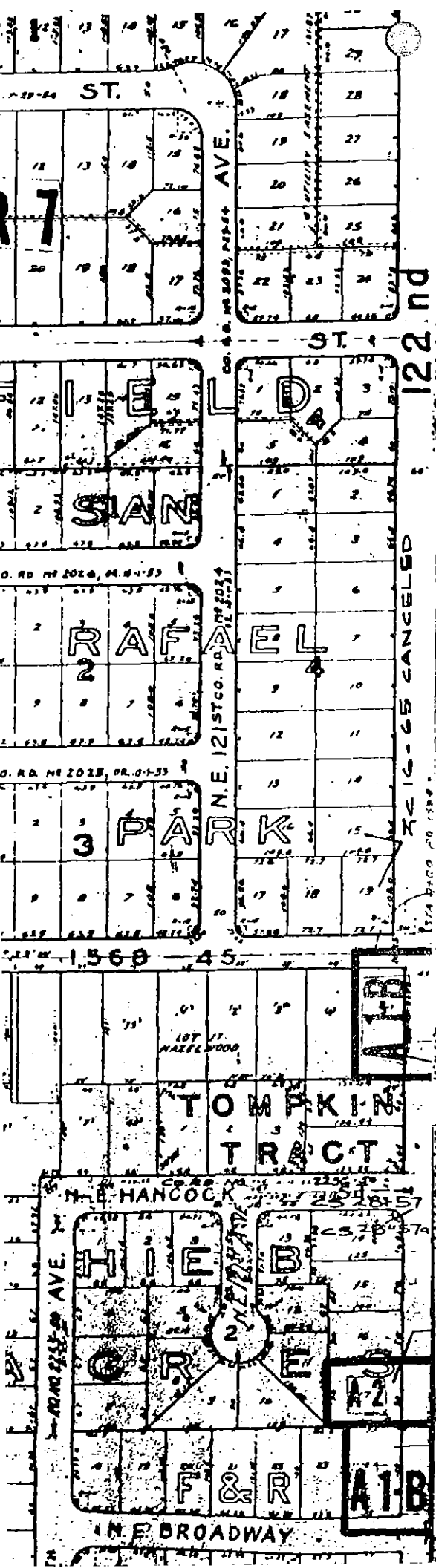
PROPERTY OWNERS: Ralph Gilbert and Western Pacific
 12401 N. E. SanRafael Street

APPLICANT: Land Reclamation, Inc., 10345 N. E. 13th Avenue, 97211

COMPREHENSIVE PLAN: Single-Family Residential

PRESENT ZONING: R-7, Single Family Residential District
 Permits single family homes on lots of 7,000 square feet or more. Allows duplexes, offices and parking when next to commercial or industrial zones.

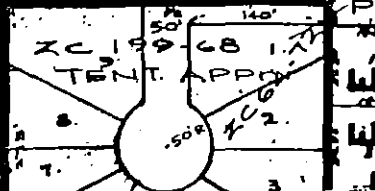
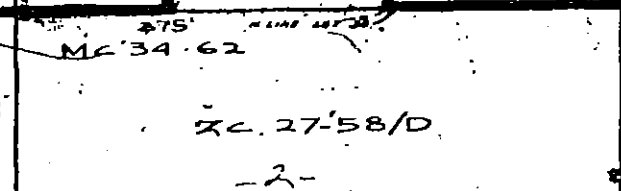
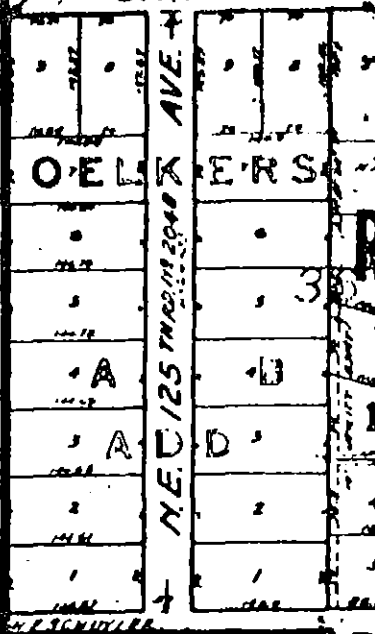
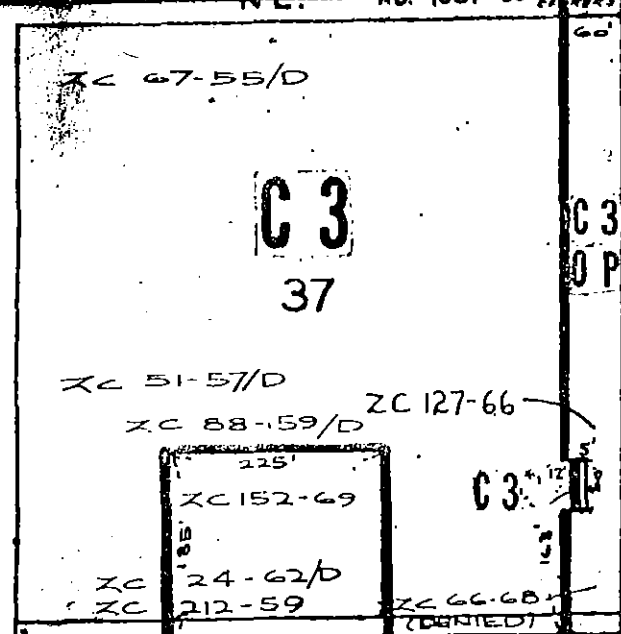
SPONSOR'S PROPOSAL: R-7, C-S, Single Family Residential, Community Service District
 Permits use of zoned property for a special use such as a church, school, park, public utility, healthcare facility, etc.



north CS 9-78
 R-7 to R-7, CS
 Land Fill
 Map #2843
 SZM #369
 Sec 26, 1N-2E
 Scale: 1"=200'

R7.5

31



COUNCIL DECISION #1: Approve Community Service designation on the above described property to permit a solid waste landfill open only to commercial handlers, subject to conditions, and adopt the Staff Report.

COUNCIL DECISION #2: Table and continue the applicant's request for approval of the proposed building materials recycling operation for the reason that the applicant has failed to provide adequate information describing the nature and impact of such a recycling operation, particularly with regard to (1) generation of noise and dust; (2) generation of what levels and what kinds of truck traffic; (3) hours of operation; and (4) expected capacities and output.

CONDITIONS OF APPROVAL, DECISION #1:

Prior to the effective date of the zoning, the owner shall:

1. File an appropriate document agreeing that all debris blown from or spilled by vehicles entering the site or blown from the disposal area will be disposed of a minimum of once each operating day, within the right-of-way of 122nd Avenue and San Rafael Street.
2. Repair and make provisions for continued maintenance of the existing site obscuring fence around the site.
3. Provide and maintain tree planting of perimeter of the site to a plan approved by Staff and designed in a manner to provide visual screening of the site during the fill operation.
4. Obtain all necessary approvals from the Department of Environmental Quality and the Metropolitan Service District. Said approvals to be limited to the disposal of only non-reprocessible fill material.
5. Terminate the mining, rock crushing, concrete mixing and other non-conforming uses upon completion of the filling or five years after commencement of filling, whichever is earlier.

FINDINGS

1. Applicant's Proposal.

Applicant requests Community Service classification for this property to permit a solid waste landfill operation, to reclaim the existing gravel pit. Applicant proposes that the landfill be open only to commercial hauling. Length of time required to fill the site is estimated to be three years by the applicant.

Property owner plans to continue the existing non-conforming mining, gravel crushing and ready mix concrete operations now on the property during the filling period.

Applicant and property owners further request approval to recycle concrete and brick demolition material as ancillary to its current non-conforming use.

This request was originally heard on May 2, 1978 and tabled by the Hearings Council to allow time to develop additional information. It is being brought back at this time for further consideration.

2. Applicable Standards for a Community Service Approval.

A. Subsection 12.25.3 of Ordinance #100 states that the burden of proof is on the applicant to persuade the Hearings Council that:

- (1) Granting the request is in the public interest;
- (2) There is a public need for the requested change, and that need will be best served by changing the classification of the property in question as compared with other available property;
- (3) The proposed action fully accords with the applicable elements of the Comprehensive Plan; and
- (4) The factors listed in ORS 215.055 have been considered (LCDC Goals).

B. CRAG Regional Plan.

- (1) Section 3 of Land Use Framework Element.

Conformity to the Framework Element, "members shall not approve any land use related action or permit any development which is not in conformity to the Framework Element."

- (2) Applicable CRAG Regional Plan Policies.

(b) Section 2: All development in Urban Areas shall be consistent with the following policies:

- (1) the maximum feasible use of existing public facilities prior to construction of new facilities;
- (2) the timely, orderly and efficient extension, construction or improvement of public facilities and services;
- (3) that all areas of local responsibility for provision of urban services shall be designated, coordinated and acknowledged;

3. Public Interest.

- A. Community service approval would allow a solid waste landfill on the site.
- B. The site is uniquely suited for the proposed use in that it is located in an area that does not currently have a landfill. The site lends itself to a landfill because of the existence of the large pit which is the result of past sand and gravel extraction.
- C. Retail commercial uses exist south of the site at the San Rafael Shopping Center.
- D. Directly east of the site is the location of the Parkrose Heights Junior High School.
- E. Single family residences lie north and west of the site.
- F. The Comprehensive Plan indicate this site as suitable for single family, but recognizes Community Service uses as allowable in any plan area if approved by the Hearings Council.

4. Public Need.

- A. According to the Comprehensive Framework Plan (p. 119), "Disposal of solid wastes in the Portland Metropolitan Area is quickly becoming a major problem. The District has estimated that the St. John's Sanitary Landfill, which serves much of Multnomah County, will be filled to capacity by 1980. After that time, refuse generated in the County will have to be transported elsewhere."
- B. There is also a need to reclaim the existing 10 acre pit to a ground level commensurate with surrounding properties.

5. Comprehensive Plan.

- A. Map Designation: The site is within the urban area and the pre-existing plan map designates the site as suitable for single-family residential use.
- B. Noise that will be associated with the use should have minimum adverse impact on surrounding uses in that the noise generation source will be below the existing grade of surrounding properties.
- C. The continued use of the rock crusher beyond the scheduled completion date of the fill will adversely affect the surrounding neighborhood. The crusher would then be atop the proposed fill on the same level as the surrounding properties. Such a use would be out of character with surrounding uses.

- D. Filling in the existing pit would enhance community identity, in that it would reclaim 10 acres of the existing neighborhood which in the past has adversely impacted the community.

6. LCDC Goals (ORS 2.5.055).

- A. #6 To maintain and improve the quality of air, water and land resources of the State.

#13 Framework Plan Policy.

- #9 To diversify and improve the economy of the State.

The proposal will help improve the economy of the State by creating additional jobs and revenue which would come about with the approval of this landfill.

- #11 To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.

#31 Framework Plan Policy.

- #13 To conserve energy.

The proposal will help conserve energy by providing a public facility within the urban area where there is a need for such a use. Because of its central location, trip lengths will be shortened.

7. Framework Plan Policies:

- #13 Air and Water Quality and Noise Level Policy.

No statement in regard to either air and water quality or noise levels has been submitted from either DEQ or MSD.

- #18 Community Identity Policy.

By reclaiming the existing gravel pit to a level commensurate with the surrounding land community, identity could be reinforced.

- #23 Redevelopment Policy.

By redeveloping this non-conforming use through the fill of the existing pit, could help elevate a community "eyesore". The community, on the most part, is well established and well kept.

By filling the existing pit, valuable urban property will be reclaimed which could be developed within the guidelines of the current zoning.

#31 Community Facilities and Uses Location Policy.

Major community public facility.

(1) Access.

- (a) The site has direct access to NE San Rafael Street, which is a minor arterial with a right-of-way of 55 feet and proposed for a 60 foot width. The width along the property frontage is 30 feet from centerline. The additional 5 foot dedication will thus be along the south line of NE San Rafael which abuts the San Rafael Shopping Center.
- (b) No increased traffic congestion is anticipated with this use. The intersection of 122nd and San Rafael is presently signaled.

(2) Impact of the Proposed Change on Adjacent Lands.

- (a) The proposed use is not compatible with surrounding ones. However, neither is the existing gravel pit. A solid waste landfill will reinforce an orderly and timely development by reclaiming this 10-acre site for future development.

CONCLUSIONS

- A. The request is in the public interest in that it would reclaim the existing pit to a level commensurate with surrounding levels, thus eliminating the adverse impact the pit has had on the community in the past.
- B. The request will fulfill a substantial public need in the area for a landfill.
- C. The request helps satisfy the following applicable Framework Policies: #18, #23, #31.
- D. The request helps satisfy the following LCDC Goals: #9, #11, #13.
- E. The applicant has failed to satisfy Framework Plan Policy #13, and LCDC Goal #6; however, satisfaction of this policy will be complied with through DEQ and MSD permit requirements.
- F. The proposal helps satisfy CRAG Policies in regard to urban infill and public facilities.
- G. The non-conforming uses of the site are associated with the gravel mining operation which will cease upon completion of site filling, estimated to take three years. All such uses will thus be terminated.

- G. Because of the nature of the use and the possibility of strong east winds in this portion of the County, precautions should be taken to prevent any accidental spillage of material in transit to the site or materials that might be blown from the site into the surrounding neighborhood. Therefore, all debris blown from or spilled by vehicles entering the site or blown from the disposal area should be collected and properly disposed of a minimum of once each operating day.
- H. Expansion of the existing non-conforming use is out of character with the surrounding area. The purpose of approving the landfill is to allow for the eventual development of the property in a manner compatible with surrounding properties. Expansion of the crushing operation would preclude that eventuality.

Signed February 6, 1979

By 

Don Gibbons, Chairperson

February 16, 1979

Filed with Clerk of the Board

Appeal to Board of County Commissioners

Any party may file Notice of Review with the Planning Director within 10 days of the date the Decision is filed with the Clerk of the Board.

The decision on this item will be reported to the Board of County Commissioners for review at 9:30 a.m., Tuesday, February 27, 1979, in Room 602, Multnomah County Courthouse. For further information, call the Multnomah County Land Development Division, 248-3043.



MULTNOMAH COUNTY OREGON

DIVISION OF PLANNING AND DEVELOPMENT
2115 S.E. MORRISON
PORTLAND, OREGON 97214
(503) 248-3591

COUNTY COMMISSIONERS
DON CLARK, Chairman
DAN MOSEE
ALICE CORBETT
DENNIS BUCHANAN
BARBARA ROBERTS

BOARD OF COUNTY COMMISSIONERS

Tuesday, February 27, 1979

9:30 a.m. Room 602

Multnomah County Courthouse

I. Decisions of the Hearings Council of February 6, 1979

A. The following decisions are reported to the Board for acceptance and implementation by Board Order.

1. ZC 11-79, Tentatively approve with conditions, zone change from R-7 to A-1-B at 5559 SE 52nd Avenue for church office use.
2. ZC 7-79
LD 11-78 Tentatively approve with conditions, zone change from R-10 to R-7 and further approve a three-lot land division at 13701 SE Gladstone Street for single-family development.
3. ZC 8-79
LD 12-78 Tentatively approve with conditions zone change from R-10 to R-7 and further approve a two-lot land division at 13805 SE Gladstone Street for single-family development.
4. PD 2-79a Tentatively approve with conditions zone change from R-7 to A-2, P-D and R-4, P-D at 822 NE 181st Avenue for single-family and multiple development.

B. The following decisions are reported to the Board for acknowledgment by the Chairman of the Board:

1. CS 2-79 Approve, with conditions, community service designation for use of existing structure and property at 2850 SE 82nd for Community College purposes.
2. CS 9-78 Approve with conditions Community Service designation for use of existing gravel pit at 12401 NE San Rafael for solid waste disposal.

-over-

3. CS 1-79 Tentatively approve, with conditions Community
LD 6-78 Service designation to expand the existing cemetery
at 6617 SE Tenino Street, and further tentatively
approve with conditions the proposed subdivision plat.
4. MC 3-79 Approve with conditions application of high-
density standards to property at 19214 E. Burnside
to permit multiple-family development.
5. LD 13-78 Approve with conditions requested land division
and future street plan for property at 10902 NE
Siskiyou Street.
6. LD 10-78 Approve, with conditions proposed 10-lot
BA 5-79 subdivision, together with certain lot depth
variances on property at 18445 SE Stephens Street.
7. LD 15-78 Approve, with conditions requested 5-lot land
and future street plan for property at 2944 SE
109th Avenue.

II. Decisions of the Board of Adjustment on February 6, 1979

A. The following decisions are reported to the Board for acknowledgment by the Chairman of the Board:

1. BA 11-79 Approve with conditions a 22'0" front yard
setback variance on property on SE Hurlburt Road.
2. BA 3-79 Approve, with conditions, a 10'0" front yard
setback variance on property at 11131 NE Couch Ct.
3. BA 8-79 Approve, with conditions area and width variances
to permit property at 7958 SE 64th to be divided
into two parcels.
4. BA 12-79 Approve with conditions a variance to permit an
off-premise sign on property at 320 SE 99th Avenue.
5. BA 4-79 Approve, with conditions, a one-year temporary
temporary permit renewal for continued use of a
beauty shop in a single-family residence at
6404 SE Duke Street.

III. Other Items for Board Action

In the matter of appointing William J. Cooley to serve a six-month term on the Hearings Council, commencing on March 6, 1979. Mr. Cooley will replace Lynda Gardner whose term on the Council expires February 28, 1979.

PC 23-78, In the Matter of Recommending Adoption
of an Ordinance amending Ordinance #100

Public hearing for consideration and adoption
of an Ordinance amending Ordinance No. 100 by
amending the required minimum landscaping
standards under Design Review, and providing
for certain minor exceptions.

This is the First Reading



EXHIBIT B

MULTNOMAH COUNTY

DEPARTMENT OF ENVIRONMENTAL SERVICES
2115 S. E. MORRISON STREET
PORTLAND, OREGON 97214
(503) 248-5000

COUNTY COMMISSIONERS
DON CLARK, Chairman
DAN MOSEE
ALICE CORBETT
DENNIS BUCHANAN
MEL GORDON

July 13, 1979

Ronald J. Watson
Attorney at Law
Jackson Tower
806 S. W. Broadway Street
Portland, Oregon 97205

RE: CS 9-78

Dear Mr. Watson:

It is the understanding of Multnomah County that the fill material planned for the 12401 N. E. SanRafael Street site, referred to as a "solid waste landfill" and as "non-processible waste", would consist of

Inert solid wastes, soils, rock, gravel,
asphaltic concrete, brick, crushed glass and tire chips

Demolition solid wastes, wood, insulation, wire, tile and rubble

Land clearing waste including stumps, logs, limbs and brush

Construction wastes including wood, corrugated packing materials,
metal bands, studding materials, wiring and wrapping papers

Industrial wastes including roofing material, pellets and other
dry type wastes.

The County is prepared to issue a land use permit for the fill based upon the above definition and the attached list of conditions imposed by the Hearings Council and Board of County Commissioners on February 27, 1979.

Very truly yours,

MULTNOMAH COUNTY DIVISION OF PLANNING AND DEVELOPMENT

Larry Epstein
Larry Epstein, Program Manager

DC:sec

EXHIBIT C

Page 1

East Multnomah County overlies a large aquifer which provides a source of groundwater to water districts in the area, including the Hazelwood, Parkrose and Richland water districts which surround the proposed landfill site. These three districts provide water to a combined estimated population of 51,000 persons. The Richland District relies solely on groundwater for its needs. Testing of groundwater samples from these districts, as required by the U.S. Environmental Protection Agency, has not shown any contamination with the exception of nitrate-nitrogen, which does not exceed the 10 ppm EPA drinking water standard.

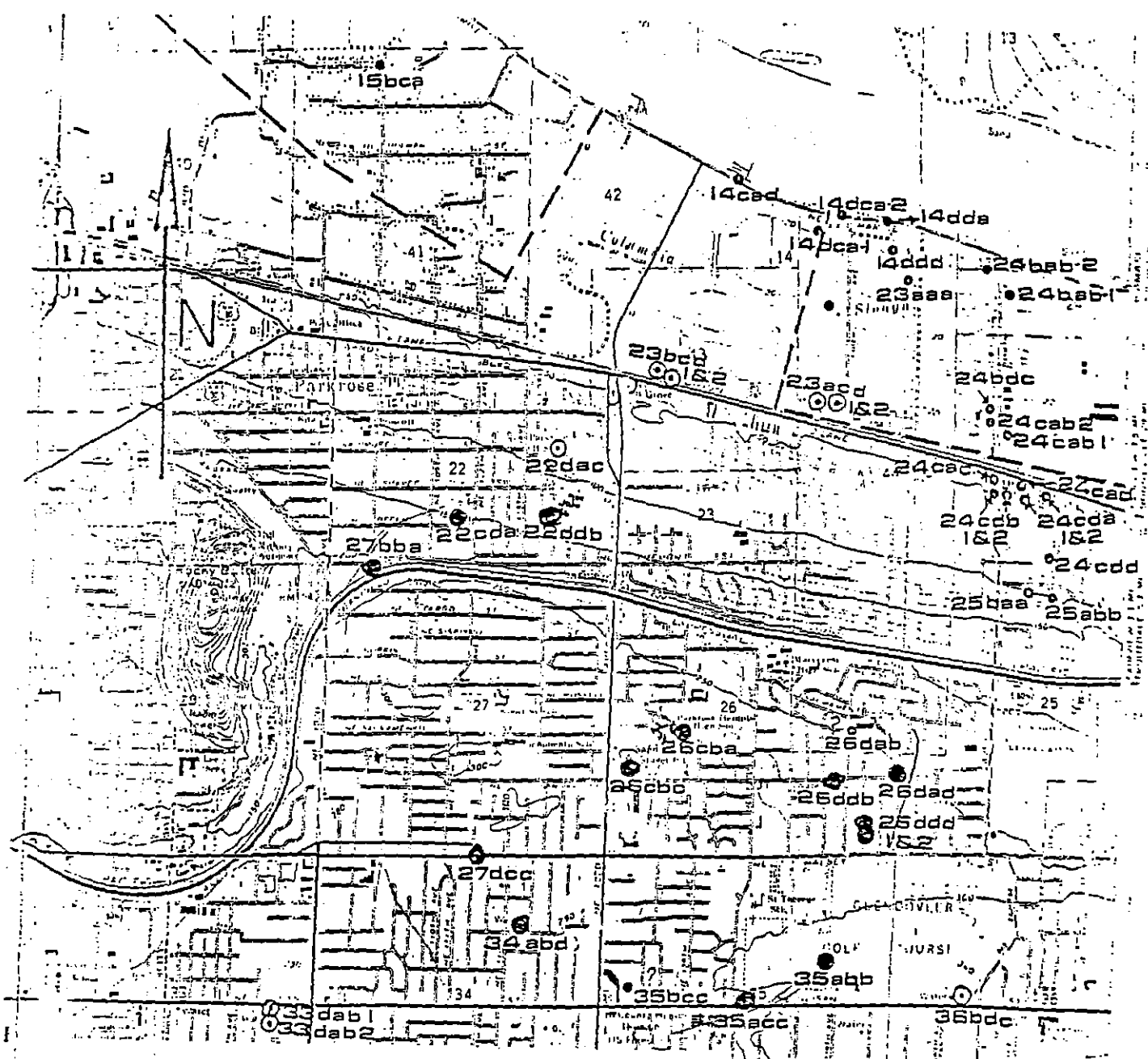
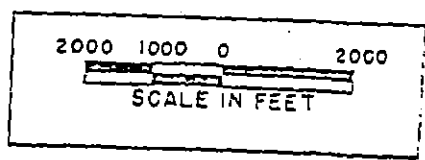


FIGURE 3.4
**LAND RECLAMATION INC.
 PIT WELL LOCATIONS**

23 dab 1 ---- WELL NUMBER
 ⊙ ---- WELL (FIELD LOCATED)
 • ---- WELL (FROM REFERENCES)
 - - - - - WELL FIELD BOUNDARY -
 PORTLAND BUREAU OF
 WATER WORKS

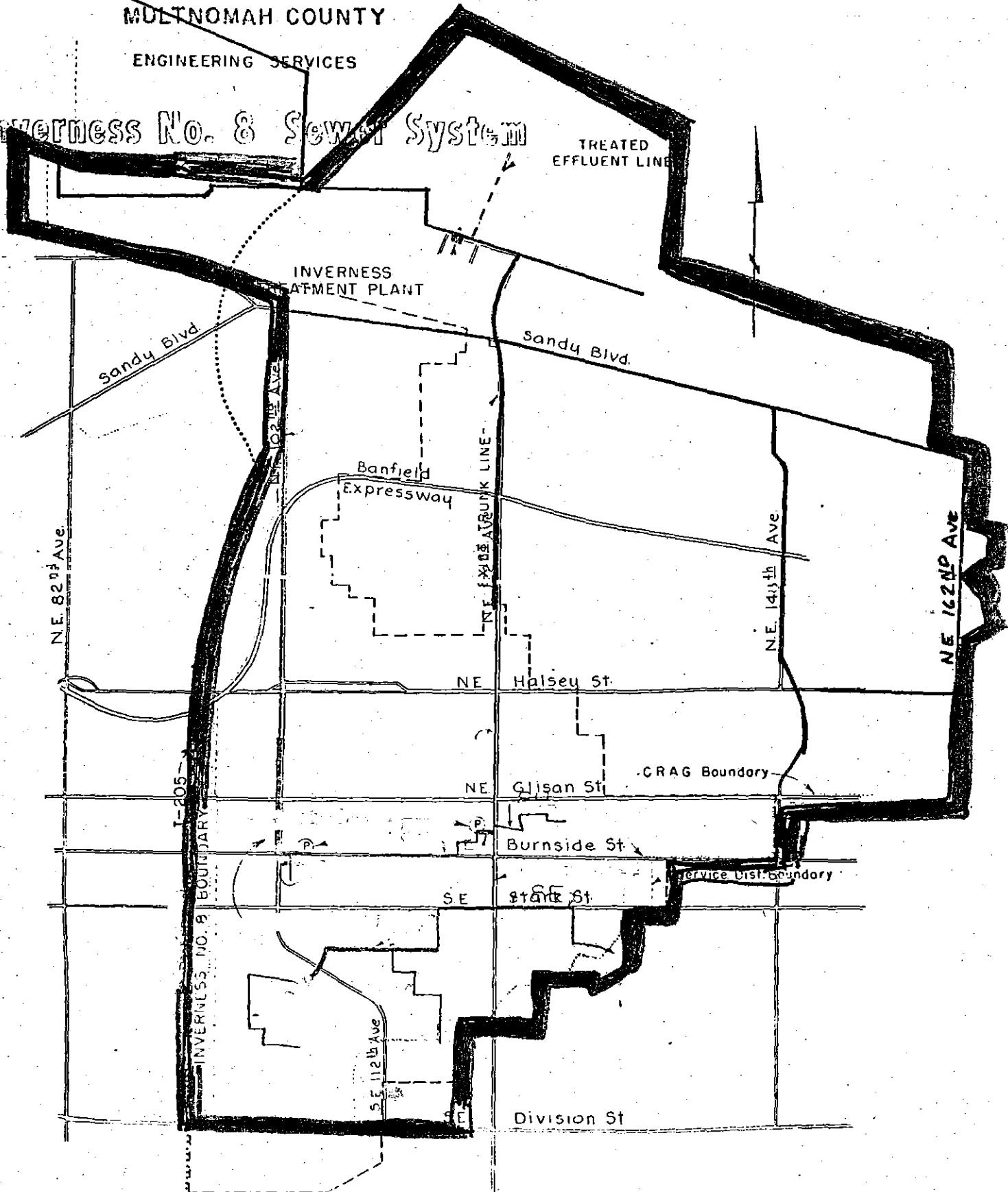
NOTE:
 1. WELL LOGS AND LOCATION
 FORMS ARE IN THE APPENDIX.
 2. WELLS LOCATED WITH
 THIS SYMBOL • ARE PRIMARILY
 TAKEN FROM WILLIS, R.F.
 (1976).



DEPARTMENT OF ENVIRONMENTAL SERVICES
MULTNOMAH COUNTY

ENGINEERING SERVICES

Inverness No. 8 Sewer System



BEFORE THE PLANNING COMMISSION
OF MULTNOMAH COUNTY, OREGON

In the Matter of Recommending to the Board of County
Commissioners Adoption of an East County Groundwater
Plan for Submittal to the State Environmental Quality
Commission.)
)
)
)
)

R E S O L U T I O N

PC 10-79

WHEREAS, the groundwater of East Multnomah County is a valuable resource serving many domestic water systems; and

WHEREAS, the degradation of the groundwater resource in East Multnomah County would be a threat to the public health, safety and welfare; and

WHEREAS, recent tests indicate significant increases in the pollution levels of the groundwater in East Multnomah County; and

WHEREAS, Policy 13 of the adopted Comprehensive Framework Land Use Plan states that the County policy is to maintain and enhance water quality in accordance with applicable standards; and

WHEREAS, several adopted Community Land Use Plans express grave concerns over the threat to groundwater quality posed by use of cesspools; and

WHEREAS, these Community plans recommend sewer service in the Inverness area to solve the problem; and

WHEREAS, the County has actively participated in many local and regional sewer planning and construction efforts; and

WHEREAS, a Board of County Commissioners' resolution of June 15, 1978, determined it necessary for the County to work with the Department of Environmental Quality towards completion of a management plan for the disposal of subsurface sewage that satisfies their mutual concerns; and

WHEREAS, the State Environmental Quality Commission has requested a specific management plan for the elimination of cesspools; now, therefore,

BE IT RESOLVED, the Planning Commission of Multnomah County, Oregon recommends that the Multnomah County Board of Commissioners adopt the East County Groundwater Plan (including summary) as County policy, and submit it to the State Environmental Quality Commission, as such.

Dated this 22nd day of October, 1979.

APPROVED AS TO FORM:

JOHN B. LEAHY
County Counsel

By John B. Leahy
Deputy

PLANNING COMMISSION
MULTNOMAH COUNTY, OREGON

By Gregory H. Meyer
Chairman

10/10/79

EAST COUNTY GROUNDWATER PLAN SUMMARY

INTRODUCTION

This summary is an outgrowth of the Preliminary East County Groundwater Plan submitted to the EQC in August, 1978. The Final updated plan reflects the County's recently adopted community plans. It is also based upon the work of the East County Sanitary Sewer Consortium. This updated plan is a specific management plan for phasing out the cesspools in East Multnomah County.

The updated groundwater plan is based on a number of assumptions and reservations. They are as follows:

1. Regional Problems - The groundwater resource which this plan intends to protect extends across many jurisdictions: Portland, Gresham, Troutdale, as well as unincorporated Multnomah County. All these jurisdictions have existing development on cesspools which contributes to the groundwater problem. The County can only take responsibility and action in the Inverness sewer system area.

2. MSD - MSD's role in solving the regional groundwater problem has not been fully defined. The County offers to work with MSD, the EQC/DEQ, and other agencies on this matter.

3. Schedule - The goals for sewer connections presented on pages 10 and 11 of the preliminary groundwater plan are still basically valid. The schedules for treatment plant capacity expansion and completion of the trunk and interceptor systems have slipped due to lack of federal financing. These slippages have consumed all of the float time in the schedules. Provision of additional treatment capacity must be expedited if the County is to avoid a sewer moratorium. If the County proceeds immediately with a temporary expansion of its treatment plant, it will have barely enough time to obtain additional permanent capacity before a sewer moratorium takes effect.

4. Financing - The updated plan assumes that federal financing will be available as needed for all elements of the proposed sewage treatment and collection system, including laterals. State law prohibits the County from spending General Fund revenues to benefit the Inverness sewer service area. The magnitude of expenditures involved in solving the groundwater problem, 50 to 60 million dollars, cannot be provided by the service area alone. The County is exploring other financing options. If Federal financing is not available when requested, the County will not be able to meet its schedule for solving the groundwater problem.

5. EQC/DEQ Policy - The County assumes that there will be a direct relationship between the EQC assessment of the groundwater problem and its financing policies. That is, if the EQC decides that there is a serious groundwater

problem, then they will provide funds for the solution. Conversely, if the EQC does not provide funding for the solution to the problem, the County will assume that the EQC does not consider the problem serious. The County further assumes that Administrative Rule OAR 340.44 provides an adequate precedent for the EQC to fund the County groundwater problem as they have funded the solution of the groundwater problem in Bend.

6. Moratorium - The County assumes that a sewer moratorium would have no significant effect on solving the groundwater problem in East County. This assumption is based on the premise that existing development is and will continue to be the source of the vast majority of groundwater pollution. The population increase from new development will be a small percentage of existing population. Most new development is going in on sewer. Prohibiting additional development on cesspools would not reduce groundwater pollution, but it would seriously upset the County's Comprehensive Plan. The other premise of this assumption is that construction of Inverness 8 interceptor and trunk lines will significantly reduce groundwater pollution by connecting several major sewage sources to sewer. Two hospitals, several schools and other major institutions would be involved. This reduction would probably compensate for the increase from development on cesspools.

In order to clarify these issues, the County has divided the updated plan into four topics, with problem analysis and recommendations for each topic.

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1. Existing Development.

- A. Problem Analysis.

The existing population of the Inverness service area is and will continue to be a major source of groundwater contamination for the area. Providing sewers for the existing population is the major obstacle in solving the groundwater problem.

Approximately 75,000 people live in the Inverness service area.

This population is sufficient to make it the fourth largest city and the ninth largest county in Oregon. Approximately 90% of the population do not have sanitary sewers.

The County does not have the interceptor and trunk lines or the treatment plant capacity to serve this population. Such improvements would cost roughly 20 million dollars. Under current State law, property owners would have to pay the full cost of lateral sewers to connect to the Inverness system. A complete lateral system would cost, roughly, an additional 40 million dollars.

- B. Recommendations for Existing Development.

1. Major Construction - The County and other involved parties would proceed with federal financing to obtain additional sewage treatment capacity through the East County Consortium and to construct the Unit 8 trunk and interceptor lines. There is not sufficient time under any scheme for the County to obtain additional permanent treatment capacity before the Inverness plant runs out of

its current capacity. Therefore, the County must proceed immediately with an interim expansion of the plant.

The County would prepare a 201 Plan at its own expense for a temporary expansion of the plant. Such an expansion would involve minor modifications rather than permanent construction, and would probably increase the capacity by approximately one half million gallons per day. The County would submit its 201 proposal to the DEQ for informal review. Assuming the approval of the 201 Plan, the County would proceed at its own expense with the temporary expansion. The earliest date for completing the temporary expansion is the Summer of 1982. This is also the date at which the County projects the Inverness Plant to reach capacity. The temporary expansion should provide capacity for an additional two years of service growth.

2. Construction of Laterals - Once the County has adequate treatment capacity and a complete trunk and interceptor system, it will initiate resolutions for the construction of lateral sewers throughout the Inverness sewer system. Once the laterals are complete, the County will require all existing development to hook up to sewer. This step will be preceded by a Community Involvement and Education Program.

It is assumed the construction of laterals will be federally financed with property owners providing the local match. To

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obtain federal financing, it is assumed that the EQC will pass an Administrative Rule similar to Administrative Rule OAR 340.44, giving the East County area eligibility and priority for federal funds. If federal financing is not available, the County will proceed with other financing options. However, it may not be possible to meet the schedule for sewer connections if federal funds are unavailable.

3. Contamination Contingency Plan - The County will initiate planning for mitigating actions, should contamination exceed federal standards. The County would coordinate with DEQ, Water Districts, etc. DEQ would increase its monitoring of the groundwater problem.

2. New Development - Undeveloped Area.

- A. Problem Analysis.

Almost all of the large vacant parcels in the Inverness service area are north of Halsey Street. The County expects most of the growth in population and industrial activity in the Inverness area to occur here. The current development pattern bears out this prediction.

The area is well served with interceptors and trunk sewers. The County requires connection to sanitary sewer as a condition of development in this area. Given the large scale of most developments in this area, sewers are economically feasible and have not inhibited development.

B. Recommendations for New Development in the Undeveloped Area.

1. Major Construction - Interceptors and trunks have already been constructed for this area.
2. Mandatory Sewers - Sewer connections are already a condition of development in this area.
3. Lateral Sewers - Additional laterals and trunks for this area are to be constructed by developers. The County may expedite this process by initiating improvements by resolution. This practice would be restricted to projects supported by property owners.
4. Storm Water Recharge - The County Street Standards Ordinance requires sump bottom manholes for storm drainage systems wherever feasible. The intent is to increase the flushing of the East County aquifer with storm water. Such flushing has been inhibited by the increase in paved surface.

3. New Development - Infill Area.

A. Problem Analysis.

The portion of the Inverness service area south of Halsey Street is a built-up area with few large vacant parcels. However, large lot sizes in this area provide many opportunities for flag lots and other forms of infill development. The County Comprehensive Plan encourages

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infill development in this area. The plan also calls for very high density residential development in the vicinity of transit stations on the proposed light rail line on Burnside Street. The existing population of the Inverness portion of the LRT corridor is approximately 26,000. The comprehensive plan calls for an additional 10-15,000 people to live in this area. About 5000 - 6000 of these people will be in the high density units mentioned previously, the remainder in smaller infill developments.

This area is generally without interceptor and trunk sewers. Existing and new developments use cesspool/septic tank systems.

B. Recommendations for New Development in the Infill Area.

1. Deed Restriction - The County requires a sewer deed restriction as a condition of granting a building permit in the Inverness area. The deed restriction states that any property owner will not remonstrate against an assessment for lateral sewers.
2. Dry Sewers - The County will draft an ordinance that would require dry sewers for any major development not on a trunk sewer line.
3. Requirement for Connection - Once the County has a treatment capacity and a complete trunk and lateral system, new infill development would be required to connect to the sewer as a condition of construction.

4. High Density Plan - The County is preparing a special report on the high density clusters shown along the Burnside light rail corridor. The County will submit a report to the DEQ showing the location, projected population, timing of development, and timing of sewer connection for each of these clusters. The DEQ will respond with a policy for cesspools for each cluster.

4. Sewage Treatment Capacity.

A. Problem Analysis.

The County expects the existing Inverness sewage treatment plant to reach capacity in 1981 or 1982. The County plans to proceed with an interim plant expansion that will permit additional sewer hookups until the Summer of 1984. The County must obtain additional treatment capacity before that date or face a sewer moratorium. Either the existing plant must be expanded or the County must connect the Inverness system to a regional treatment plant. The CRAG/MSD 208 Sewer Plan recommends the regionalization alternative. The CRAG/MSD Plan permits other alternatives as long as they are developed by the East County Consortium through a 201 process demonstrating the superiority of the alternatives to the regionalization option.

This issue cannot be resolved easily without adequate study of the other alternative - local planned expansion. The County, Gresham, and Troutdale have drawn up a 201 plan of study and have selected a consultant. This study has been delayed at least a year because it was not funded by the EQC last year.

Regardless of the alternative chosen, time is running out to obtain additional capacity. The County estimates that regional plant capacity cannot be available any earlier than Summer of 1985, a year after the temporary Inverness expansion reaches capacity.

B. Recommendations for Treatment Capacity.

1. Financing - The EQC should give the East County Consortium 201 Study immediate priority for funding. EQC should also establish a funding priority for construction of the additional treatment capacity.

2. Implementation - The Consortium should be prepared to expedite the selected alternative for additional treatment capacity.

2. New construction must be oriented to future sewers. (Plumbed to facilitate abandonment of on-site system and connection to sewers.)
3. New developments (i.e. subdivisions, apartments) be required to connect and/or provide dry sewer.

In addition, it is the Director's recommendation that the EQC instruct the staff to amend its subsurface sewage disposal rules to allow approval of cesspools only under the above conditions and only in areas where a master sewerage plan is adopted and an implementation agency is formed.

Bill

WILLIAM H. YOUNG

Robert E. Gilbert:eve
229-5292
8/10/78

2. Engineering design (Step II) and construction (Step III) of Multnomah County Inverness 8 sewer project (Attachment 2, Map Page 7). Construction of the interceptor sewers would allow connection of high sewage users, such as schools, hospitals, apartments, restaurants, etc., to the sewage system.
3. Through the Multnomah County land use planning and the consortium facility planning process, Multnomah County will develop by July 1979, a specific management plan identifying a time schedule for the eventual phasing out of cesspools in the county. The emphasis of the plan will be on methods of assuring existing and future development connections to a completed area-wide sewer trunk system with added treatment capacity. Among the alternatives to be examined for inclusion in the plan will be:
 - a. Conditions imposed on zoning actions coming before the county.
 - b. Current requirements include hooking to a sewer line when it is available and submission of a non-remonstrance agreement for sewer line proposals.
 - c. Requirement for construction of a "dry sewer" system in developments approved for cesspools prior to availability of the major trunk line.
 - d. Designation of areas where development will occur only by connection onto the sewer system.

Portions of the management plan would become county ordinances.

4. Plan connection schedule is as follows:

<u>Year</u>	<u>Goal No. of Connections</u>
1978	2,500
1979	3,000
1980	3,500
1981	4,000
1982	4,500
1985	13,000
1990	32,000

Director's Recommendation

Having found the foregoing facts to be true, I recommend that the EQC authorize the Director to enter into a consent order with Multnomah County containing the basic features as above subject to the following conditions:

1. Acknowledgment by the property owner (applicant) that any new on-site system is interim and agreement to connect when sewer system becomes available.


 ROBERT W. STRAUS
GOVERNOR

Environmental Quality Commission

522 SW 5th Avenue, Portland, Oregon 97204

PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. Q, February 24, 1978 EQC Meeting
Multnomah County Groundwater Aquifer - Status Report

Background

An area of approximately 30 square miles in central Multnomah County is currently unsewered. Development has occurred over the past 30 - 50 years utilizing individual on-site sewage disposal systems, predominantly cesspools. An estimated 10 million gallons of sewage per day is presently discharged into the underlying porous gravels.

The area of concern is a regional groundwater discharge zone which receives water from the Cascades as well as local hills bordering the area. The aquifer receives approximately 50,000 acre feet of annual recharge from precipitation in the 30 square mile area. Groundwater production capabilities could therefore range from 50,000 acre feet (16,335,000,000 gallons) to 100,000 acre feet (32,670,000,000 gallons) annually.

Presently several water districts utilize the aquifer for domestic water supply purposes. The City of Portland has recently filed for a water right for approximately 200 million gallons per day (MGD). The aquifer would be utilized as an alternate and supplemental source to Bull Run and provide for continued growth in the metropolitan area.

In 1971 and 1973 the Department conducted water quality studies of the Columbia Slough. The chemical data obtained during these studies revealed high concentrations of nitrate - nitrogen ($\text{NO}_3 - \text{N}$) in the springs forming the headwaters of the South Arm of Columbia Slough. The individual subsurface sewage disposal systems lying directly south of the South Arm of Columbia Slough were presumed to be the prime contributors to the $\text{NO}_3 - \text{N}$ levels. As a result the Department, assisted by the State Engineer's Office (now the Water Resources Department), conducted a water quality-hydrogeological evaluation of the central Multnomah County area. Data was collected for the period June 1974 to July 1975. The U.S. Geological Survey (USGS) and City of Portland Bureau of Water Works, under its exploratory program have also collected additional data from some of the same and other wells within this area from 1975 to 1977.


 Contains
Recycled

These surveys revealed that $\text{NO}_3 - \text{N}$ levels were significantly higher in the unsewered area (4 - 6 mg/l) than in adjacent sewer areas in Gresham and Troutdale. The higher concentrations were found in the private shallow wells, springs and municipal wells developing water from the upper portions of the aquifer, while the deeper wells revealed concentrations of less than 1.0 mg/l $\text{NO}_3 - \text{N}$. The subsurface disposal of sewage is considered to be the prime contributor of $\text{NO}_3 - \text{N}$ to the groundwater and provides an enrichment quality to the waters in the South Arm of Columbia Slough.

Summation

1. Subsurface sewage disposal systems in central Multnomah County discharge approximately 10 MGD of sewage into the groundwater aquifer. This discharge is considered to be the prime contributor of $\text{NO}_3 - \text{N}$ to the shallow groundwater system which empties into the South Arm of Columbia Slough.
2. The aquifer is presently utilized as a domestic groundwater supply source and the City of Portland is proposing to utilize this aquifer as an alternate and supplemental source to Bull Run and as a water supply for continued growth in the metropolitan area.
3. This past year the Department proposed to foreclose the use of cesspools throughout the state in amending its subsurface sewage disposal regulations. This proposed rule change impacts the draft Multnomah County Comprehensive Framework Plan which calls for R-5 zoning in central Multnomah County vs. an R-10 to R-15 required for use of a septic tank-drainfield system.
4. The Department has requested that the amendment be deferred until the Department, Multnomah County, CRAG and other affected agencies develop a plan to protect the groundwater in conformance with the land use plan.

Director's recommendation

It is the Director's recommendation that the EQC instruct the staff, in cooperation with Multnomah County, CRAG and other affected agencies, to develop a plan for protection of the groundwater aquifer. The proposed plan to be developed by no later than September 1978 with EQC adoption as soon as practicable but by no later than December 31, 1978.

Bill

WILLIAM H. YOUNG

Robert E. Gilbert:mkw
229-5292
2/9/78

BEFORE THE BOARD OF COUNTY COMMISSIONERS
FOR MULTNOMAH COUNTY, OREGON

In the Matter of Working with the)
Department of Environmental Quality)
for a Management Plan for the)
Disposal of Subsurface Sewage)
in East-Central Multnomah County)

RESOLUTION

WHEREAS it is in the best interests of the citizens of Multnomah County that adequate provision be made for the disposal of sewage wastes in such a way as to protect public health, water quality and accommodate the developmental needs of East-Central Multnomah County; and

WHEREAS scientific analysis of the ground water of East-Central Multnomah County by the Department of Environmental Quality has indicated substantial increasing water pollution by measurement of nitrate levels, a recognized subsurface sewage pollutant indicator; and

WHEREAS the Department of Environmental Quality is statutorily charged with the promulgation and enforcement of administrative rules for the installation of subsurface disposal systems in the State of Oregon; and

WHEREAS Multnomah County is responsible for effectively administering the administrative rules and regulating land uses in such a way as to protect the environmental quality of the County and provide for development associated with the need for housing and a balanced economy for the citizens of the County; now, therefore,

BE IT RESOLVED that the Board of County Commissioners for Multnomah County determines it necessary to work with the Department of Environmental Quality toward the completion of a management plan for the disposal of subsurface sewage that satisfies their mutual concerns.

June 15, 1978

BOARD OF COUNTY COMMISSIONERS
MULTNOMAH COUNTY, OREGON

By Arnold E. Clark
Chairman

APPROVED AS TO FORM:

JOHN B. LEAHY
County Counsel

By Charles J. Evans
Deputy



MULTNOMAH COUNTY OREGON

DEPARTMENT OF ENVIRONMENTAL SERVICES
2115 S E MORRISON STREET
PORTLAND, OREGON 97214
(503) 248-5000

COUNTY COMMISSIONERS
DON CLARK, Chairman
DAN MOSEE
ALICE CORBETT
DENNIS BUCHANAN
MEL GORDON

June 12, 1978

Mr. Donald E. Clark, Chairman
Board of County Commissioners
Room 606 - Courthouse
Portland, OR 97204

RE: Subsurface Sewage Disposal within the Inverness Drainage Road^{Area}

Dear Sir:

In 1975 the State Environmental Quality Commission agreed to allow continuation of the established County practice of allowing development using cesspools in East Multnomah County where sub-soil conditions are satisfactory. The State administrative rules (that were subsequently adopted) were based on the position articulated in Mel Gordon's statement of May 21, 1975.

The County acknowledged increasing levels of ground water aquifer pollution as a direct result of existing cesspool systems. Information available at that time concerning the rate of pollution did not indicate any emerging health hazard. The County's argument in favor of continued use of cesspools for new development was substantially based on the need for urban densities to financially support the construction of public sewers in the area which was consistent with the County's Comprehensive Plan. The larger land area needed for septic tanks would tend to defeat this objective.

In 1977, further studies by DEQ and other agencies along with the development of the water quality plan (PL 92-500 Sec 208) conducted by CRAG, brought new focus on the pollution issue. A recently proposed revision to the administrative rules to prohibit the development of land using cesspools was deferred until DEQ, Multnomah County, CRAG, and other affected agencies could develop a plan to protect the ground water in conformance with the Land Use Plan.

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Mr. Donald E. Clark

Page 2

June 12, 1978

On February 24, 1978, the EQC instructed the DEQ staff to develop a plan for protection of the ground water aquifer in Multnomah County to be completed no later than September, 1978, with EQC adoption as soon as practicable but no later than December 31, 1978.

EQC will be considering funding priorities for public sewer project proposals in July, 1978. It is appropriate that the County's position on the ground water aquifer protection plan be developed as soon as possible. This will provide justification for prioritizing sewer projects currently being considered for extension of the service capacity for the County's Inverness sewer system.

The following resolution and preliminary East County ground water plan are forwarded to the Board of County Commissioners with the recommendation that the resolution be approved.

Very truly yours,



RENA CUSMA

Director

OJD/klw.

Enclosure

PRELIMINARY EAST COUNTY GROUNDWATER PLAN

A. Introduction

The Oregon Environmental Quality Commission through the Department of Environmental Quality has expressed concern with the groundwater problem in East Multnomah County. The County has been instructed to prepare, in cooperation with D.E.Q., a plan for solving the subsurface waste disposal problem to protect the groundwater aquifer flowing to the Columbia River within the unsewered areas. This report constitutes the County's plan to alleviate the amount of subsurface waste ultimately discharging into the groundwater system. The provision of a sewer system within the Inverness Service area is seen as a top priority. The trunks, interceptors, and laterals will have to be in place for the sewer system to function independent of how the waste will be treated. The issues of responsibility for waste treatment are now being studied within East Multnomah County, but the basic premise of the need for a sewer line system and its construction is a given and plans for this phase should not be hampered by the resolution of the treatment issues.

B. Findings

1. Resource Problem

- a. As a result of studies being conducted by the Department of Environmental Quality and the City of Portland Bureau of Water Works, information concerning the pollution of groundwater has become more available. For a number of years the urbanization of the unincorporated area between Portland and the East County cities has been taking place with cesspools and septic tanks being the primary means of waste disposal. This has resulted in large amounts (10 - 12 m.g.d.) of waste going into the ground. Waste quality tests in water district wells and City of Portland exploratory wells have revealed an increase in nitrate-nitrogen levels over recent years. This contaminant, besides being a problem for babies in and of itself, is also an indicator that severe problems are developing for the aquifer which drains toward the Columbia River.
- b. Nitrate-nitrogen levels of greater than 10 m.g./liter (the Federal EPA Standard for public drinking water) is exceeded by some wells and shows signs of further increases in the surface levels of groundwater. Tests conducted by the City of Portland indicate that:
 - (1) Due to the age of the water tested, levels could get much higher in the future even if all waste disposal were to cease immediately.

- 2) The contaminated groundwater has the ability to migrate to lower levels if increased pumping of water occurs in the middle of lower levels of the aquifer. Continued increases in subsurface waste will not change the situation drastically in the present, but will ultimately prolong the problem.
- c. The amount of imperviable surface (streets, houses, etc.) for the area prevents the necessary flushing action that rainwater can give. Drainage into the ground rather than on its surface can have a beneficial effect.
 - d. Nitrate-nitrogen contamination as well as other parameters presented by subsurface waste disposal such as viruses are not filterable by the existing system and are very costly to filter by other methods.
 - e. Septic tanks are much more efficient at ridding the waste of nitrogen by fixing it in the vegetation through the soil. Cesspools allow the wastes to migrate rapidly downward into oxygen free areas where the nitrate-nitrogen will remain for indefinite periods.
 - f. Since some water districts and the City of Portland have to use this aquifer for continued domestic ~~water~~ supply purposes, it becomes even more imperative to insure the future potability of the groundwater. Although further research is necessary to assess the danger and accurately monitor the water quality, enough is now known to certify that a problem does exist, that it most likely will get worse before it gets better. Action to solve this problem is necessary now rather than waiting until quality levels exceed standards in drinking water.

2. Population Growth & Services

- a. The County only has the ability to correct the problem of ground water contamination within the Inverness Sewer Service area. It is within this area, however, that the problem is the greatest since it contributes a large share of the subsurface waste to the aquifer recharge area. The balance of the report will deal with this area. (SEE MAP, Page 7)
- b. The period of greatest development and population growth for this area has already occurred. From 1940 to 1960, a great deal of growth occurred and by 1960 the population was 80% of what it is estimated to be today. The amount of growth projected for the area by the year 2000 represents an increase of about 12,000 persons and an increase of about the same number of dwelling units. The reason for the closeness of the two figures is explained by the forecasted decrease in persons per dwelling unit.

CRAG Population Projections

Inverness Treatment Plant Service Area

C.T.	Yr.	** 1960	** 1970	1975	1985	1990	2000
73*		2863	1905	1626	1375	1284	1192
77		2388	2119	1865	2050	2000	2000
78		2291	2379	2115	2400	2400	2400
79		3478	3945	3782	4450	4600	4750
80.01		3046	3492	3455	3700	3750	3800
80.02		3115	3180	2913	3250	3300	3350
81		6232	6650	6356	6886	7011	7360
82.01*		2485	2666	2540	2746	2796	2935
82.02		4724	5193	4776	5350	5400	6700
83.0*		5079	5408	4821	5318	5401	5526
92.01		4208	5385	5508	5850	6000	6600
92.02		2832	3942	3964	4300	4500	4650
93		4964	6634	6897	7250	7500	7700
94		4060	6048	5965	6950	7400	7950
95		415	4200	5882	5500	6000	6450
97.01		1797	4246	4552	4600	4700	5250
97.02		5200	6549	6604	6800	6900	7000
<hr/>							
Totals		59,177	73,941	73,621	78,825	80,942	85,613
Dwelling Units		16,975	24,243	28,870	33,259	35,500	40,768
Person/ Dwelling Unit		3.5	3.05	2.55	2.37	2.28	2.1

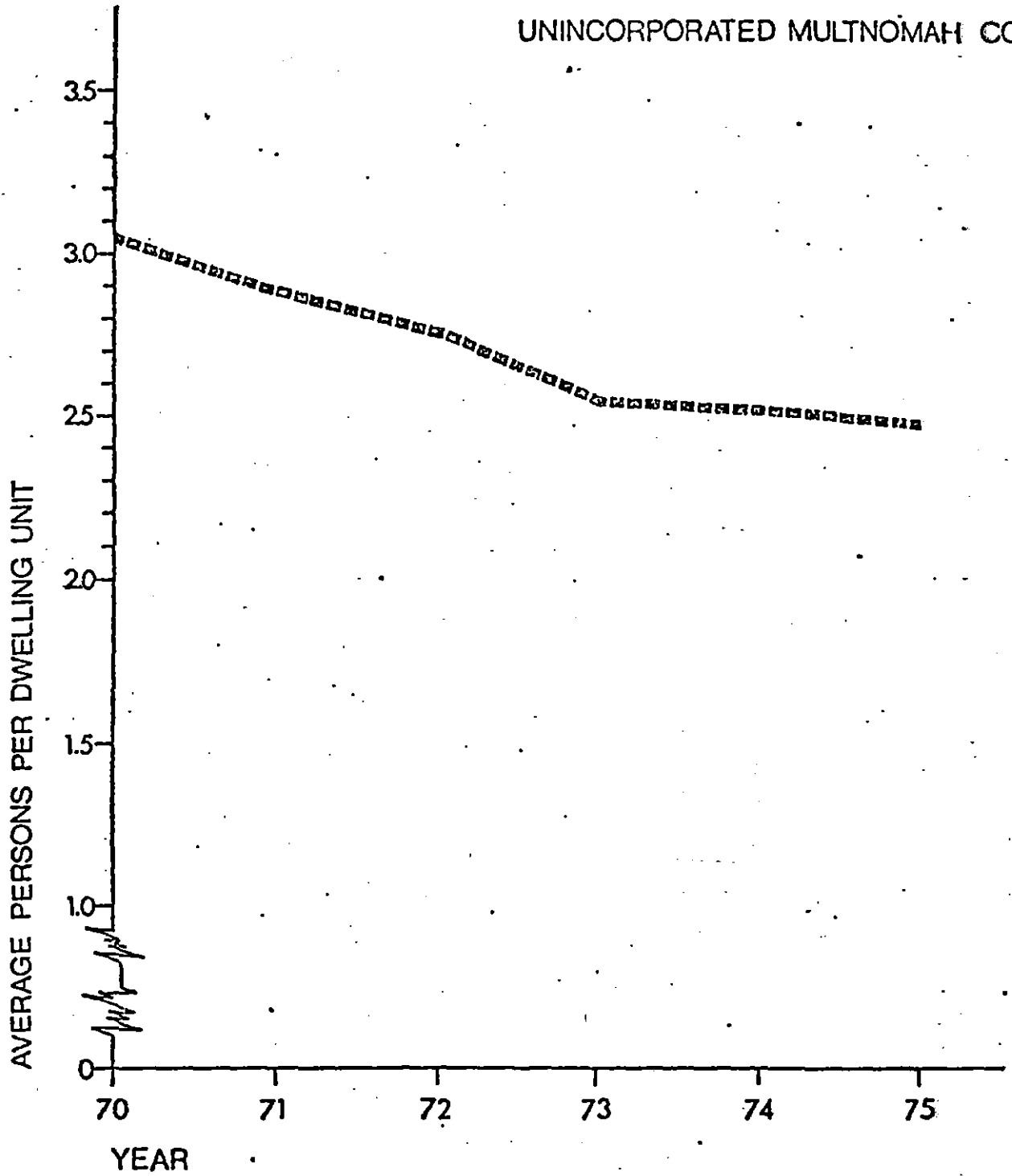
73 @ 91.7%
 82.01 @ 97.8%
 83 @ 85.1%

Average growth rate from 1970-2000 =
 389 persons per year for a total of
 11,672

* Proportion of Census Tract in Service Area
 ** Census Figures

HOUSEHOLD SIZE

UNINCORPORATED MULTNOMAH CO.



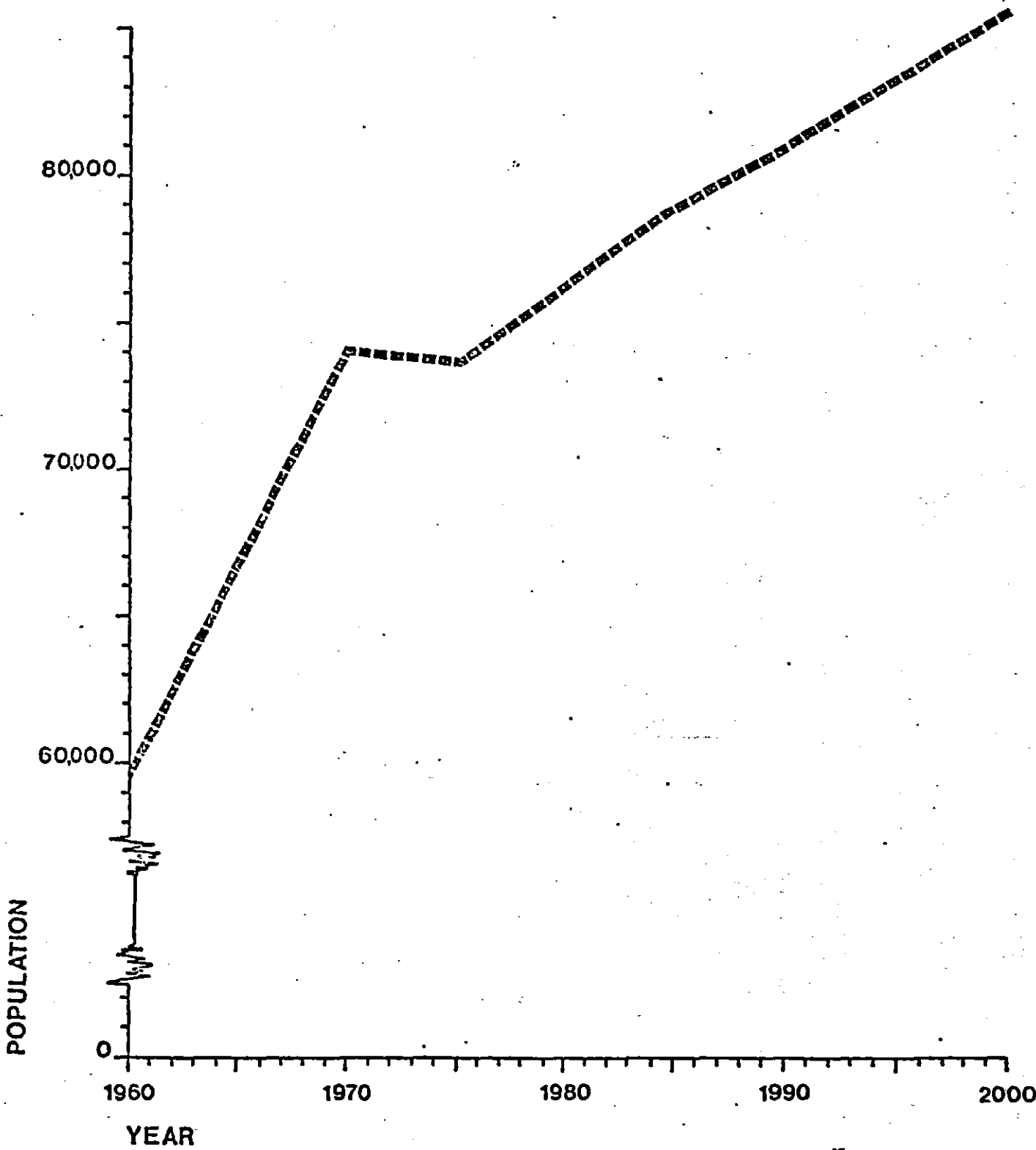
CRAIG, Building Permit Statistics

1960

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POPULATION GROWTH IN THE INVERNESS SEWER SERVICE AREA

CRAG Projections



- 25
- c. The additional growth represents a 14% population increase in the Inverness Service area by the year 2000. This is easily explained by the fact that most of the area is already developed to a fairly high density with homes which are likely to still be present by the year 2000. The County is encouraging added density within the urban growth boundary so it is conceivable that more people could be present in the area, but the difference could not be too great due to the already developed portion for much of the land.
 - d. The basic waste disposal problem is already largely present and will not increase by any great amounts as it will be limited by the amount of available space for development and by the type of disposal required for future development (especially non-residential development). The scope of the problem then becomes more one of coping with the existing waste disposal than one of controlling future increases.

3. The Present Sewer System

- a. The present Inverness-Central County Sewerage Collection System included the following trunk sewers:

NE 122nd Avenue from Inverness Drive to NE Sacramento Street;
NE Whitaker Way from NE 122nd Avenue to NE 136th Avenue;
NE Sandy Blvd. from NE 122nd Avenue to NE 162nd Avenue;
NE 148th Avenue from NE Sandy Blvd. to NE 150th Drive;
NE 162nd Avenue from NE Sandy Blvd. to NE Halsey Street;
NE Halsey Street from NE 150th Avenue to NE 162nd Avenue;
Columbia Slough from NE 82nd Avenue to NE 105th Avenue
Portland International Airport to NE 105th Avenue;
NE 105th Avenue and NE Holman Street to Inverness Sewage
Treatment Plant.

- b. The following lateral sewers are included in the systems:

Barker Brook Subdivision (includes Holcomb Heights),
Highwood Subdivision, Prestige Park, Argay Downs,
Rivercliff Estates, Hollyview, Clearview (partial),
Stonehurst, Lancashire, Strathmore (partial), Schuyler Park,
Victor Seven, Airway Park, A. P. Industrial Park and some others.

- c. The present number of connections is approximately 2500 single family dwellings or commercial equivalent thereof. Also connected is the Portland International Airport with a dry weather flow of 0.5 MGD.


DEPARTMENT OF ENVIRONMENTAL SERVICES
DAVIE COUNTY

ENGINEERING SERVICES
1975

Inverness No. 8 Sewer System
(PROPOSED)

LEGEND

 Area served with Sanitary Sewers

 Area using Sub-Surface Disposal

 Inverness Boundary

TREATED EFFLUENT LINE

INVERNESS TREATMENT PLANT

6F

EXIST. TRUNK LINE

8A

CRAG Boundary

PUMP STATIONS

8H

8G

TRUNK LINES

Service Dist. Boundary

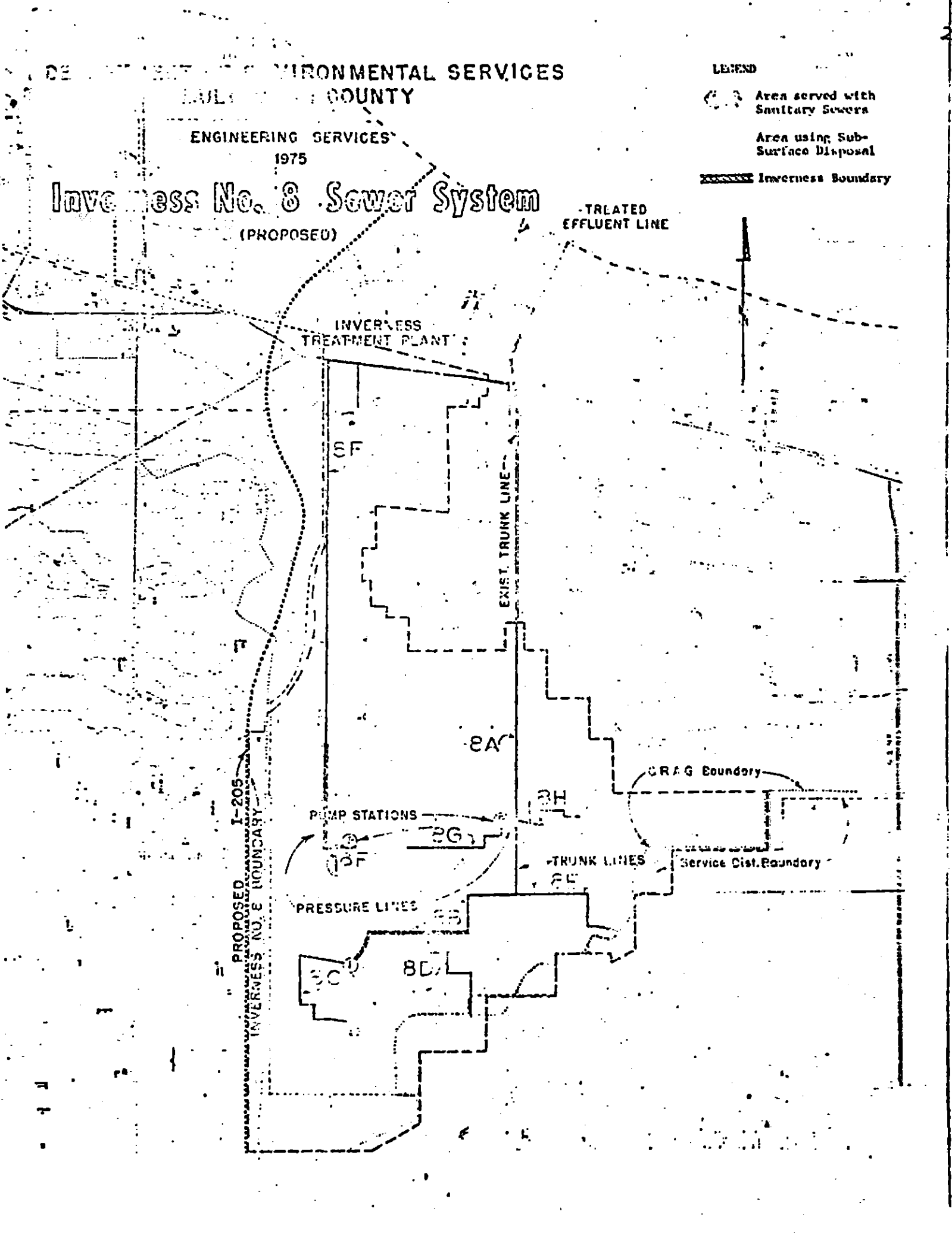
PRESSURE LINES

8E

8C

8D

PROPOSED I-205 INVERNESS NO. 8 BOUNDARY



- d. In new subdivisions having sewers, all units are required to connect to sanitary sewer. No cesspool or septic tank may be replaced within 300 feet of an accessible sanitary sewer, in compliance with the Department of Environmental Quality regulations. Therefore, the majority of sewer homes lie in the area within one-quarter mile of NE Sandy Blvd. or the three main sewer streets extending south therefrom.

It should be noted that since the construction of the Inverness Sewage Treatment Plant, fewer than 100 owners of existing homes have installed and/or connected to sanitary sewers. Almost all of those utilizing sewer service are doing so in response to building requirements.

A "dry sewer" was constructed in SE Main Street from SE 100th Avenue to SE Cherry Blossom Drive in 1976 as part of the Portland Adventist Hospital complex. This will be utilized as a portion of the Inverness VIII Project. The pump station site at SE Cherry Blossom Drive and SE Main Street was also acquired at that time.

- e. Presently, petitions are being circulated for lateral sewers on NE Russell Street from NE 117th Avenue to NE 122nd Avenue, NE Marx Street from NE 101st Avenue to NE 115th Avenue and the extension of Inverness VII Trunk Sewer from NE 136th Avenue and NE Whitaker Way to NE 148th Ave.

4. Required Sewerage Facilities.

The elimination of subsurface disposal of sanitary wastes in the Inverness service area will require a large capital investment. The following approximate costs of required publicly owned facilities represent current costs and are accurate for preliminary planning purposes only.

a. Treatment Plant Expansion (<u>to 10.5MGD</u>)	<u>\$12,000,000</u>
b. Trunk & Interceptor Construction	<u>5,000,000</u>
c. Lateral Sewer Construction	<u>35,000,000</u>
TOTAL:	<u>52,000,000</u>

5. The Current Citizen Involvement and Attitudes.

- a. As a part of the Comprehensive Planning Program several communities were formed to provide the necessary citizen involvement. The communities involved in the Inverness Service area are Cully/Parkrose, Hazelwood, Powelhurst, and Wilkes/Rockwood. Basically the citizen attitudes thus far have been supportive of the need for sewerage the area. As a result of presentations by staff at

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the County level, there has been an understanding generated of the seriousness of the resource problem. The importance of early education and communication has made it clear that these factors can go a long way toward solving the initial citizen resistance to the need for sewers.

C. Issues:

The issues brought up by the findings section of this plan are many and some of them do not have easy answers. The following plan section will attempt to answer as many of the issues as possible:

1. Accepting the severity of the groundwater problems as a given, what is the best way to alleviate the amount of subsurface waste presently going into the ground?
2. Who will bear the costs of solutions and what are the best methods to implement them?
3. How can communications and education be improved to gain the necessary citizen support for sewers if sewers are to become politically feasible.
4. A moratorium on all new development until sewers are available will substantially impact the Comprehensive Framework Plan policies on land use which encourage higher densities and infill within the urban growth boundary. What is the best course of action to achieve both improved groundwater and provide for projected housing and employment needs?
5. Cooperation and interconnected progress and regulation will be necessary among agencies if success is to be achieved in reducing subsurface waste disposal.
6. What other techniques besides waste treatment can be implemented to help reduce the contaminants already existing within the groundwater system? In the last 5 years, storm sewers in this area have been constructed with "sump-bottom" manholes in order that as much storm water as possible be "recharged" to the aquifer. This should result in continued dilution of groundwater pollutants.
7. No immediate solution will solve the problem and a long term program is necessary, but what combinations of short term and long term actions will be both politically and technically acceptable?
8. Improved priority for Multnomah County construction grant requests will be a substantial factor in diverting subsurface waste. The construction of Inverness 8 will permit immediate connection of two hospital complexes, several shopping centers, many multi-family apartments and schools, and extend the necessary "back-bone" of the central Multnomah County sewerage collection system.

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D. Plan

1. Objective.

The goal of the following plan is to collect 90 percent of all sanitary and industrial waste from the Inverness service area and to treat these wastes at the Inverness Treatment Plant or a regional treatment plant. These wastes should be collected, treated and discharged to the Columbia River by 1990. The accomplishment of this goal would result in a long-term improvement of ground water quality and permit the area to fully develop under the Multnomah County Land Use Plan.

2. Plan Schedule.

1978 - Goal 2500 Connections.

June - East County Groundwater Plan
East County Plan Resolution ???
Consultant Agreement for Plant Capacity and Infiltration Study

Nov. - Plant Capacity and Infiltration Study completed. *Begin not completed*

1979 - Goal 3000 Connections.

Jan. - Step I Federal grant approval for Gresham - Troutdale - Multnomah Consortium 201 Study. ()
Step II Federal grant approval for Inverness 8 Sewer Project.

June - Land Use Supplement to East County Groundwater Plan.

Oct. - Gresham - Troutdale - Multnomah Consortium 201 Study completed.

Nov. - Regional or separate treatment plant decision.

1980 - Goal 3500 Connections.

Jan. - Step III Federal grant approval for Inverness 8 Sewer Project.

March - Step II Federal grant approval for Inverness or Regional Treatment Plant Expansion.

1981 - Goal 4000 Connections.

March - Step III Federal grant approval for Inverness or Regional Treatment Plant Expansion

1982 - Goal 4500 Connections.

July - Sewer connection rate evaluation report.

Dec. - Inverness or Regional Treatment Plant Expansion completed.

1985 - Goal 13,000 Connections.

1990 - Goal 32,000 Connections.

3. Implementation.

a. Funding.

It will be necessary to invest approximately \$52 million in sewer facilities in order to meet the goal. Sewers in this area are provided by the Central County Service District. The Central County District financing plan is based on funding treatment plant, sewer trunk, and interceptor facilities with Federal grants and loans from Multnomah County. The County funds are recovered by connection charges collected at the time of the connection. The financing plan provides for lateral sewer construction by local improvement districts with the benefited property owners paying the cost of construction.

The construction of sewers costing \$52 million is a major undertaking for the people in this area. The preliminary schedule included as part of this plan assumes that Federal grants will be available to support treatment plant and interceptor construction. The availability of these grant funds are an essential element of the plan.

b. Citizen Involvement.

The Comprehensive Plan citizen groups will carry on beyond the Comprehensive planning stage. They will be useful advisory groups in further developing the strategy to solve the current waste disposal problems. The generation of citizen support for measures designed to obtain hook-ups of existing subsurface waste disposal systems to sewers will be vital if any program is to succeed. The established citizen involvement process is seen as a useful way to gain this support.

c. Legislation.

ORS 451 permits the construction of sewers by the County when a majority of the property owners or voters favor the installation of sewers. The County does not have statutory authority to force property owners to pay for the installation of lateral sewers.

3/

The Inverness Treatment Plant is expected to reach capacity in 1982 or 1983 at the present connection rate. A major increase in this rate prior to the availability of additional treatment facilities could result in treatment plant overloading and unsatisfactory treatment. It is appropriate that this connection rate be reviewed in 1982 to determine the effect of the County sewer promotion efforts. If the County sewer promotion efforts are not sufficiently effective, it may be necessary to ask the legislature for statutory authority to construct a lateral sewer system in this area.

d. Land Use Supplement to the East County Groundwater Plan.

The Multnomah County Land Use Plan will not be available until early 1979. This supplement to be prepared with and completed after the land use plan will be a specific management plan for the phasing out of cesspools in East Multnomah County.

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LAND USE SUPPLEMENT
EAST COUNTY GROUNDWATER PLAN

Implementation

d. Land Use Plans

As the result of urban community plan formulation policies regarding future development are now in place for the Inverness Service Area. The Inverness Service Area is affected by community plans for Columbia, Cully/Parkrose, Hazelwood, and small parts of Powellhurst and Wilkes/Rockwood (see map). The format of these community plans closely follows that of the Multnomah County Comprehensive Framework Plan (adopted Sept., 1977), and in many cases directly references the overall policy considerations.

The overall planning policy which addresses the problems of East County groundwater problems in policy No. 37 on Public Utilities. The pertinent language in that policy states:

THE COUNTY'S POLICY IS TO REQUIRE A FINDING PRIOR TO
APPROVAL OF A LEGISLATIVE OR QUASI-JUDICIAL ACTION THAT:

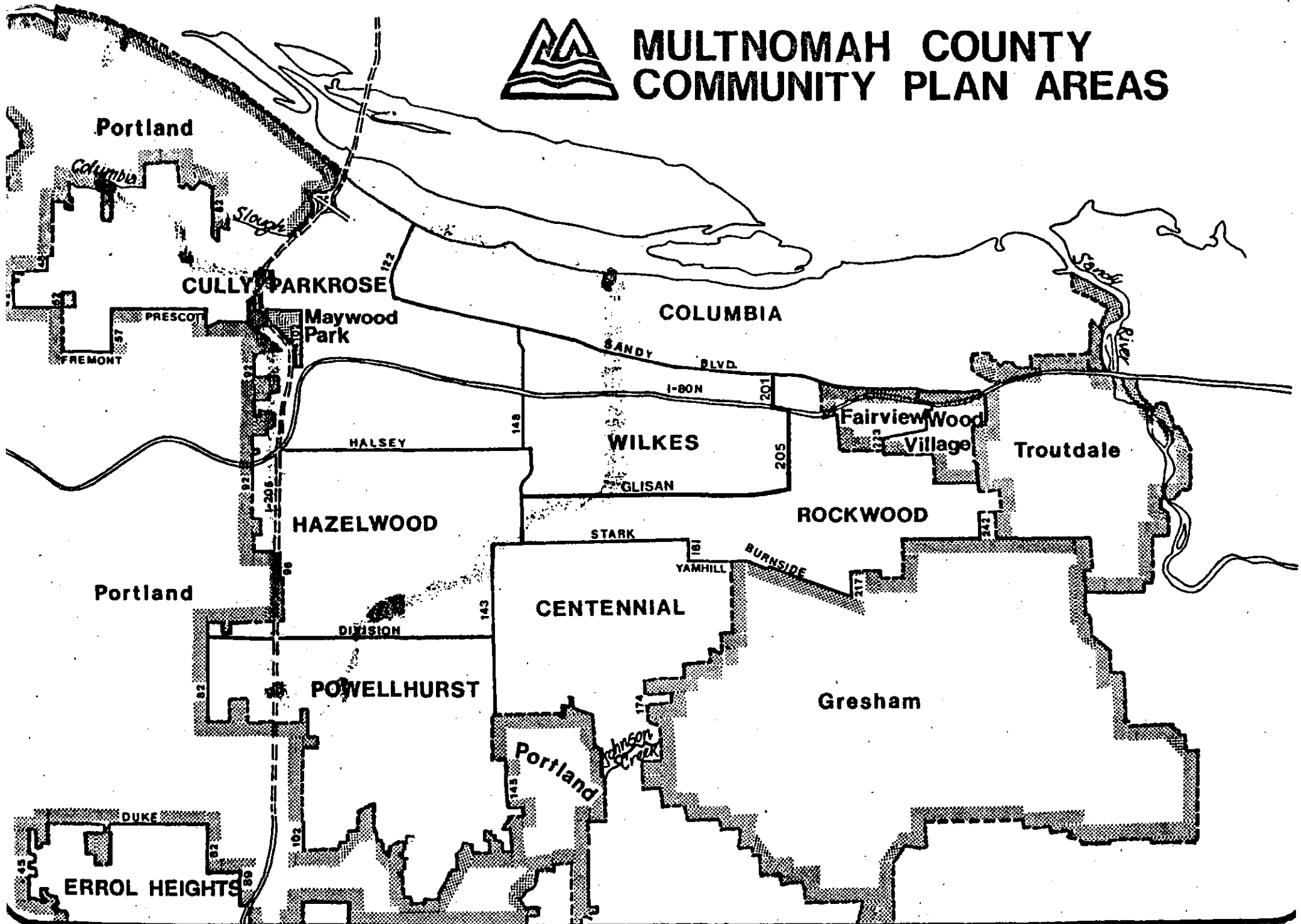
Water and Disposal System

- A. The proposed use can be connected to a public sewer and water system, both of which have adequate capacity; or
- B. The proposed use can be connected to a public water system, and the Oregon Department of Environmental Quality (DEQ) will approve a subsurface sewage disposal system on the site; or
- C. There is an adequate private water system, and the Oregon Department of Environmental Quality (DEQ) will approve a subsurface sewage disposal system; or
- D. There is an adequate private water system, and a public sewer with adequate capacity.

As an adjunct to the utilities, community facilities, and transportation policies, Policy No. 32 contains the need for capital improvements to implement the policies. The language in the Capital Improvements Policy makes it apparent that capital improvements will be programmed to protect the health of the residents in the County. Policy No. 32 states:



MULTNOMAH COUNTY COMMUNITY PLAN AREAS



THE COUNTY'S POLICY IS TO ESTABLISH AND MAINTAIN A CAPITAL IMPROVEMENTS PROGRAM TO ACHIEVE DESIRED TYPES AND LEVELS OF PUBLIC SERVICES AND FACILITIES, AND TO PROVIDE FOR THE TIMELY, ORDERLY AND EFFICIENT ARRANGEMENT OF PUBLIC SERVICES AND FACILITIES IN ACCORD WITH THE PLAN POLICIES AND STRATEGIES, CONSIDERING:

- A. The health, safety and general welfare of County residents;
- B. The level of services required, based upon the needs and uses permitted in the urban, rural and natural resource areas;
- C. The equitable distribution of costs based upon the benefits received from the public utility system or facility; and
- D. The environmental, social and economic impacts.

An additional policy in the Frameworks Plan is Policy No. 13 on Air and Water Quality. That policy states:

THE COUNTY'S POLICY IS TO SUPPORT THE MAINTENANCE, AND WHERE POSSIBLE, THE ENHANCEMENT OF AIR AND WATER QUALITY AND THE REDUCTION OF NOISE POLLUTION BY REQUIRING, PRIOR TO APPROVAL OF A LEGISLATIVE OR QUASI-JUDICIAL ACTION, A STATEMENT FROM THE APPROPRIATE AGENCY THAT ALL STANDARDS CAN BE MET WITH RESPECT TO:

- A. Air Quality;
- B. Water Quality; and
- C. Noise Levels.

In addition the strategy section of this policy contains the following language:

Planning

1. The County should participate in environmental quality planning through participation in the regional planning process and committee structure charged with the preparation of:
 - A. An Air Quality Maintenance Plan;
 - B. A Water Quality Management Plan; and
 - C. A Land Use Plan.
2. Community Plan elements of the Comprehensive Plan should take into consideration airshed quality and noise level limitations.
3. The County should prepare and maintain coordinated storm water management and sewer plans in accord with the regional water quality management plan.

Implementation

1. The following should be addressed in the preparation of the Community Development Ordinance:
 - A. As a part of the Capital Improvements Program process, priority should be given to areas where the public health, safety or welfare is being impaired.

Within each community plan, which were those plans prepared for the urbanized area of unincorporated East Multnomah County, direct reference is made to the two above mentioned Framework Plan Policies. In addition, some specific language has been included in each separate community plan depending upon the specifics of that area. The following material relates to those individual plans:

1. Cully/Parkrose (C.P.) Policy 13 - Air & Water Quality

Strategies (in addition to policy) The County should:

- A. Act to oppose the degradation of water quality in the Columbia Slough and domestic water aquifers by working towards the development of a sanitary sewerage system for the community and other communities in the same drainage system.
- B. Review all land development application in the Columbia Slough Lowlands to assure their compatibility with the areas potential for the regions second major source of domestic water. This includes use and storage of toxic chemicals, emissions and water.

Policy 37 Utilities - Added Policy Language:

COMPREHENSIVE FRAMEWORK PLAN UTILITIES POLICY NO. 37 APPLIES TO THE CULLY/PARKROSE COMMUNITY, AS WELL AS THE FOLLOWING:

All land uses in the community must utilize a public water system as a source for drinking water.

Development must coincide with the full provision of utilities, including sewerage, water and streets.

Development on lots greater than 10,000 square feet or lots which were part of a lot over 10,000 square feet at the adoption of the Plan must be connected to a sanitary sewerage system. This construction requirement may be temporarily waived by the County Director of Environmental Services if the following conditions are met:

- A. The County Engineer certifies that a larger sewerage project will be undertaken in the area within five years and economies of scale can be achieved by doing it at a later time; and

- B. A temporary disposal system is approved by the County Sanitarian; and
 - C. Financial security is provided in the amount of the cost of the sewerage project. (The amount of the financial security will be credited to the assessment against the property at such time as the project is constructed).
2. Columbia Community Plan - Policy 13, Air & Water Quality

Findings

- A. Water quality in the Columbia Slough is enriched with nutrients, the major source of which is the subsurface disposal of 10-12 million gallons/day of household sanitary waste through cesspools and septic tanks.
- B. Water quality in the Upper Columbia Slough appears to be in violation of the following DEQ water quality standards for Willamette Basin streams.
 - Aesthetic conditions offensive to the human sense of sight, smell, taste or touch.
 - No more than 10% cumulative increase in natural stream turbidities.
- C. High nitrate levels occur in the Parkrose Water District wells located a short distance south of the Columbia Slough, but these levels are still lower than 10 parts per million which is the maximum allowable for domestic water supplies. The high nitrate levels may be confined to the upper groundwater aquifers and not significantly affect the deep groundwater aquifers being developed by the City of Portland as an alternative source of domestic water.

Strategies

Community Recommendation

- 1. In regard to water quality:
 - A. The Columbia Community recommends that the County proceed to sewer the upper area of the Columbia Slough drainage basin to insure the long term water quality of the ground water.
 - B. Developments with large paved areas shall be encouraged to utilize settling ponds or other similar methods to maintain the water quality in the Columbia Slough.

- 31
- C3. The Oregon Department of Environmental Quality should fully determine the water quality of the Columbia Slough and the groundwater quality in the Columbia Slough watershed. If a significant degradation of water quality due to subsurface sewage waste is found, an appropriate solution should be enacted to protect water quality and public health. The solution should consider the degree and trend of pollution, an adequate level of treatment, and the economic costs involved.
 - D. The Section 208 Water Quality Planning Process should be supported as a means to deal with the pollution problems related to urban stormwater runoff.

Policy 37 - Utilities

Findings

Sewer

1. There are three sewer treatment plants: The County Inverness Plant, The Gresham Plant and The Troutdale Plant that can provide service to the Columbia Community. Because of the flat topography, all sewer service involves some pumping to the treatment plant.
2. The soil conditions in most of the community will not allow sub-surface sewage disposal.
3. The cities in East Multnomah County and the County have formed a Sanitary Sewer Consortium to determine the best method of providing service to Central Multnomah County.
4. To provide service to the entire area, all three plants must ultimately be expanded.
5. The consideration of sewer service delivery is intended to be aided by joint urban planning area management agreements. These agreements will be prepared as an element of the ongoing planning process.

Strategies

Community Recommendations

1. The agencies that provide public sewer and water should be requested to participate in the Multnomah County Capital Improvements Program to insure co-ordinated development. In addition to these policy sections the Columbia Plan contains a large section on future service requirements for full development. That section is reproduced as Appendix I.

Hazelwood Community Plan, Policy 13 - Air & Water Quality

Findings

1. There are no waterways in Hazelwood, however, the development of the community has contributed to the:
 - A. Pollution of the groundwater system due to reliance on cesspools for disposal of domestic waste water.

Strategies

Community Recommendations:

1. The Section 208 water quality planning process should be supported as a means to deal with the pollution problems related to urban stormwater runoff.

Policy 37 - Utilities

SEWAGE DISPOSAL

1. Public sanitary sewer facilities are virtually non-existent in the Hazelwood area. The porous gravel soils have a high capacity to absorb sewage; however, disposal of raw sewage into the ground could hinder programs to recharge drainage water and develop new water sources. Increased levels of pollution have been found in the ground water of both the Johnson Creek and the Columbia Slough basins.
2. Recent studies by the County, CRAG, and DEQ confirm the recommendation of the 1965 Master Sanitary Sewer Plan that Mid-Multnomah County (the Hazelwood area in particular) should be sewered as soon as practical.

Strategies

Community Recommendations

1. The community recommends the use of natural drainage solutions where practical. For example, the use of on-site recharge areas, porous pavement, and special curb designs can reduce the amount of runoff from parking areas into the streets and, in the future, into an underground urban scale drainage system.

Policy 32 - Capital Improvements

Capital Improvements List

- A. Sanitary sewer to serve the community.

Within the Hazelwood Plan it has also been noted under Policy 6 (Urban Land Area) that it is the community intent to require sewers through the following language:

Considerations for community facilities and improvements.

"Provide for sanitary and storm sewers, supplemented with innovations in natural drainage..."

Powellhurst Community Plan

Policy 13 - Air and Water Quality

Findings

The Johnson Creek watershed occupies most of the Powellhurst Community. In 1975 the Department of Environmental Quality did a study of water quality in Johnson Creek, Water Quality in Johnson Creek, 1970-1975. This study showed a high concentration of phosphorus, nitrate-nitrogen and bacteria which resulted from septic tank effluent, urban runoff and agricultural runoff. At SE 45th Avenue pollution was excessively high. The study states, "Bacterial concentrations in Johnson Creek usually exceed the limits imposed by the Oregon Water Quality Standards", and the report recommends installation of sanitary sewers throughout the Johnson Creek Drainage basin by 1985. DEQ has tested the groundwater quality of the Johnson Creek watershed from public wells of the Gilbert Water District. The water from these wells is tested yearly by DEQ, as is all other public well-water according to State health laws. In recent years there has been a trend of rising nitrate levels that are above natural background levels.

Strategies

Community Recommendations:

1. The Oregon Department of Environmental Quality should fully determine the water quality of Johnson Creek and the groundwater quality in the Johnson Creek watershed. If a significant degradation of water quality due to subsurface sewage waste is found, an appropriate solution should be enacted to protect water quality and public health. The solution should consider the degree and trend of pollution, an adequate level of treatment, and the economic costs involved.
2. The Section 208 water quality planning process should be supported as a means to deal with the pollution problems related to urban stormwater runoff.

Policy 32 - Capital Improvements

Capital Improvements List

Natural drainage and recharge areas, to protect groundwater resources and to complement sanitary and storm sewer systems.

Policy 37 - Utilities

Sewage Disposal

1. The existing Johnson Creek Interceptor is designed to serve the watershed at the population and density anticipated in the Framework Plan. The Johnson Creek Interceptor feeds into the City of Portland treatment and collection system.
2. The porous gravel soils have a high capacity to absorb sewage; however, disposal of sewage into the ground and the tendency of Johnson Creek to flood could hinder programs to recharge drainage water and develop new water sources.
3. Recent studies of the County, CRAG, and DEQ confirm the recommendation of the 1965 Master Sanitary Sewer Plan that Mid-Multnomah County (the Powellhurst area in particular) should be sewered as soon as practical.

Strategies

1. Community Recommendations:

- A. The community recommends the use of natural drainage solutions where practical. For example, the use of low areas such as wetlands for retaining storm runoff and releasing it gradually, can help purify water and recharge the groundwater.

Within the Powellhurst Plan it has also been noted under Policy 6 (Urban Land Area) that it is the community intent to require sewers by the following language:

Considerations for Community Facilities and Improvements

Provide for urban scale, separated, underground sewer and drainage systems, complemented with innovations in natural drainage such as the design of gutters, porous materials, and the mixture of open space uses with water recharge areas.

Wilkes Community Plan

The Wilkes Community Plan was prepared in 1976 and pre-dates even the Framework Plan. It is a very short document and will be up for revision and update in _____. A finding in this plan states, "The area is served by sewer and there is adequate capacity to serve the area to full development." The Wilkes community is being currently developed on sewer from Inverness and is therefore not a problem with reference to groundwater pollution.

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The above material contains most of the pertinent plan policies that attempt to answer the problems of groundwater pollution. (Together the Framework Plan and the Community Plans make up the Multnomah County Comprehensive Plan). The County Plans try to balance the need for urban growth within the Urban Growth Boundary while recognizing the need to control the groundwater pollution problems resulting from large subsurface waste disposal. As the groundwater situation becomes clearer, revisions to the plans through the normal updating process may be necessary.

EXHIBIT F

BEFORE THE BOARD OF COUNTY COMMISSIONERS

FOR MULTNOMAH COUNTY, OREGON

ORDINANCE NO. 216

An ordinance Amending Multnomah County Code Chapter 11.10 by adopting the East County Groundwater Plan as an element of the Comprehensive Plan.

MULTNOMAH COUNTY ORDAINS AS FOLLOWS:

SECTION I FINDINGS

A. General.

1. The East County Groundwater Plan, (hereinafter "Groundwater Plan"), is a specific management plan for the elimination of cesspools in East Multnomah County, specifically in the Inverness Service area.
2. The majority of residents in the Inverness Service area dispose of sanitary wastes via cesspools. Continued use of cesspools poses significant problems:
 - a. Cesspools are not a permanent method of sanitary waste disposal in an urban area because there are a limited number of sites for cesspools on an urban residential lot and each site has a finite service life.
 - b. Continued use of cesspools threatens to contaminate domestic water quality and to violate LCDC Goal 6, and the applicable federal standards and community plan policies set out below.
 - c. Once the groundwater is contaminated, elimination of cesspools will not affect an improvement in water quality for many years.
3. The alternatives considered by the Board of County Commissioners as solutions to the problem of groundwater pollution are:
 - a. The Groundwater Plan which calls for 90% of all development in the area to be sewerred by 1990, but permits new development on cesspools as a temporary measure.
 - b. A ban on all new development not connected to sewer service ("building moratorium").

- c. To provide sewers as cesspool systems fail.
 - d. To require individual pre-treatment for new development.
 - e. To delay action until there is a declared health hazard.
4. The State Environmental Quality Commission has requested that the County prepare a specific management plan for the elimination of cesspools in East Multnomah County.
 5. A Board of County Commissioners Resolution of June 15, 1978, determined it necessary for the County to work with Department of Environmental Quality towards completion of a management plan for the disposal of subsurface sewage that satisfies their mutual concerns.
 6. Land Conservation Development Commission (L.C.D.C.) Goal #2 requires coordination with affected Governmental Units. The County has coordinated with the Metropolitan Service District, City of Portland and other affected agencies, in developing the Groundwater Plan.
 7. Planning Commission Resolution PC 10-79 recommends that the Board of County Commissioners adopt the East County Groundwater Plan as County Policy and submit the plan to the Environmental Quality Commission.
 8. The Board concurs with the Planning Commission and finds that the Groundwater Plan conforms to the applicable L.C.D.C. goals and County Comprehensive Plan policies as described below.

B. Water Quality.

1. a. L.C.D.C. Goal 6, Air, Water and Land Quality, states the following:

"Goal: To maintain and improve the air, land and water resources of the State.

"All waste and process discharges from future development, when combined with such discharges from existing development, shall not threaten to violate, or violate, applicable state or federal environmental quality statutes, rules and standards...."

- b. Policy 13, Air and Water Quality, of the County Comprehensive Framework Plan, states that the County Policy is to maintain and enhance water quality in accordance with applicable standards.

- c. Policy 13, Strategy 1A, of the Cully/Parkrose and Columbia Community Plans states that the County should oppose the degradation of water quality in the domestic water aquifer by developing sanitary sewer for the drainage system of the aquifer.
 - d. Policy 13, Finding 1A, of the Hazelwood Community Plan states that development in the community has contributed to pollution of the groundwater system from use of cesspools.
2. The East County groundwater system is a valuable resource serving the Parkrose, Hazelwood and Richland Water Districts and other domestic water supply systems. The City of Portland is currently developing a \$15-\$20 million well and pipeline system to use the groundwater as a supplement and emergency alternative to Bull Run.
 3. The Federal Standard, as established by E.P.A., for nitrates in drinking water, is 10 parts per million. The D.E.Q., with assistance of other agencies, has tested the nitrate level of several East County domestic water supply wells. The nitrate levels in shallower wells were found to be rising, and the levels in some wells used by Parkrose and Richland Water Districts have nitrate readings of 7-9 parts per million.
 4. As the D.E.Q. states, sanitary waste disposed through cesspools from existing development is the cause of the high nitrate readings in the groundwater.
 5. The majority of development that has occurred since the Inverness Treatment Plant and lines were constructed has been connected to sewer. The majority of large vacant parcels in the Inverness area have sewer service available. The County requires connection to sewer as a condition to development in areas where sewer service is available. It is the existing unsewered development that is and will continue to be the major source of groundwater pollution.
 6. Approximately 200 residential units are built in the Inverness area each year which are not connected to sewer. This annual rate of 200 unsewered units per year would account for less than 1% of the total amount of existing unsewered units, i.e., the amount of new development that will go in on cesspools would contribute only negligibly to the groundwater contamination problem.
 7. The population of the unsewered portion of the Inverness Service area (S. of Halsey St.) is expected to increase by 2500-3500 people between 1980 and 1990. This increase represents less than 8% of the existing population using cesspools.

8. Construction of the Inverness 8 Interceptor, as proposed by the Groundwater Plan, would connect several major existing services of groundwater pollution to sewer, such that approximately one million gallons a day of sewage that presently contributes to the groundwater problem would then be connected to sewer. The reduction in pollution which would result from connecting these major sources of pollution to sewer would compensate for 10-20 years of new development on cesspools at the rate of 200 units per year.

C. Public Facilities.

1. a. L.C.D.C. Goal #11, Public Facilities, and County Framework Plan Policy #32, Capital Improvements, advocate the planning and development of a timely, orderly and efficient arrangement of public facilities to serve as a framework for urban development.
b. Policy #13 of the Cully/Parkrose and Columbia Community Plans, and Policies #6 and #32 of the Hazelwood Community Plan advocate the provision of sewers.
2. The area which will be provided for by the sewage facilities proposed in the Groundwater Plan is within the Urban Growth Boundary as designated by the metropolitan regional planning body.
3. The sewer facilities contemplated by the Groundwater Plan are necessary and suitable for the level of development envisioned by the County Comprehensive and Community plans and meet the requirement of Goal 11 by providing a framework for urban development.
4. The Groundwater Plan provides for the construction of necessary sewage facilities in accordance with the County Master Plan for sewage facilities and the Regional Sewer Plan and thereby satisfies Goal 2 by its provision for regional coordination.

D. Housing.

1. L.C.D.C. Goal #10, Housing, and County Framework Plan Policy #21, Housing Choice, advocate provision of an adequate number of housing units at price ranges and rent levels commensurate with the financial capabilities of Oregon and the Region's households, and allowance for flexibility in housing location, type and density. The goal also requires plans to provide for the appropriate type, location and phasing of public facilities sufficient to support housing development.

2. The County Housing Goal enacted in the Framework Plan, The Community Plans, The Housing Opportunity Plan for Assisted Housing, and Report on Housing Demand and Supply in Urban East Unincorporated Multnomah County, requires significant additional development in the Inverness Service Area, including high density development in the unsewered area south of Halsey Street. The Department of Environmental Quality will not approve such development without the County's commitment that the area will be sewerred in the near future.
3. The East County Groundwater Plan provides for the development of sewer service necessary to support the County housing goal. It permits some development on temporary cesspools in advance of sewer construction as a means of supporting the housing goal.
4. Because, as indicated in findings B5-7 above, new unsewered development will have only a negligibly deleterious impact on groundwater pollution, a building moratorium is a drastic solution to the groundwater pollution problem which is not called for under present circumstances and which would have a significantly negative effect on County's efforts to comply with L.C.D.C. Goal #10.

E. Citizen Involvement.

1. L.C.D.C. Goal #1, Citizen Involvement, and County Framework Plan Policy #3, Citizen Involvement, advocate a program that ensures opportunity for citizens to be involved in all phases of the planning process.
2. The Comprehensive Framework Plan and Community Plans, which provide the basis for the Groundwater Plan, were developed with extensive citizen involvement.
3. The Planning Commission conducted a public hearing, with extensive additional notice on Resolution P.C. 10-79.
4. The Board of County Commissioners has held two public hearings and one informal meeting on PC 10-79, and has held two public hearings on this ordinance.
5. There will be opportunities for citizen involvement in the development of the ordinances, financing measures, etc., that arise from the Groundwater Plan.

F. Evaluation of Alternatives.

1. Providing lateral sewers as cesspool systems fail is not a viable solution to the groundwater pollution problem because it is not economically feasible. Information presented by the County Engineer indicates that the costs are prohibitive.

2. Requiring individual pretreatment for new development is not a viable solution because as indicated by the County Engineer, there is presently no economically feasible method for filtering nitrates either at the point of waste discharge or from the groundwater after discharge.
3. Delaying action until a health hazard is declared is an unacceptable solution for many reasons:
 - 1) It is not in the best interests of the citizens of Multnomah County;
 - 2) It is in conflict with the applicable L.C.D.C. Goal, federal requirements and community plan policies set out above; and
 - 3) Once the groundwater is contaminated, elimination of cesspools will not affect an improvement in water quality for many years.
 - 4) The decision to act requires advance planning because the County will require a minimum of 10 years to design and construct the necessary treatment plant capacity, interceptor, trunk lines and lateral sewer.
4. Ban on all new development not connected to sewer service is an unacceptable solution because it is in conflict with the County's effort to comply with L.C.D.C. Goal #10 and with the County's housing goal and development plans set out in Findings D-1 and 2, and because new unsewered development will have only a negligible impact on groundwater quality. (Findings B5-8).
5. On the basis of the findings made above, the Groundwater Plan which calls for 90% of the development in the area to be sewered by 1990 but permits new development in cesspools as a temporary measure, is the preferable solution:
 1. Provision of sewer facilities to existing development would provide service to the major sources of the pollution problem and result in significant reduction of groundwater pollution. (Finding B-8).
 2. Permitting new construction to be serviced by cesspools as a temporary measure would have only a negligible impact on groundwater quality. (Finding B-5 and 6).
 3. The Groundwater Plan best serves the requirements of L.C.D.C. Goal #6 by maintaining and improving water quality preserving the objectives of L.C.D.C. Goal #10 and the County's housing and development needs.

4. The Groundwater Plan is consistent with the objectives of L.C.D.C. Goal #2 and #11 and the County's Comprehensive and Community Plans provisions.

SECTION II CODIFICATION

Section III of this Ordinance is hereby added to and made a part of Multnomah County Code Chapter 11.10.

SECTION III

The East County Groundwater Plan is adopted.

SECTION IV

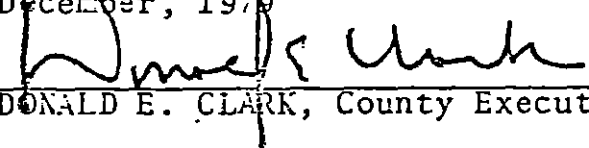
The Director of the Department of Environmental Services shall forward the Groundwater Plan to the Environmental Quality Commission.

ADOPTION

This Ordinance being necessary for the health, safety and general welfare of the people of Multnomah County, shall take effect on January 19, 1980.

ADOPTED this 20th day of December 1979, being the date of its second reading before the Board of County Commissioners of Multnomah County, Oregon.

Authenticated by the County
Executive on the 20th day of
December, 1979

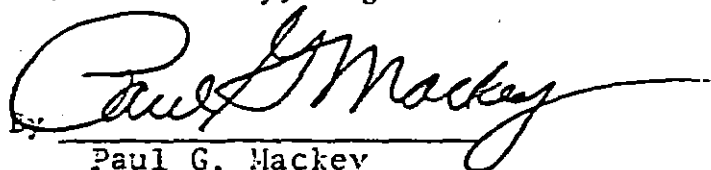

DONALD E. CLARK, County Executive

BOARD OF COUNTY COMMISSIONERS
FOR MULTNOMAH COUNTY, OREGON

By 
Presiding Officer

APPROVED AS TO FORM

JOHN B. LEAHY
County Counsel for
Multnomah County, Oregon


Paul G. Mackey
Deputy County Counsel

LEACHATE COMPOSITION

Parameter	Range of Values Landfills and Test Lysimeters	"Typical" Landfill	"Typical" Regulatory Agency Requirements
Color (chloroplatinate) Odor	0 - 12000 N.D. to terrible	Not bad	
Fecal Coliform MPN/100 ml Fecal Strep MPN/100 ml	<3 - 0.93×10^6 <3 - 29×10^6		
Elect. Cond $\mu\text{mho/cm.}$ pH	240 - 20,000 3.7 - 8.5	7.5	6.5 - 8.5
D.O. mg/l Total Carbon mg/l Total Organic Carbon mg/l BOD ₅ mg/l COD mg/l P.C.B. ppb	0 - 7.4 715 - 22350 715 - 22350 9 - 55000 0 - 90000 0 - 0.4	350 23 120 800	45
Acidity mg/l as CaCO ₃ Alkalinity mg/l as CaCO ₃ Hardness mg/l as CaCO ₃ Volatile Acids mg/l	0 - 9590 0 - 20900 0 - 22800 48 - 19560	185 3400	
T.S. mg/l T.S.S. " T.D.S. " T.V.S. "	1000 - 45000 6 - 2685 0 - 42300 1000 - 23157	4400 130 4270 1090	60
Tannin-like compounds mg/l	76 - 1278	62.4	
Chloride mg/l Cyanide Fluoride Nitrogen - total mg/l N - NH ₃ mg/l - NO ₃ mg/l - organic mg/l Phosphorus - mg/l PO ₄ Sulphate - mg/l Sulphide - mg/l	34 - 2800 0 - 0.11 0 - 2.13 0 - 1106 0 - 1300 0 - 946 0 - 154 1 - 1826 0 - 0.13	2300 0.27 450 427 3.8 5.3	0.1 5.0 15.0 4.5 50 0.5

/Continued.....

Parameter	Range of Values Landfills and Test Lysimeters	"Typical" Landfill	"Typical" Regulatory Agency Requirements
Calcium mg/l	5 - 4000	170	
Magnesium mg/l	16.5 - 15600	100	150
Potassium "	2.8 - 3770	490	
Sodium "	0 - 7700	800	
Arsenic "	0 - 11.6	0.038	0.05
Aluminum "	0 - 122	0.27	0.5
Barium "	0 - 5.4	0.08	1.0
Beryllium "	0 - 0.3	0.025	
Boron "	0.3 - 73	4.5	5
Cadmium "	0 - 0.19	0.0037	0.005
Chromium "	0 - 33.4	0.053	0.1
Copper "	0 - 10	0.024	0.2
Iron "	0.2 - 5500	24	0.3
Lead "	0 - 5.0	0.054	0.05
Manganese "	0.06 - 1400	0.6	0.05
Mercury "	0 - 0.064		0.0006
Molybdenum "	0 - 0.52	0.013	0.2
Nickel "	0.01 - 0.8	0.069	0.3
Titanium "	0 - 5.0	ND	
Vanadium "	0 - 1.4	ND	
Zinc "	0 - 1000	0.5	0.5
Toxicity (96hr TLm) %	38 - 0.062	7.0	100

Source: Cameron, Dr. Robert, Leachate Treatment.
 Paper presented at Leachate Technical Training
 Seminar on January 22, 1975.

EXHIBIT G

TABLE II
RANGE OF LEACHATE CHARACTERISTICS

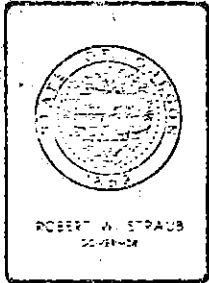
Constituent	Value ^a mg/l	
	Range ^b	Typical
BOD ⁵ (5-day biochemical oxygen demand)	2,000-30,000	10,000
TOC (total organic carbon)	1,500-20,000	6,000
COD (chemical oxygen demand)	3,000-45,000	18,000
Total suspended solids	200- 1,000	500
Organic nitrogen	10- 600	200
Ammonia nitrogen	10- 800	200
Nitrate	5- 40	25
Total phosphorus	1- 70	30
Ortho phosphorus	1- 50	20
Alkalinity as CaCO ₃	1,000-10,000	3,000
pH	5.3- 8.5	6
Total hardness as CaCO ₃	300-10,000	3,500
Calcium	200- 3,000	1,000
Magnesium	50- 1,500	250
Potassium	200- 2,000	300
Sodium	200- 2,000	500
Chloride	100- 3,000	500
Sulfate	100- 1,500	300
Total iron	50- 600	60

^a Except pH.

^b Representative range of values. Higher maximum values have been reported in the literature for some of the constituents.

Source: Tchobanoglous, George, Hilary Theisen, and Rolf Eliassen, Solid Wastes: Engineering Principles and Management Issues. McGraw-Hill, Inc. 1977.

Note: Constituents will also include the total array of heavy metals in concentrations which will range from only trace amounts to several 100 mg/l dependent on the wastes deposited in the landfill.

*Department of Environmental Quality*

522 S.W. 5th AVENUE, P.O. BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229-5395

November 23, 1979

Mr. Ronald A. Watson
Jackson Tower
806 SW Broadway
Portland, Oregon 97205

Re: SW - Multnomah County
Columbia Sand and Gravel Pit
NE San Rafael and 122nd Avenue

Dear Mr. Watson:

The Department has completed its review of Land Reclamation, Inc.'s solid waste disposal permit application for the Columbia Sand and Gravel Pit located at NE 122nd Avenue and San Rafael Street in east Multnomah County. This review was based on information contained in the application exhibits along with reports prepared by the State Water Resources Department, Environmental Protection Agency, and the Metropolitan Service District. Further, the staff met with the applicants and their consultants on October 19, 1979 and November 2, 1979 to discuss the proposal.

Attached you will find our staff's and the Department of Water Resources' review of your consultant's feasibility report dated September 13, 1979. Please note that Exhibits B and D and the information requested in the above reviews would need to be submitted before the application would be considered complete.

After carefully reviewing all the available information I have concluded that the siting of a landfill at the proposed location would probably result in the contamination of the groundwater which serves as a municipal water supply for the east county area. In other words, the proposed solid waste facility would contaminate an underground community drinking water source beyond the solid waste boundary. Further, this contamination would be irreversible and would be contrary to the Department's goal of protecting the groundwater aquifer for domestic water purposes and contrary to other actions taken by this Department and the Environmental Quality Commission as related to this aquifer.

In our judgement, solid waste activities should not be allowed to increase the risk of damage to present or future users of a groundwater aquifer. As discussed with you, among the potential landfill

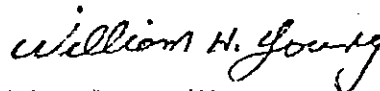
Mr. Ronald A. Watson
Page 2
November 23, 1979

sites available in the MSD area, the east Multnomah County gravel pits would be the least desirable from the standpoint of risk and non-reversible impact to the groundwater supply should the system leak. Sites down-gradient from domestic water supplies and with suitable hydrogeological and physical conditions would be more acceptable from an environmental viewpoint.

We share your consultant's view with respect to the fact that current technology is less than perfect and that no assurances can be made that zero discharge of leachate is possible. It seems logical to us that if indeed a landfill is necessary for this area within MSD, a site should be located where the impact affects the least possible present or future users of a groundwater aquifer should that leachate system fail.

In light of the uncertainty of technology, no demonstrated need that this particular site is necessary since less risky alternate sites are available, and the Department's intent to protect the groundwater aquifer as a domestic water supply source, I would deny this proposal should a complete application be submitted.

Sincerely,



WILLIAM H. YOUNG
Director

REG/mkw

Enclosures

cc: Richard J. Brownstein
Columbia Sand and Gravel
Attn: Ralph Gilbert
Metropolitan Service District
Multnomah County Department of
Environmental Services
Gene Plew
Seton, Johnson & Odell, Inc.
Attn: Bryan Johnson
Solid Waste Division, DEQ
Randy Sweet

DEPT.

TELEPHONE

TO: REG, CHG

DATE: October 19, 1979

FROM: SCC

SUBJECT: SW - Columbia Sand & Gravel/Land Reclamation Inc.
122nd Avenue & San Rafael Pit. - Multnomah County

The following is a comparison of the Permit Application prepared by Seton, Johnson and Odell, Inc./Randy Sweet for Land Reclamation Inc. and the proposed guidelines published in the federal register dated 3-26-79.

241.200 - Site Selection

The site is located in a sole source aquifer which serves at least three adjacent municipal water districts and many other private wells. There is little discussion of the potential for contamination of these wells or the consequences thereof except a statement that "community water supplies are available" (page 14). There is no discussion of the economic consequences of contamination to these wells. Additional review of this matter follows in the leachate section.

The report borrows from MSD studies done on waste generation and siting feasibility to develop community need and cost figures. Other than the potential groundwater contamination of a "sole source aquifer" the landfill meets the intent of the federal guidelines on siting.

241.201 - Design

The design takes into consideration types and quantities of all solid waste expected to be disposed of at the landfill. The design figures are taken from MSD studies.

The report notes that the groundwater is currently supplying several municipal water districts with their sole source of groundwater and mentions the Portland Water Bureau's exploratory well and efforts to develop an East Well Field. The report concludes however there will be "no significant impact on beneficial uses of groundwater".

Other design factors noted in the guidelines such as hydrogeology, geology, or water balance, leachate generation and control, gas and socioeconomic effects are presented to varying degrees.

241.202 - Leachate Control

The report details the hydrogeology of the area and calculates underflow of the upper ten feet of the saturated zone equal to about 600 gallons per day. Leachate generation is estimated at 50% of the incident rainfall (38 inches/year) over 6 acres of fill (10 acre site) or about 55,000 gal./yr. (3,091,000 gal/yr). I could not calculate the 55,000 gal/yr they arrived at.

Control and attenuation of the leachate is described on pages 12-15. Each of these control and/or attenuative features is commented upon as follows:

- a) "paper materials" (page 12) - it is noted that paper materials include clay filler and have a demonstrated cation exchange capacity. Clay filler is found only in slick paper (magazine grade) and also contains starch as a binder. This is insignificant as an attenuative feature and will not be considered further.
- b) hydraulic conductivity.... is relatively low (page 13) - although the conductivity of the Troutdale Gravel Aquifer may or may not be relatively low in the vicinity of the pit. The hydraulic conductivity is still very high and it is an excellent transmitter of water.
- c) cement.... cleanings (page 13) - cement cleanings are likely to be found in the washwater ponds however their mass relative to the total amount of waste to be filled (710,000 tons) is inconsequential and therefore will not be discussed further.
- d) clayey fines lining (page 13) - there are several discussions of the use of clayey fines (actually a mixture of clay, silt loam, and silty clay loam) for lining the "total base and side-walls" of the pit. This feature will attenuate the leachate with its cation exchange capacity (no details provided for discussion or review) and will act as a hydraulic barrier due to its "exceptionally low" hydraulic conductivity. Even if the "clayey fines" have a low conductivity (not demonstrated) the method of placement (pumps in slurry form page 21/plate 2) (dragline and truck page 21) negates any restrictive effect it may have had because of cracking, and shrinking upon drying and/or inadequate compaction or total lack thereof. This proposal cannot be considered an effective seal for either leachate control or gas migration.
- e) French drains (page 13) - the plan features french drains placed in the "clayey bottom liner" to intercept and collect for pumping any leachate which is generated. The leachate would be pumped to the "refuse surface or reinjected and circulated through the refuse via low pressure distribution in two-inch diameter French drains within the refuse". Plate 2 shows these two-inch drains to also be gas collection lines. The report concludes with a statement that "should the volume of accumulated leachate become too great for reinjection into the refuse, pumping to the surface with treatment and disposal can be facilitated". No details on how this treatment and disposal are given.

Review of Plate 2 shows two gas and leachate water collectors which have a concrete sump set ten feet into the floor of the pit and below the clayey seal with drains entering it and a pump to remove accumulated leachate. The plate also shows four gas collector and drainage sumps which also feature concrete rings set ten feet into the pit floor and below the "clayey seal". The base

October 19, 1979

of these sumps are gravel to facilitate drainage into the pit floor. The report does not discuss the manner, if any, which leachate would be prevented from entering these sumps via the gas collection lines which are set in gravel and directly connected to the sumps. Since my calculations show a net surplus of 3,091,000 gallons of leachate per annum it can only be assumed that some of this would find its way into these sumps and enter the groundwater directly.

The plan to circulate the leachate through the landfill does not effectively reduce the volume of leachate nor does it necessarily reduce the strength of it. A more positive method of leachate treatment and disposal should be evaluated.

There are several restatements of the previously described features however nothing new is added. A "contingency plan" on page 14 describes two interceptor wells to be placed in the northwest and southwest ends of the pit. These wells would be used as a backup to collect contaminated water for disposal at a series of sumps or drainfields to be developed in the unfilled southern portion of the pit. No further details are given on this system. It is not clear as to why the disposal system would work in the small fraction of property along the southern portion of the pit but fail across the entire filled area. A flow estimate of 100 gpm per well is suggested as necessary to collect all leachate. That works out to 144,000 gpd of liquid per well which is a large volume of water to dispose of.

241.203 - Gas Control

The plan calls for containment of gases with a "claywall" and passive collection through use of perforated concrete ring towers set into the fill with "radial lines" extending from the towers (6) into the fill. The radial lines will be two-inch perforated pipes set into two square foot gravel trenches with no slope. The radial lines will be set at thirty foot depth intervals.

The radial lines will also act as the leachate low pressure distribute system at the leachate water collectors (2). It is not clear how the operator will keep these lines from acting as leachate collectors or keep them from flooding.

As previously discussed the method of placement and compaction of the "clayey fines" in both the pit bottom and walls leaves the question of an effective seal to be very questionable. For discussion purposes the clay wall cannot be considered an effective gas containment barrier.

The report notes that positive gas collection can be added by installing a 200 cfm fan manifolded to the collection towers. There is no discussion of odors, energy requirements or cost.

241.204 - Runoff Control

The report states that surface runoff would be collected and discharged into the gas venting system. Since the entire fill is located in the pit, it is assumed surface runoff would be considered with leachate control.

October 19, 1979

241.205 - Operation

Disposal operation is covered in Section 5 of the report and touches on staffing (7 people), equipment (one tractor and one compactor), hours of operation (8:00 AM to 5:00 PM daily) support facilities, water, fire protection, landfilling methods (8-foot compacted lifts), haul roads (12% maximum grade) and staging of landfill areas. Much of the material discussed was previously discussed in other sections of the report.

A bar chart is provided showing an estimated 10-year life of the pit assuming 125,000 yds³ per year of fill and removal of another 200,000³ yds. of gravel.

Other environmental operating concerns such as dust and blowing debris, road mud, traffic, noise and birds are discussed in Sections 4.3 through 4.6.

241.206 - Monitoring

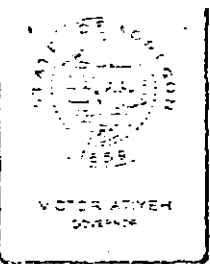
Monitoring is proposed for gas by installing seven test wells driven twenty feet deep and located along the west, north and east walls of the pit.

Monitoring for leachate will be done by testing of the adjacent school well and by drilling a new well in the north end of the pit.

Conclusion and Recommendation

Report has several glaring design faults which leave serious questions regarding the adequate control of leachate and gas from the landfill. In light of these deficiencies it is recommended that the application be returned for redesign with the requirement that positive methods of leachate containment, collection, treatment and disposal be provided as well as effective containment, collection and disposal of gas. A water balance should also be provided as well as a thorough and detailed analysis of the potential for contamination of municipal and private wells in the area. Since the municipal systems chlorinate their water a review of chemical reactions of trace amounts of leachate (organics) should be performed to insure that carcinogenic and/or other toxic compounds are not formed. Taste and odor problems should be reviewed.

If the applicant is unwilling to redesign then the Department should deny the necessary permit required for the landfill.



Water Resources Department

MILL CREEK OFFICE PARK

555 13th STREET N.E., SALEM, OREGON 97310

EXHIBIT J

SOLID WASTE
PHONE 376-8455

TO: Bill Dana, DEQ, Solid Waste DATE: November 2, 1979
Division, Portland
FROM: Kent Mathiot *Kent Mathiot*
SUBJECT: Columbia Sand and Gravel Landfill Application

General Comments:

Any proposal for a landfill operation at the Columbia Sand and Gravel Site needs to be given careful review and consideration. As we have discussed before, the hydrogeologic conditions in the East Portland area make the prevention of landfill leachate generation and the management of such leachate very difficult, and the alluvial aquifer that underlies the area is a resource of ever increasing value. If put into operation, the disposal program outlined by Land Reclamation, Inc. would be a major improvement over many of the past and existing landfill operations throughout the state, and in many less critical hydrogeologic settings would be acceptable with only minor modifications. However, because the site is located above a major, highly utilized, alluvial aquifer, additional work needs to be done.

Regional geologic and hydrogeologic conditions:

The Land Reclamation report provides a good description of the regional geologic and hydrogeologic conditions, as well as useful information on the location of high production wells in relation to the proposed landfill site. The transmissivity information presented documents the anticipated condition that numerous high production zones occur throughout the thick sequence of alluvial deposits, and that these deposits have overall ground water producing characteristics that range from good to excellent. However, the report does not provide adequate ground water gradient information. The ground water flow direction for the unconfined aquifer in the Troutdale gravels below the disposal site may be available in the report, but it is not clearly presented. On page 10 the report states "...the piezometric surface gradient appears to slope to the west and south from the Richland Water District and Hazelwood District wells toward the vicinity of the pit." This appears to be a self contradicting statement since the Hazelwood and Richland Districts are located to the southwest and east of the pit respectively. The gradient issue is further confused by two statements on page 14 that state, "An irrigation well 600 feet northeast of the site is the next nearest downgradient use of ground water...", and "...interceptor well be placed in the northwest and southeast ends of the pit." These three statements suggest a ground water gradient in a southwest, northeast, and northwest direction.

Leachate generation:

An error was apparently made in calculating the potential for leachate generation at the site. Using an available precipitation amount of 19 inches per year and an area of six acres, the report predicts 55,000 gallons per year of leachate generation potential. My preliminary water balance calculations resulted in an available precipitation amount of 16 inches. Applying that amount over the entire 10 acre site I estimate an annual leachate potential of 4.3 million gallons. This is a considerable difference, and the discrepancy needs to be cleared up. The application report estimate of 600 gallons per day of ground water underflow is accurate, but is based on conservative values. The actual underflow could be significantly greater.

Another point that should be addressed in considering the leachate problem is the time required for leachate generation to reach a maximum and to begin entering the underlying aquifer. Using the same water balance information, and assuming an available water holding capacity for the fill materials of 25%, it would theoretically take 28 years to saturate the 150 feet of fill materials, and another 19 years for the first leachate to enter the underlying aquifer. In actuality the time for initial leachate migration to the water table would probably be significantly less, but these figures point out the potential long term affects of this proposed landfill operation.

Soil liner:

Properly designed and constructed soil liners are gaining support as the preferred method for landfill leachate treatment and control. The Land Reclamation, Inc. proposal appears feasible, but additional information is needed on (1) the method of placement and compaction of the liner material including information on optimum moisture characteristics, the proposed dewatering program for the liner materials (if necessary following initial placement), settlement or shrinkage assessment, etc., and (2) the treatment affect these materials will have on landfill leachate over the lifetime of the operation. The soil liner proposals should be further reviewed by a soil specialist such as Bob Paeth.

Ground Water Monitoring:

The proposed design for the ground water monitoring wells appears to be adequate, but the proposed number and location of these wells cannot be evaluated without additional information on the local ground water gradient characteristics at the proposed landfill site. Major ground water users are located within approximately one mile of the proposed site in a north-east, south and southwest direction. Because of this, I would anticipate a need for at least four ground water monitoring wells.

Leachate interception contingency plan:

A leachate interception system should be required at any new landfill site. The Land Reclamation, Inc. estimate that one well pumping at 100 gallons per minute will be sufficient for leachate interception is based on an estimated aquifer storage coefficient of .03 and a transmissivity value of 20,000 gpd/ft. These values were based upon pump test information from one of the Hazelwood Water District wells located approximately 3/4 of a mile to the southwest of the gravel pit. It is very possible that the T and S values at the actual pit site could be significantly higher, and the required withdrawal rate for interception much greater. For example, if the storage coefficient is raised to 0.3, (a value well within the possible range for an unconfined aquifer), a withdrawal rate of 2500 gpm would be required to lower the water table six inches at a distance of 400 feet from the pumping well.

Recommendations:

From a ground water standpoint, the final approval for a waste disposal permit at this site should not be issued until the following points have been addressed:

- (1) The method of placement and compaction of the soil liner should be described in detail, and be demonstrated to be effective in preventing the channelized movement of leachate out of the landfill. In addition the leachate treatment capabilities of the proposed soil liner should be described and demonstrated.
- (2) At least four single completion, exploration/monitoring wells should be constructed around the perimeter of the site, and (a) the local ground water gradient should be established, and (b) pump tests should be conducted in order to develop site specific information that can be used to design a leachate interception program.
- (3) The possibility of restricting allowable fill material to non putrescibles should be discussed with the owner/operators of the proposed site.
- (4) Discussions should be held with the city on who would be responsible for handling the anticipated flow of contaminated ground water that would be generated if the leachate interception program was ever required.
- (5) An agreement should be reached on who will be responsible for insuring the operation of the monitoring and leachate interception systems for the anticipated lifetime of the potential leachate problem.

KH:caw

RONALD A. WATSON
ATTORNEY AT LAW

EXHIBIT K

Jackson Tower, 805 S. W. Broadway, Portland, Oregon 97205
(503) 228-8531

December 12, 1979

HAND DELIVERED

Mr. William H. Young, Director
Department of Environmental Quality
State of Oregon
522 S.W. Fifth Avenue
P. O. Box 1760
Portland, Oregon 97207

Re: SW - Multnomah County
Columbia Sand and Gravel Pit
NE San Rafael and 122nd Avenue
Request for Hearing before Environmental
Quality Commission

Dear Sir:

On behalf of Land Reclamation, Inc., the applicant for solid waste permit on the aforementioned site, and the owner of the site, we acknowledge receipt of your letter dated November 23, 1979; you and your staff have agreed that we may treat the letter as a denial. Under the applicable provisions of ORS Chapter 459, OAR Chapter 340, Divisions 61 and 14 of DEQ, and in particular OAR 340-14-035, the applicant and the site owner respectfully request a hearing before the Environmental Quality Commission on denial of our application. It is further requested that this hearing be set at the earliest possible date before the Commission.

The grounds for the request are as follows:

1. In paragraph three of the letter an opinion is stated that the proposed landfill would probably result in the contamination of the ground water but no facts were stated to support the opinion. Our engineering studies have reached a contrary conclusion.
2. DEQ has arbitrarily denied consideration of the application on its merits, which is inconsistent with the recommendations of the Memo of the Water Resources Department dated November 2, 1979, to the DEQ.

Mr. William H. Young, Director
December 12, 1979
Page Two

3. The memo from Steve Carter to R. E. Gilbert dated October 19, 1979, from an engineering and hydrogeologist's standpoint, is unsubstantiated. The protective measures proposed in this application are in excess of any now in practice or proposed for any other operation in Oregon. If it has "glaring design faults" then DEQ has accepted all of the previous pits in Oregon with "glaring design faults". (In previous meetings with the staff of DEQ, we have been willing to submit a redesign covering all of the alleged "design faults" and points listed by DEQ. However, DEQ would not agree to approve the pit even after redesign. These additional costs would be unjustifiable if the permit were denied, so the work has not been done to complete the application.)
4. This application has been actively pursued before the DEQ, MSD and Multnomah County since March, 1978. It should have priority as to all other applications for "demolition-type (dry) landfills". The denial of our permit application and grant of a permit to a later applicant is discriminatory.
5. In all contacts between the applicant and land owner, their attorneys and engineers with DEQ staff since March, 1978, we were lead to believe that, when the engineering was completed and procedural concerns met, a permit would be granted.
6. DEQ has exceeded its authority in denying our application on a siting basis contending that it has the primary authority to site landfills and set their priorities. The primary jurisdiction to site landfills in the metropolitan area is the MSD Council. DEQ is restricted to siting landfills in this area if the MSD requests it to act or MSD fails to act and there is a

Mr. William H. Young, Director
December 12, 1979
Page Three

need. (See, Senate Bill 925 and House Bill 2846).

7. DEQ does not have the authority to deny the permit of the applicant when we have complied with, or are willing to comply with, all the provisions of the rules pertaining to landfills (OAR 340-61-035 and 340-61-040) and ORS Chapter 459, OAR Chapter 340, Divisions 14 and 61.)
8. DEQ has exceeded its authority by denying our application on policy grounds without its having adopted rules and regulations permitting denial (assuming such regulations, if adopted, would be valid).
9. The public safety and welfare demands that 122nd be restored. Landfilling is the only feasible means to enable reconstruction. DEQ hasn't given this problem any consideration in its denial.

Respectfully submitted,

RONALD A. WATSON
Attorney for Land Reclamation, Inc.,
Applicant

RICHARD J. BROWNSTEIN
Attorney for Western Pacific Enterprises,
Inc., Land Owner

/clh

Receipt is hereby acknowledged of
the original of this letter this 12
day of December, 1979.

Jan Shaw

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

3 DEPARTMENT OF ENVIROMENTAL)
4 QUALITY) HEARING OFFICER'S FINAL ORDER
5 vs.)
6 LAND RECLAMATION, INC.,)
7 RALPH GILBERT and WESTERN)
8 ENTERPRISES, INC.,)
9 Permit Applicants.)

Case No. 19-P-SW 329-NWR-79

8 FINDINGS OF FACT

9 The Findings of Fact in this proceeding are those stipu-
10 lated in the Stipulation and Agreement of the parties relating
11 to this proceeding.

12 CONCLUSION OF LAW

13 The Department of Environmental Quality lawfully denied
14 to permit applicants a solid disposal site permit for the
15 Columbia Pit in Multnomah County, Oregon.

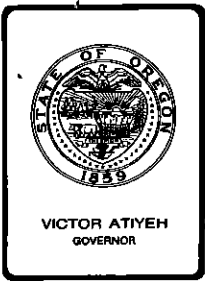
16 ORDER

17 IT IS ORDERED that the denial by the Department of
18 Environmental Quality of an application by permit applicant
19 for a solid waste disposal site permit for the Columbia Pit
20 in Multnomah County, Oregon is sustained.

21 DATED: _____, 1980.

22
23 _____
24 LINDA ZUCKER
 Hearings Officer for Environmental
 Quality Commission

25 NOTICE: You will be entitled to judicial review of the
26 Environmental Quality Commission's final order
 pursuant to ORS 183.482.



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

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

• MEMORANDUM

To: Environmental Quality Commission
From: Director
Subject: Agenda Item M, May 16, 1980, EQC Meeting

MEDFORD CORPORATION - HEARING ON THE MEDFORD CORPORATION
PETITION FOR DECLARATORY RULING ON APPLICABILITY OF
OAR 340-30-060 TO AIR CONVEYING SYSTEMS AND VENEER DRYERS

Attached for your information is the is the brief prepared by Medford Corporation, received April 10, 1980; and the brief prepared by the Department of Environmental Quality, received April 30, 1980.



Contains
Recycled
Materials

APR 10 1980

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
OF THE
STATE OF OREGON

In the matter of the application of)
Medford Corporation as to the appli-)
cability of OAR 340-30-060 to its) PETITIONER'S BRIEF
air conveying systems and veneer)
dryers.)

I.

SUMMARY

The issue before the commission is the manner of computing total plant site emission limits pursuant to OAR 340-30-060 which provides:

"The Department shall have the authority to limit the total amount of particulate matter emitted from a plant site, consistent with the requirements of these rules. Such limitation will be applied, where necessary, to ensure that ambient air quality standards are not caused to be exceeded by the plant site emissions and that plant site emissions are kept to the lowest practicable levels."
(emphasis supplied)

It is petitioner's position that OAR 340-30-060 and the other pertinent rules set forth in the appendix hereto require the department to use a uniform emission limit for each facility. The respective emission limits must be consistent with the rules adopted by the commission.

OAR 340-21-030 establishes the emission limitations for air conveying systems. Said emission limitations treat all air conveying systems uniformly and the department should be directed to use said limits in determining the permissible

1 air conveying system emits more than 10 tons per year the
2 resulting figure must be adjusted downward by 98.5 percent.

3 The procedure proposed by the department discriminates
4 and penalizes the responsible companies which have made an
5 effort to bring their air conveying systems not only within the
6 10 tons per year limit, but well below that limit.

7 The fair and accurate determination of total plant
8 site emissions is of extreme importance to a permit holder in
9 the Medford AQMA (the AQMA) for several reasons. The obvious
10 reason is the potential for a permit violation if total plant
11 site emission limits are set too close to the actual emission
12 levels. Of equal importance is the minimal opportunity for
13 growth within the constraints of the AQMA. Tightening total
14 plant site emissions to a point of actual emissions as the
15 department wishes to do on air conveying systems gives companies
16 that have relatively clean operations very little room for
17 developing any offsets that are cost effective.

18 To illustrate these points assume plant A has a single
19 source of emission in an air conveying system emitting three
20 tons per year and the department establishes a total plant site
21 emission limit of three tons per year. Plant A has little
22 opportunity to develop a cost effective offset. Assume plant B
23 has an air conveying system emitting 9.9 tons per year. Plant
24 B's emission limit would be 9.9 tons per year which is a cost
25 effective offset. In addition plant A which has been fine tuned
26 has virtually no room for error while plant B which has been

1 operating its air conveying system in a rather loose manner has
2 plenty of slack. If in fact plant A's system goes out of com-
3 pliance it will more than likely cost the owner of plant A as
4 much if not more to achieve compliance as it would cost the
5 owner of plant B if it had a similar problem but the owner of
6 plant A will not have the benefit of the offset which is available
7 to the owner of plant B.

8 David C. Junge, Ph.D., P.E., a professor at Oregon
9 State University testified before this commission on December
10 16, 1977. In his testimony Dr. Junge emphasized the need for
11 using a method by which "the owner or operator of the equipment
12 knows exactly what the rule means, and he can take direct
13 measurements to see if he is in compliance with the limitation."
14 He recommended that the commission "set a definite and measurable
15 limit on the rate of emissions [for air conveying systems]. For
16 example, limit each exhaust gas stream from [air conveying
17 systems] to some fixed and definite amount (in pounds per hour)
18 of material which may be emitted to the atmosphere."

19 By using the formula set forth in OAR 340-21-030 the
20 department would implement Dr. Junge's recommendation, the
21 emission limits on air conveying systems would be consistent
22 with the commission's rules and the petitioner would not be
23 unduly and arbitrarily penalized as a result of its care in
24 minimizing emissions from its facilities.

25 / / / / /

26 / / / / /

FOSTER & PURDY
ATTORNEYS AT LAW
201 W. MAIN STREET, SUITE 4A
P.O. BOX 1667 - 503 770-5466
MEDFORD, OREGON 97501

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III.

VENEER DRYERS

The department proposes to calculate a plant site emission limit on petitioner's veneer dryers by using an emission factor that has no relation to the commission's rules. The control strategy for veneer dryers is based on an opacity test. OAR 340-25-315. There are no provisions in the rules that set forth a conversion formula based on the opacity test to determine the particulate emissions, if any, from veneer dryers.

The rules do not characterize veneer dryer emissions as particulate in nature. OAR 340-30-060 only applies to "particulate matter". Therefore, before the department can include veneer dryer emissions in plant site emission limits calculated pursuant to OAR 340-30-060 the commission must determine that veneer dryer emissions are particulate in nature as opposed to being organic compounds.

If the commission determines that veneer dryers are emitters of particulates then an objective formula for determining the emission limits of veneer dryers must be developed. This process may require the institution of a test other than the opacity test or the development of an objective formula based on the opacity test.

What is important is that all similar facilities be treated uniformly and that the formula developed has a reasonable relationship to the control strategy for the particular facility involved.

1 Developing such an emission factor for veneer dryers
2 is a complex problem because emissions and control efficiency
3 vary substantially depending upon the species of wood being
4 produced.

5 There is a tremendous difference in emissions between
6 the various species of wood. For example, pine emissions are at
7 least twice those of fir, white fir is less than Douglas fir,
8 and sap wood emissions are higher than heart wood. Some mills
9 operate with predominantly one species of wood while with
10 others the mix may vary substantially from time to time. A
11 single emission factor if strictly adhered to would almost
12 dictate the species that could be dried and would severely limit
13 the flexibility and profitability of a plywood plant.

14 IV.

15 CONCLUSION

16 In all areas involving the AQMA other than the two
17 discussed above the department has determined plant site emission
18 limits based on objective rules adopted by the commission after
19 public hearings concerning the emissions of the specific facility
20 involved. For example, in the rules applying to wood waste
21 boilers, wood particulate dryers and charcoal producing plants
22 the limit for each facility is clearly expressed in the res-
23 pective rules and tied to an emission level per unit of production
24 or volume of gas stream. The petitioner respectfully submits
25 that OAR 340-30-060 requires the same objective approach in
26 regard to air conveying systems and veneer dryers.

1 The department in the past has recognized the im-
2 portance of the objective approach. In her letter of November
3 17, 1978 to Medford Corporation in regard to its air contaminant
4 discharge permit, Barbara A. Burton, environmental specialist
5 for the department stated:

6 "What this means for your plant is that if you
7 decide to significantly increase production
8 over your recent rate, (such as by adding
9 a shift), you may be required to add further
10 emission controls or increase the efficiency
11 of existing control equipment. The plant
12 site limit is generally based on the rules'
13 emission limits (such as 0.50 (sic) gr/scf
14 for hogged fuel boilers), but whether or not
15 the limit is met by your company will be based
16 on actual tested emissions. This will allow a
17 company operating control equipment below the
18 rules' limits some flexibility in increasing
19 production."

20 While we agree with Ms. Burton that there is a need
21 for flexibility unfortunately the calculations proposed by the
22 department in regard to air conveying systems and veneer dryers
23 do not accomplish such flexibility.

24 Respectfully submitted,

25 FOSTER & PURDY

26 By Stuart E. Foster
 Stuart E. Foster
 Of Attorneys for Petitioner

APPENDIX "A"

OAR Chapter 340, section 21-030

"No person shall cause, suffer, allow or permit the emission of particulate matter, from any air contaminant source other than fuel burning equipment or refuse burning equipment, in excess of:

- (1) 0.2 grains per standard cubic foot for existing sources; or
- (2) 0.1 grains per standard cubic foot for new sources."

OAR Chapter 340, section 25-315

"(1) Veneer dryers:

- (a) Consistent with sections 340-35-310(1) through (4), it is the objective of this section to control air contaminant emissions, including, but not limited to, condensible hydrocarbons such that visible emissions from each veneer dryer located outside special problem areas are limited to a level which does not cause a characteristic "blue haze" to be observable.
- (b) No person shall operate any veneer dryer outside a special problem area such that visible air contaminants emitted from any dryer stack or emission point exceed:
 - (A) A design opacity of 10%,
 - (B) An average operating capacity of 10%, and
 - (C) A maximum opacity of 20%.

* * * *"

OAR Chapter 340, section 30-020

"(1) No person shall operate any veneer dryer such that visible air contaminants emitted from any dryer stack or emission point exceed:

- (a) A design opacity of 10%,
- (b) An average operating opacity of 10%, and
- (c) A maximum opacity of 20%.

* * * *

- (7) Compliance with the emission limits in section (1) above shall be determined in accordance with the Department's Method 9 on file as of November 16, 1979."

OAR Chapter 340, section 30-025

"All air conveying systems emitting greater than 10 tons per year of particulate matter to the atmosphere at the time of adoption of these rules shall, with the prior written approval of the Department, be equipped with a control system with collection efficiency of at least 98.5%."

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
OF THE STATE OF OREGON

EGC
Hearing Section

APR 30 1983

In the matter of the application of)
Medford Corporation as to the) Department of
applicability of OAR 340-30-060) Environmental Quality
to its air conveying systems and) Brief
vener dryers)

The petitioner takes exception to the Department's computation of annual particulate mass emission limits for air conveying systems and veneer dryers which are summed with other emission points to determine the proposed total plant site emission limit, and is seeking relief from the Commission as provided by Oregon statute. The Department's position is summarized below and is discussed fully in the evaluation. (Note: All rules referenced herein may be found in their entirety in Attachment 1).

I

Summary

The Department has the authority to establish total plant site emission limits and has correctly computed a proposed particulate emission limit for air conveying systems and veneer dryers as part of a total plant site emission limit for Medford Corporation in a manner consistent with the Commission's intent and the Department's rules.

Only legally enforceable total plant site emission limits provide the important and necessary means to effectively manage industrial emissions within Medfords fragile airshed and limited carrying capacity. In keeping with the intent of the Commission, the Department has proceeded to set total plant site emission limits consistent with the State Implementation Plan control strategy, modeling data bases, adopted rules (OAR 340-30-060

1 and OAR 340-20-196, -20-197) and actual emissions. The Department has
2 used the same approach in computing limits for all affected companies in
3 Medford and has not knowingly created a favorable competitive advantage
4 for future emission offsets for any company. All other major companies
5 in Medford have accepted total plant site emission limits computed on this
6 basis and all major new sources statewide have accepted such limits since
7 inception of the prevention of significant deterioration (PSD) program
8 several years ago.

9 II

10 Evaluation

11 In this section the Department discusses individual issues raised
12 by the petitioner.

13 Issue 1 (page 1 lines 10-22) The petitioner argues the Department is
14 required to use a uniform emission limit for each facility "consistent
15 with the requirements in these rules" (OAR 340-30-060), in computing total
16 plant site emission limits.

17 Department response: Rule OAR 340-30-060 gives specific authority
18 to limit emissions on a plant site basis. The phrase "consistent with
19 the requirements in these rules" means that the total plant site emission
20 limit is to be compatible with the regulations that legally carry out the
21 State Implementation Plan to attain and maintain air quality standards.

22 OAR 340-30-060 continues by stating the basis of computing the total
23 plant site emission limit: "Such limitation will be applied, where
24 necessary, to ensure that ambient air quality standards are not caused
25 to be exceeded by the plant site emissions and that plant site emissions
26 are kept to the lowest practicable levels." The intent is best met by

1 computing total plant site emission limits based in general on actual
2 emissions.

3 The Department has applied this approach uniformly in computing limits
4 for all affected companies in Medford and for new sources statewide since
5 inception of the PSD program several years ago. If the Medford rule, OAR
6 340-30-060, is considered ambiguous in determining total plant site
7 emission limits, the statewide Total Plant Site Emission Limit rule, OAR
8 340-20-196, -20-197, is even more definitive and continues to reaffirm
9 that the Department is correct in computing emission limits for all source
10 categories in conformance with the State Implementation Plan control
11 strategy, Medford rules, data base, and actual emissions.

12 The applicability of OAR 340-20-196, 20-197 is found in OAR 340-30-005
13 which states in part: "These rules (Medford rules) shall apply in addition
14 to all other rules of the Environmental Quality Commission. In cases of
15 apparent conflict, the most stringent rule shall apply." OAR 340-20-196
16 states in part: "The purpose of OAR 340-20-196, 340-20-197 is to insure
17 that emissions from sources located anywhere in the state are limited to
18 levels consistent with State Implementation Plan data bases, control
19 strategies, overall airshed carrying capacity, and programs to prevent
20 significant deterioration." These rules also authorize the Department to
21 limit "emissions on a mass per unit time basis including an annual
22 kilograms per year limit and may also include a monthly and daily limit."

23 The statewide rule clearly and precisely states that the State
24 Implementation Plan is the basis of the total plant site emission limit
25 computation. The Department has computed a total plant site emission limit
26 on a mass per unit time basis for Medford Corporation consistent with the

1 State Implementation Plan.

2 Issue 2 (Page 1 line 23 to Page 2 line 1; Page 2 line 19-26; Page 3
3 line 1-2)

4 The petitioner argues the emission limit for each air conveying system
5 should be based on a uniform application of OAR 340-21-030 by multiplying
6 the grainloading limit times the volume of air being exhausted.

7 Department response: OAR 340-21-030 establishes a maximum
8 concentration emission limit of 0.2 grains per scf for existing and 0.1
9 grains per scf for new non-fuel burning facilities. This does not mean
10 that all non-fuel burning emission points can emit up to this maximum
11 level. If OAR 340-21-030 was applied as argued by the petitioner, industry
12 could increase airflow and lawfully emit through dilution unlimited
13 quantities (ie mass emissions) of air contaminants.

14 In addition, OAR 340-20-001 (Highest and Best Practicable Treatment
15 and Control) requires all sources to minimize emissions regardless of other
16 specific emission limits and authorizes the Department to regulate the
17 airshed such that air contaminants are maintained at the lowest possible
18 levels and that overall air quality is maintained at the highest possible
19 levels.

20 Proposed limits for the petitioner's air conveying systems were
21 determined from source test and/or process information provided by Medford
22 Corporation sufficient for full normal operation. Actual emissions, after
23 compliance with OAR 340-30-025 and OAR 340-21-030, total about 30 tons
24 annually from petitioner's 15 air conveying systems with individual air
25 conveying systems ranging from 1 to 6 tons per year. This is typical of
26 similar sources in the air quality maintenance area (AQMA). If Medford

1 Corporation's interpretation is used, the emission limit for air conveying
2 systems would be several hundred tons per year and represent significant
3 "paper emission offsets" for growth. The plant site emission limits are
4 not intended as a growth mechanism. Growth is accommodated in the Medford
5 airshed under the emission offset rule.

6 The December 16, 1977 testimony of Dr. David Junge, OSU professor, was
7 cited to support the petitioner's request that emission limits from air
8 conveying systems be based on OAR 340-21-030 which sets concentration
9 limits but not air flow. Junge's testimony pointed out the need for
10 "measurable short term limits on the rate of emissions" so that industry
11 could readily determine compliance through source tests. The Department
12 has been in favor of adopting a short-term mass emission limit in addition
13 to an annual plant site emission limit. To do so the Department has sought
14 to obtain better source test data to precisely set short-term and annual
15 limits. Industry has to date balked at conducting the necessary tests.

16 The 10 ton per year emission limit of OAR 340-30-025 was set only to
17 relieve small air conveying systems from the burden of installing expensive
18 controls with little air quality benefit. It was not meant to allow each
19 small air conveying system to emit up to 10 tons per year.

20 Issue 3 (Page 2 line 2-16; Page 5 line 1-22)

21 The petitioner argues "there are no criteria in the rules for determining
22 veneer dryer emissions. The Commission has never characterized such
23 emissions as particulates. In order for OAR 340-30-060 to be applicable
24 to veneer dryer emissions the Commission must determine that such emissions
25 are particulate in nature and the Commission must after public hearing
26 adopt an emission limit applicable to such emissions."

1 Department response: Investigations of veneer dryer emissions by
2 Washington State University⁽¹⁾ under contract with the American Plywood
3 Association concluded in part that particulate is a large significant
4 component of veneer dryer emissions. The Plywood Research Foundation
5 contracted with Washington State University^(2, 3) to investigate the
6 scientific nature of veneer dryer emissions in the early 1970's. Among
7 the major conclusions were the presence of wood particles at stack
8 temperature and significant condensed hydrocarbons (liquid particulate)
9 below stack temperatures which forms the characteristic blue haze.

10 The United States Environmental Protection Agency (EPA) is currently
11 investigating New Source Performance Standards (NSPS) for veneer dryers⁽⁴⁾.
12 Preliminary findings of the consultant to EPA is that the wood fiber
13 and condensible aerosol organic material emission (ie particulate) should
14 be regulated by a NSPS. EPA is suggesting use of Oregon DEQ Method 7 to
15 measure particulate emissions from veneer dryers. The level of control
16 proposed is based on existing technology and practice equivalent to current
17 Department requirements.

18
19
20
21 (1) American Plywood Association "Veneer Dryer Emission Study" Report
 No. 1, November 17, 1970, prepared by Frankfurter & Associates, Inc.
 Project 294-1

22 (2) "Investigations of Emissions from Plywood Veneer Dryers" Washington
23 State University, March, 1971 report prepared for the Plywood Research
 Foundation Contract No. CPA-70-138

24 (3) "An Investigation of Operating Parameters and Emission Rates of Plywood
25 Veneer Dryers," Washington State University final report prepared for
 the Plywood Research Foundation, July, 1972

26 (4) Acurex Project 7510 "NSPS and NESHAPS for Plywood-Veneer
 Manufacturing"; Contract for Environmental Protection Agency, February,
 1980.

1 Several references are made in the Medford rules that acknowledge the
2 particulate component of veneer dryer emissions. Particulate matter, as
3 defined in the Medford rules, "means any matter, except uncombined water,
4 which exists as a liquid or solid at standard conditions OAR 340-30-
5 010(4). Opacity is the physical manifestation of the scattering of light
6 by particulate, especially in the submicron size range. The blue haze from
7 veneer dryers must meet opacity limits of OAR 340-30-020 which further
8 requires that "Air pollution equipment installed to meet the opacity
9 requirements of OAR 340-30-020(1) shall be designed such that
10 the particulate collection efficiency can be practicably upgraded."
11 (emphasis added). Further reference to particulate emissions is found
12 in OAR 340-30-055 which requires "the person responsible for the following
13 sources of particulate emissions. . ." (emphasis added) is required to
14 perform periodic source tests. Veneer dryers are listed as a source
15 requiring periodic particulate source tests. Refer to Attachment 2 for
16 a brief review of the interesting development of the Medford veneer dryer
17 rule.

18 Based on rules adopted by the Commission which regulate emissions from
19 veneer dryers, and historical and current investigations into the nature
20 of veneer dryer emissions sponsored by industry and regulatory agencies,
21 the evidence clearly and strongly supports that particulate emissions is
22 a significant component of veneer dryer exhaust.

23 The Department has proposed emission limits for veneer dryers based on
24 the State Implementation Plan control strategy which was developed from
25 recent plywood production records and particulate emission factors derived
26 from source tests on veneer dryers. The Department is tracking veneer

1 dryer emissions on the basis of emission factors with due consideration
2 that emissions are affected by wood species and process variables.

3 Issue 4 (Page 3 line 3-26; Page 4 line 1-26) The petitioner argues the
4 Department's proposed plant site emission limit that is based on actual
5 emissions creates the potential for frequent permit violations, and
6 discriminates and penalizes responsible companies which have relatively
7 clean operations by severely curtailing opportunity for clean operating
8 companies to develop cost-effective emission offsets.

9 Department response: It has not been the intent of the Department
10 to set emission limits too tight and put the source in jeopardy of frequent
11 violation of its operating permit. Adequate allowance has been provided
12 for fluctuations in annual emissions as a result of product schedule
13 changes and product demand, and control system performance.

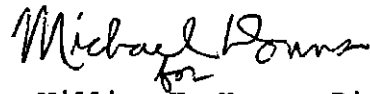
14 No industry in the Medford airshed has had a plant site limit
15 computed more stringently than any other in the Department's knowledge.
16 Certainly at the time of adoption of the special Medford rules there were
17 sources that may have had emissions from similar equipment that was greater
18 than another but when all affected sources are in compliance with the
19 control strategy rules no unearned competitive advantage is gained from
20 the respective plant site emission limit.

21 Conclusion

22 The Department has carried out the Commissions intent by computing
23 annual emission limits for air conveying systems and veneer dryers on the
24 basis of actual emissions consistent with the State Implementation Plan
25 control strategy and consistent with the Department rules. The petitioners
26

1 allegation that the Department has discriminated against the petitioner
2 in setting emission limits for air conveying systems lacks supporting
3 evidence. The Department has used the same approach in computing total
4 plant site emission limits for all affected companies in the Medford
5 airshed and has not knowingly created a favorable competitive advantage
6 for future emission offsets for any company. All other major sources have
7 accepted total plant site emission limits computed in general on actual
8 emissions. Veneer dryer emissions have repeatedly been referred to in
9 the literature and in the Commission rules as particulate. The Department
10 will refine veneer dryer emission limits as better information is obtained
11 through periodic source tests provided for in the rules. If Medford
12 Corporation's interpretation of the Department's rules is upheld then the
13 current Medford total suspended particulate control strategy cannot be
14 effectively enforced. In fact, the emissions from industry could legally
15 increase substantially instead of decline if industry uses what amounts
16 to substantial "paper emission offsets." Air quality could irreparably
17 be harmed.

18 Respectively Submitted,

19 

20 William H. Young, Director

21 Department of Environmental Quality

22 Attachment 1 OAR 340-30, Sections -005 through -070
23 OAR 340-20-001
24 OAR 340-21-030
25 OAR 340-20-196, -197
26 Attachment 2 The Development of the Medford Veneer
Dryer Rule OAR 340-30-020

Highest and Best Practicable Treatment and Control Required

340-20-001 Notwithstanding the general and specific emission standards and regulations contained in this division, the highest and best practicable treatment and control of air contaminant emissions shall in every case be provided so as to maintain overall air quality at the highest possible levels, and to maintain contaminant concentrations, visibility reduction, odors, soiling and other deleterious factors at the lowest possible levels. In the case of new sources of air contamination, particularly those located in areas with existing high air quality, the degree of treatment and control provided shall be such that degradation of existing air quality is minimized to the greatest extent possible.

340-20-196 Emission Limitations on a Plant Site Basis

The purpose of OAR 340-20-196 to 340-20-197 is to insure that emissions from sources located anywhere in the state are limited to levels consistent with State Implementation Plan data bases, control strategies, overall airshed carrying capacity, and programs to prevent significant deterioration.

DEFINITIONS

As used in OAR 340-20-196 to 340-20-197, unless otherwise required by context:

1) "Facility" means an identifiable piece of process equipment. A source may be comprised of one or more pollutant-emitting facilities.

2) "Source" means any structure, building, facility, equipment, installation or operation, or combination thereof, which is located on one or more contiguous or adjacent properties and which is owned or operated by the same person, or by persons under common control.

340-20-197 For the purposes set forth in OAR 340-20-196, the Department may limit by permit condition the amount of air contaminants emitted from a source. This emission limitation shall take the form of limiting emission on a mass per unit time basis including an annual kilograms per year limit and may also include a monthly and daily limit.

Particulate Emission Limitations for Sources Other Than Fuel Burning and Refuse Burning Equipment

340-21-030 No person shall cause, suffer, allow or permit the emission of particulate matter, from any air contaminant source other than fuel burning equipment or refuse burning equipment, in excess of:

- (1) 0.2 grains per standard cubic foot for existing sources, or
- (2) 0.1 grains per standard cubic foot for new sources.

DIVISION 30
SPECIFIC AIR POLLUTION CONTROL RULES FOR THE
MEDFORD-ASHLAND AIR QUALITY MAINTENANCE AREA

PURPOSES AND APPLICATION

340-30-005 The rules in this Division shall apply in the Medford-Ashland Air Quality Maintenance Area (AQMA). The purpose of these rules is to deal specifically with the unique air quality control needs of the Medford-Ashland AQMA. These rules shall apply in addition to all other rules of the Environmental Quality Commission. The adoption of these rules shall not, in any way, affect the applicability in the Medford-Ashland AQMA of all other rules of the Environmental Quality Commission and the latter shall remain in full force and effect, except as expressly provided otherwise. In cases of apparent conflict, the most stringent rule shall apply.

DEFINITIONS

340-30-010 As used in these rules, and unless otherwise required by context:

(1) "Medford-Ashland Air Quality Maintenance Area" is defined as beginning at a point approximately one mile NE of the town of Eagle Point, Jackson County, Oregon, at the NE corner of Section 36, T35S, R1W; thence South along the Willamette Meridian to the SE corner of Section 25, T37S, R1W; thence SE along a line to the SE corner of Section 9, T39S, R2E; thence SSE to the SE corner of Section 22, T39S, R2E; thence South to the SE corner of Section 27, T39S, R2E; thence SW to the SE corner of Section 33, T39S, R2E; thence West to the SW corner of Section 31, T39S, R2E; thence NW to the NW corner of Section 36, T39S, R1E; thence West to the SW corner of Section 26, T29S, R1E; thence NW along a line to the SE corner of Section 7, T39S, R1E; thence West to the SW corner of Section 12, T39S, R1W; thence NW along a line to the SW corner of Section 20, T39S, R1W; thence West to the SW corner of Section 24, T38S, R2W; thence NW along a line to the SW corner of Section 4, T38S, R2W; thence West to the SW corner of Section 5, T38S, R2W; thence NW along a line to the SW corner of Section 31, T37S, R2W, thence North along a line to the Rogue River, thence North and East along the Rogue River to the North boundary of Section 32, T35S, R1W; thence East along a line to the point of beginning.

- (2) "Charcoal Producing" Plant means an industrial operation which uses the destructive distillation of wood to obtain the fixed carbon in the wood.
- (3) "Air Conveying System" means an air moving device, such as a fan or blower, associated ductwork, and a cyclone or other collection device, the purpose of which is to move material from one point to another by entrainment in a moving airsteam.
- (4) "Particulate Matter" means any matter, except uncombined water, which exists as a liquid or solid at standard conditions.
- (5) "Standard Conditions" means a temperature of 60° Fahrenheit (15.6° Celsius) and a pressure of 14.7 pounds per square inch absolute (1.03 Kilograms per square centimeter).
- (6) "Wood Waste Boiler" means equipment which uses indirect heat transfer from the products of combustion of wood waste to provide heat or power.
- (7) "Veneer Dryer" means equipment in which veneer is dried.
- (8) "Wigwam Waste Burner" means a burner which consists of a single combustion chamber, has the general features of a truncated cone, and is used for the incineration of wastes.
- (9) "Collection Efficiency" means the overall performance of the air cleaning device in terms of ratio of weight of material collected to total weight of input to the collector.
- (10) "Domestic Waste" means combustible household waste, other than wet garbage, such as paper, cardboard, leaves, yard clippings, wood or similar materials generated in a dwelling housing four (4) families or less, or on the real property on which the dwelling is situated.
- (11) "Open Burning" means burning conducted in such a manner that combustion air and combustion products may not be effectively controlled including, but not limited to, burning conducted in open outdoor fires, burn barrels, and backyard incinerators.
- (12) "Dry Standard Cubic Foot" means the amount of gas that would occupy a volume of one cubic foot, if the gas were free of uncombined water at standard conditions.

WOOD WASTE BOILERS

340-30-015 No person shall cause or permit the emission of particulate matter from any wood waste boiler with a heat input greater than 35 million BTU/hr in excess of 0.050 grain per dry standard cubic foot (1.14 grams per cubic meter) of exhaust gas, corrected to 12 percent carbon dioxide, as an annual average.

VENEER DRYERS (Repealed 1-18-80 and new rule adopted)

~~340-30-020 No person shall cause or permit any veneer dryer to violate the rules of Section 340-25-315(1) except that, for the purpose of this Section, subsection 340-25-315(1)(c) shall become applicable on June 1, 1978. In addition, air pollution control equipment installed to meet the opacity requirements of Section 340-25-315(1) shall be designed such that the particulate collection efficiency can be practicably upgraded.~~

AIR CONVEYING SYSTEMS

340-30-025 All air conveying systems emitting greater than 10 tons per year of particulate matter to the atmosphere at the time of adoption of these rules shall, with the prior written approval of the Department, be equipped with a control system with collection efficiency of at least 98.5 percent.

WOOD PARTICLE DRYERS AT HARDBOARD AND PARTICLEBOARD PLANTS

340-30-030 No person shall cause or permit the total emission of particulate matter from all wood particle dryers at a plant site to exceed 0.35 pounds per 1,000 square feet of board produced by the plant on a 3/4" basis as an annual average.

WIGWAM WASTE BURNERS

340-30-035 No person shall cause or permit the operation of any wigwam burner, except for short-term conditions when disposal of plant waste by other methods is extremely impracticable and operation is authorized in writing by the Director of the Department.

CHARCOAL PRODUCING PLANTS

340-30-040(1) No person shall cause or permit the emission of particulate matter from charcoal producing plant sources including, but not limited to, charcoal furnaces, heat recovery boilers and wood dryers using any portion of the charcoal furnace off-gases as a heat source, in excess of a total from all sources within the plant site of 10.0 pounds per ton of charcoal produced (5.0 grams per Kilogram of charcoal produced) as an annual average.

(2) Emissions from char storage, briquet making, boilers not using charcoal furnace off-gases, and fugitive sources are excluded in determining compliance with subsection (1).

(3) Charcoal producing plants as described in (1) above shall be exempt from the limitations of 340-21-030(1) and (2) and 340-21-040 which concern particulate emission concentrations and process weight.

COMPLIANCE SCHEDULES

340-30-045 The person responsible for an existing emission source subject to 340-30-015 through 340-30-040 shall proceed promptly with a program to comply as soon as practicable with these rules. A proposed program and implementation plan shall be submitted no later than June 1, 1978, for each emission source to the Department for review and written approval. The Department shall within 45 days of receipt of a complete proposed program and implementation plan, notify the person concerned as to whether or not it is acceptable.

The Department shall establish a schedule of compliance, including increments of progress, for each affected emission source. Each schedule shall include the dates, as soon as practicable, by which compliance shall be achieved, but in no case shall full compliance be later than the following dates.

- (a) Wood Waste Boilers shall comply with Section 340-30-015 as soon as practicable, in accordance with approved compliance schedules, but by no later than January 1, 1980.
- (b) Veneer Dryers shall comply with Section 340-30-020 as soon as practicable, in accordance with approved compliance schedules, but by no later than January 1, 1980.

- (c) Air Conveying System shall comply with Section 340-30-025 as soon as practicable, in accordance with approved compliance schedules, by not later than January 1, 1981.
- (d) Wood Particle Dryers at Hardboard and Particleboard Plants shall comply with Section 340-30-030 as soon as practicable, in accordance with approved compliance schedules, but by no later than January 1, 1981.
- (e) Wigwam Waste Burners shall comply with Section 340-30-035 as soon as practicable, in accordance with approved compliance schedules, but by no later than January 1, 1980.
- (f) Charcoal Producing Plants shall comply with Section 340-30-040 as soon as practicable, in accordance with approved compliance schedules, but by no later than January 1, 1982.

Compliance schedule for Charcoal Producing Plants and Wood Particle Dryers at Hardboard and Particleboard Plants shall contain reasonably expeditious interim dates and pilot testing programs for control to meet the emission limits in 340-30-040(1) and 340-30-030, respectively. If pilot testing and cost analysis indicates that meeting the emission limits of these rules may be impractical, a public hearing shall be held no later than July 1, 1980, for Charcoal Producing Plants and January 1, 1980, for Wood Particle Dryers at Hardboard and Particleboard Plants to consider amendments to this limit.

CONTINUOUS MONITORING

340-30-050 The Department may require the installation and operation of instruments and recorders for measuring emissions and/or the parameters which affect the emission of air contaminants from sources covered by these rules to ensure that the sources and the air pollution control equipment are operated at all times at their full efficiency and effectiveness so that the emission of air contaminants is kept at the lowest practicable level. The instruments and recorders shall be periodically calibrated. The method and frequency of calibration shall be approved in writing by the Department. The recorded information shall be kept for a period of at least one year and shall be made available to the Department upon request.

SOURCE TESTING

340-30-055 The person responsible for the following sources of particulate emissions shall make or have made tests to determine the type, quantity, quality and duration of emissions, and/or process parameters affecting emissions, in conformance with test methods on file with the Department at the following frequencies:

<u>Source</u>	<u>Test Frequency</u>
Wood Waste Boilers	Once every year*
Veneer Dryers	Once very year until January 1, 1983 and once every 3 years thereafter
Wood Particle Dryers at Hardboard and Particleboard Plants	Once every year
Charcoal Producing Plants	Once every year*

* If this test exceeds the annual emission limitation then three (3) additional tests shall be required at three (3) month intervals with all four (4) tests being averaged to determine compliance with the annual standard. No single test shall be greater than twice the annual average emission limitation for that source.

Source testing shall begin at these frequencies within 90 days of the date by which compliance is to be achieved for each individual emission source.

These source testing requirements shall remain in effect unless waived in writing by the Department because of adequate demonstration that the source is consistently operating at lowest practicable levels.

Source tests on wood waste boilers shall not be performed during periods of soot blowing, grate cleaning or other operating conditions which may result in temporary excursions from normal.

Source tests shall be performed within 90 days of the startup of air pollution control systems.

TOTAL PLANT SITE EMISSIONS

340-30-060 The Department shall have the authority to limit the total amount of particulate matter emitted from a plant site, consistent with requirements in these rules. Such limitation will be applied, where necessary, to ensure that ambient air quality standards are not caused to be exceeded by the plant site emissions and that plant site emissions are kept to lowest practicable levels.

NEW SOURCES

340-30-065 New sources shall be required to comply with Sections 340-30-015 through 340-30-040 immediately upon initiation of operation.

OPEN BURNING

340-30-070 No open burning of domestic waste shall be initiated on any day or at any time when the Department advises fire permit issuing agencies that open burning is not allowed because of adverse meteorological or air quality conditions.

DEFINITIONS

340-30-010 (21) "Department" means Department of Environmental Quality.

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

(23) "Person" includes individuals, corporations, associations, firms, partnerships, joint stock companies, public and municipal corporations, political subdivisions, the state and any agencies thereof, and the Federal Government and any agencies thereof.

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

(25) "Opacity" means the degree to which an emission reduces transmission of light and obscures the view of an object in the background.

(26) "Fugitive emissions" means dust, fumes, gases, mist, odorous matter, vapors, or any combination thereof not easily given to measurement, collection and treatment by conventional pollution control methods.

340-30-020 Veneer Dryer Emission Limitations

(1) No person shall operate any veneer dryer such that visible air contaminants emitted from any dryer stack or emission point exceed:

- (a) A design opacity of 10%,
- (b) An average operating opacity of 10%, and
- (c) A maximum opacity of 20%.

Where the presence of uncombined water is the only reason for the failure to meet the above requirements, said requirements shall not apply.

(2) No person shall operate a veneer dryer unless:

(a) The owner or operator has submitted a program and time schedule for installing an emission control system which has been approved in writing by the Department as being capable of complying with subsection 340-30-020(1)(a), (b), and (c),

(b) The veneer dryer is equipped with an emission control system which has been approved in writing by the Department and is capable of complying with subsection 340-30-020(1), (b), and (c), or

(c) The owner or operator has demonstrated and the Department has agreed in writing that the dryer is capable of being operated and is operated in continuous compliance with subsection 340-30-020(1)(b), and (c).

(3) Each veneer dryer shall be maintained and operated at all times such that air contaminant generating processes and all contaminant control equipment shall be at full efficiency and effectiveness so that the emission of air contaminants is kept at the lowest practicable levels.

(4) No person shall willfully cause or permit the installation or use of any means, such as dilution, which, without resulting in a reduction in the total amount of air contaminants emitted, conceals an emission which would otherwise violate this rule.

(5) Where effective measures are not taken to minimize fugitive emissions, the Department may require that the equipment or structures in which processing, handling and storage are done, be tightly closed, modified, or operated in such a way that air contaminants are minimized, controlled, or removed before discharge to the open air.

(6) Air pollution control equipment installed to meet the opacity requirements of OAR 340-30-020(1) shall be designed such that the particulate collection efficiency can be practicably upgraded.

(7) Compliance with the emission limits in section (1) above shall be determined in accordance with the Department's Method 9 on file as of November 16, 1979.

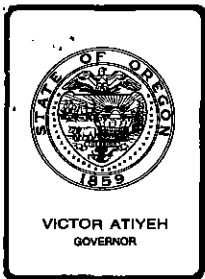
ATTACHMENT 2

The Development of the Medford Veneer Dryer Rule

OAR 340-30-020

In the original Medford strategy decisions, the AQMA advisory committee recommended that control equipment must have add on capabilities. The Department proposed at the February 24, 1978 EQC meeting that control equipment be capable of ultimately achieving 85 percent particulate collection efficiency. Industry strenuously objected to a percent control since the particulate collection efficiency of the add on equipment will vary somewhat with the inlet particulate concentration. An industry representative proposed compromising language. The proposed language was adopted at the March 31, 1978 EQC meeting as part of the veneer dryer rule OAR 340-30-020: "air pollution equipment installed to meet the opacity requirements of Section 340-25-315(1) shall be designed such that the particulate collection efficiency can be practically upgraded." The upgradeable requirement was needed in light of the distinct possibility that rules for wood particle dryers and charcoal producing plants may not be met and other replacement strategies may be needed and that additional growth in the airshed may need emission offsets. The Department felt that it was highly desirable to keep options open for further control and not allow installation of low collection efficiency systems which can't be economically or technically upgraded to a level which has been demonstrated as achievable. Industrial representatives also suggested that industry would support the Commission development of better veneer dryer emission data to improve and replace emission factors as the method of estimating emissions. The Commission acted by adopting a particulate source test

rule OAR 340-30-055 "the person responsible for the following sources of particulate emissions shall make or have made tests to determine the type, quantity, quality and duration of emissions, and/or process parameters affecting emissions..." Veneer dryers were to be tested "Once every year (beginning 1/1/80) until January 1, 1983 and once every three (3) years thereafter. Industry did not object to the source test requirement but has made no effort to date to comply resulting in the Department recently issuing notice of violations to the affected companies. The Department's emission factors and emission limit computations are subject to refinement based on new information gleaned from these sources tests.



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

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

MEMORANDUM

TO: Environmental Quality Commission

FROM: Director

SUBJECT: Agenda Item No. N, May 16, 1980, EQC Meeting

Proposed Adoption of Modifications to the Sulfite Pulp Mill Regulation, OAR 340-25-350 through 340-25-390.

Background

Subsequent to authorization by the EQC and after required public notice, the Department held a public hearing on April 21, 1980, to consider modifications to the Sulfite Pulp Mill Regulations OAR 340-25-350 through 390. Only one person attended and he supported the changes that were proposed. No written testimony was received.

The proposed modifications (see Attachment 1) will delete the ambient monitoring requirements for mills that have a production of less than 110 tons per day. Items which have been completed and are no longer applicable will also be deleted. The Department is proposing to add emission testing methods to the regulations as is required by EPA. It has been concluded by Department staff that the proposed modifications should be made to the regulation.

Summation

1. Subsequent to authorization and required public notice, a public hearing was held on April 21, 1980, regarding proposed changes to the sulfite pulp mill regulation, OAR 340-25-350 through 390.
2. Only testimony in favor of the proposed modifications was received at the public hearing.
3. The proposed modifications will delete the ambient sulfur dioxide monitoring requirements for mills with less than 110 tons per day of production, specify emission testing methods and delete all items which are no longer applicable.



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EQC Agenda Item No. N
May 16, 1980
Page 2

Director's Recommendation

Based upon the Summation, it is recommended that OAR 340-25-350 through 390 Air Quality Sulfite Pulp Mill Regulations be amended as set forth in the attached proposed regulation.

Bill

William H. Young

- Attachments: (1) Proposed Modified Regulation (OAR 340-25-350 through 390)
(2) Hearings Officer's Report
(3) Public Notice for April 21, 1980 Hearing
(4) Hearing Authorization Request for March 21, 1980 EQC Meeting

F. A. Skirvin:wd
229-6414
May 1, 1980

OREGON ADMINISTRATIVE RULES
CHAPTER 340 - DEPARTMENT OF ENVIRONMENTAL QUALITY

Regulations for Sulfite Pulp Mills

Definitions

340-25-350 (1) "Acid Plant" - The facility in which the cooking liquor is either manufactured or fortified when not associated with a recovery furnace.

(2) "Average Daily Emission" - Total weight of sulfur oxides emitted in each month divided by the number of days of production that month.

(3) "Average Daily Production" - Air dry tons of unbleached pulp produced in a month, divided by the number of days of production in that month.

(4) "Blow System" - Includes the storage chest, tank or pit to which the digester pulp is discharged following the cook.

(5) "Continual Monitoring" - Sampling and analysis in a continuous or times sequence, using techniques which will adequately reflect actual emission levels, ambient air levels, or concentrations on a continuous basis.

(6) "Department" - The Department of Environmental Quality.

(7) "Other Sources" - Means sources of sulfur oxide emissions including but not limited to washers, washer filtrate tanks, digester dilution tanks, knotters, multiple effect evaporators, storage tanks, any operation connected with the handling of condensate liquids or storage of condensate liquids, and any vent or stack which may be a significant contributor of sulfur oxide gases other than those mentioned in emission standard limitations (section 340-25-360).

(8) "Particulate Matter" - A small discrete mass of solid matter, including the solids dissolved or suspended in liquid droplets but not including uncombined water.

(9) "Recovery System" - The process by which all or part of the cooking chemicals may be recovered, and cooking liquor regenerated from spent cooking liquor, including evaporation, combustion, dissolved, fortification, and storage facilities associated with the recovery cycle

(10) "Sulfite Mill" or "Mill" - A pulp mill producing cellulose pulp using a cooking liquor consisting of sulfurous acid and/or a bisulfite salt.

(11) "Sulfur Oxides" - Sulfur dioxide, sulfur trioxide and other sulfur oxides.

(12) "Total Reduced Sulfur (TRS)" - Hydrogen sulfide, mercaptans, dimethyl sulfide, dimethyl disulfide and other organic sulfides present.

Statutory Authority:

Hist: Filed 11-23-71 as DEQ 32, Eff. 12-15-71

Note: [] Indicates deleted language
 ___ Indicates new language

Statement of Purpose

340-25-355 It is the policy of the Commission:

(1) To require, in accordance with a specific program and timetable for each operating mill, the highest and best practicable treatment and control of emissions from sulfite mills through the utilization of technically feasible equipment, devices and procedures;

(2) To require the evaluation of improved and effective measuring techniques for sulfur oxides, total reduced sulfur, particulates and other emissions from sulfite mills;

(3) To require effective measuring and reporting of emissions and reporting of other data pertinent to emissions. The Department will use these data in conjunction with ambient air data and observation of conditions in the surrounding area to develop and revise emission standards and air quality standards, and to determine compliance therewith;

(4) To encourage and assist the sulfite pulping industry to conduct a research and technological development program designed to progressively reduce sulfite mill emissions, in accordance with a definite program with specific objectives;

(5) To establish standards deemed to be technically feasible, reasonably attainable, and necessary for the attaining of satisfactory air quality with the intent of revising the standards as new information and better technology are developed.

Statutory Authority:

Hist: Filed 11-23-71 as DEQ 32, Eff. 12-15-71

Minimum Emission Standards

340-25-360 (1) Notwithstanding the specific emission limits set forth in this section, the Department of Environmental Quality may, after notice and hearing, establish more restrictive emission limits and compliance schedules for mills located in recognized problem areas, for new mills, for mills expanding existing facilities, for mills installing substantial modifications of existing facilities which result in increased emissions; or for mills in areas where it is shown ambient air standards are exceeded.

(2) The total average daily emissions from a sulfite pulp mill shall not exceed 20 pounds of sulfur dioxide per ton of air dried unbleached pulp produced and in addition:

(a) the blow system emissions shall not exceed 0.2 pounds of sulfur dioxide per minute per ton of unbleached pulp (charged to digester) on a 15 minute average.

(b) Emissions from the recovery system, acid plant and other sources, shall not exceed 800 ppm of sulfur dioxide as an hourly average.

Note: [] Indicates deleted language
 ___ Indicates new language

(3) Mills of less than 110 ton of air dried unbleached pulp per day may be exempted from the limitations of subsection (2) above provided[:]

[(a) That the schedule of compliance required by section 340-25-365 demonstrates that a minimum of 50% collection efficiency will be maintained and that compliance will be achieved within 1 year.

(b) That the schedule of compliance required by section 340-25-365 demonstrates that a minimum of 80% collection efficiency for SO₂ will be maintained and compliance will be achieved no later than December 31, 1975.

(c) That an approved program continually monitors ambient air to demonstrate compliance with State and Federal ambient air standards, and that a five (5) minute concentration of 0.8 ppm of sulfur dioxide is not exceeded:] that a minimum of 80% collection efficiency for sulphur dioxide (SO₂) is maintained.

(4) The total emission of particulate matter from the recovery furnace stacks shall not exceed four (4) ;pounds per air dried ton of unbleached pulp produced.

Statutory Authority:

Hist: Filed 11-23-71 as DEQ 32, Eff. 12-15-71

[Compliance Schedule

340-25-365 Each mill shall proceed promptly with a program to bring all sources into compliance with this regulation, but in no instance shall the compliance be achieved later than July 1, 1974 (except as provided in 340-25-360(3)(b)). A proposed schedule of compliance with this regulation shall be submitted within one hundred and twenty (120) days following the adoption of this regulation, or as otherwise determined by the Environmental Quality Commission. After receipt of the proposed schedule the Department shall adopt an approved compliance schedule. The proposed schedule shall include:

(1) A description of the program to determine the sulfur dioxide emissions from all sources.

(2) The dates when specific steps of the program will be completed, including but not limited to:

(a) Engineering study

(b) Purchase of equipment

(c) Erection of equipment

(d) Equipment placed in normal operation (full compliance with regulation)

(3) A description of each step in the program, including but not limited to:

(a) Engineering studies including alternative control procedures to be considered and a comprehensive time schedule for their evaluation.

Note: [] Indicates deleted language
 — Indicates new language

(b) Performance characteristics and estimated efficiencies of control devices.

(c) Justification for the time schedule requested.

(d) Reduction in emissions resulting from each completed step.

The approval of a compliance schedule by the Department shall be based upon a showing that the mill is proceeding with all due speed to meet all requirements of this regulation.]

Statutory Authority:

Hist: Files 11-23-71 as DEQ 32, Eff. 12-15-71

Monitoring and Reporting

340-25-370 (1) Each mill shall maintain a Department approved [submit within sixty (60) days of the date of adoption, a] detailed sampling and testing program . [and time schedule for approval by the Department.]

(2) The monitoring equipment shall be capable of determining compliance with the emission limits established by these regulations, and shall be capable of continual sampling and recording of concentrations of sulfur dioxide contaminants from the recovery system. Unless otherwise approved in writing, compliance shall be determined by Source Test Method Six (6) which is contained in the Department files as part of the Source Sampling Manual.

(3) Each mill shall sample the recovery system, blow system, and acid plant for sulfur dioxide emissions on a regularly scheduled basis.

(4) Each mill shall sample the recovery furnace stacks for particulate on a regularly scheduled basis. Unless otherwise approved in writing, compliance shall be determined by Source Test Method Five (5) (front half only) which is contained in the Department files as part of the Source Sampling Manual.

(5) Unless otherwise authorized, data shall be reported by each mill at the end of each calendar month as follows:

(a) Average daily emissions of sulfur dioxides expressed as pounds of sulfur dioxide per ton of pulp produced from the blow system, recovery system, and acid plant.

(b) The daily average and peak concentrations of sulfur dioxides expressed in pounds per hour and expressed in ppm of sulfur dioxide and the number of hours each day that the concentration exceeds 500 ppm.

(c) The average daily production of unbleached pulp and the maximum daily production

[(d)Mills operation under the provisions of section 340-25-360(3) shall report the results of their ambient monitoring monthly.]

Note: [] Indicates deleted language
 Indicates new language

(6) Each mill shall furnish upon request of the Department, such other pertinent data as the Department may require to evaluate the mill's emission control program. Unless otherwise prescribed, each mill shall report immediately to the Department abnormal mill operations which adversely affect the emission of air contaminants.

(7) All measurements shall be made in accordance with techniques approved by the Department. [Interim procedures may be approved for use prior to completion of the studies required by section 340-25-375.]

Statutory Authority:

Hist: Filed 11-23-71 as DEQ 32, Eff. 12-15-71

[Special Studies

340-25-375 Special studies of the nature described below and having prior approval of the Department shall be conducted at each mill or through cooperation among mills. The proposed program and timetable shall be submitted to the Department within 90 days of adoption of this regulations.

(1) Develop and recommend satisfactory measuring technique for particulates from recovery furnace stacks.

(2) Evaluate and report the emission and control methods of sulfur dioxide from other sources within the mill.

(3) Evaluate and report the emission of sulfur trioxide from recovery furnace and acid plants.

(4) Evaluate as required by local conditions emissions of TRS.

(5) Develop and recommend satisfactory continual monitoring techniques for SO₂ emissions from recovery systems and blow pit vents.

(6) Bleach plant contaminant emissions shall be measured and reported to the Department within one year of the effective date of this regulation. The report shall include a description of the processes and chemicals used, and shall report the emissions in terms of total emission flow rate, concentration, and mass emission rates, including but not necessarily limited to chlorine- and sulfur-containing gases.]

Statutory Authority:

Hist: Filed 11-23-71 as DEQ 32, Eff. 12-15-71

Exceptions

340-25-380 These regulations do not apply to open burning or power boiler operations conducted at sulfite pulp mills unless such boilers are an integral part of the sulfite process or recovery system.

Statutory Authority:

Hist: Filed 11-23-71 as DEQ 32, Eff 12-15-71

Note: [] Indicates deleted language
 Indicates new language

[Public Hearing

340-25-385 A public hearing may be held by the Department not later than December 31, 1973, in order to review current technology and adequacy of these regulations.]

Statutory Authority:

Hist: Filed 11-23-71 as DEQ 32, Eff. 12-15-71

[Notice of Construction and Submission of Plans and Specifications

340-25-390 (1) Prior to the construction, installation, or establishment of a sulfite mill, a notice of construction shall be submitted to the Department as required by OAR 340, sections 340-20-020 and 340-20-030.

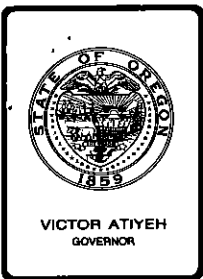
(2) Addition to, or enlargement, or placement of a sulfite mill or any major alternation therein shall be constructed as construction, installation, or establishment]

Statutory Authority:

Hist: Filed 11-23-71 as DEQ 32, Eff. 12-15-71

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Note: [] Indicates deleted language
 Indicates new language



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

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

MEMORANDUM

To: Environmental Quality Commission

From: Hearing Officer

Subject: Hearing Report on April 21, 1980 Hearing
Revision of the Air Quality Sulfite Pulp Mill Regulation

Summary of Procedure

Pursuant to public notice, the public hearing was convened in the offices of the Department of Environmental Quality, Portland, at 10:05 a.m. on April 21, 1980. The purpose was to receive testimony regarding the proposed modifications to the Air Quality Sulfite Pulp Mill Regulation.

Summary of Testimony

J. E. Walther, Crown Zellerbach, generally supported the modifications to the sulfite mill regulation. However, he expressed concern about the applicability of Method 6* for sampling sulfite mills and urged that the Department approve the sampling method which Crown Zellerbach is using as an alternative to Method 6.

*Method 6 is the standard DEQ method for sampling sulfur dioxide emissions. The Department concurs that Method 6 is not applicable to wet exhaust gases such as those associated with sulfite pulp mills. The Crown Zellerbach method will be reviewed for acceptance as an alternative method. Reviewing requests to use modified/alternate methods is a somewhat infrequent but routine process.

C. R. Clinton:pd
(503) 229-5326
May 1, 1980

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Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

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

Prepared: Jan. 24, 1980

Hearing Date: April 21, 1980

NOTICE OF PUBLIC HEARING

A CHANCE TO BE HEARD ABOUT:

Proposed Amendment of Sulfite Pulp Mill Regulation

The Department of Environmental Quality is proposing to amend the Sulfite Pulp Mill Regulation by deleting archaic language and the ambient sulfur dioxide monitoring requirements for mills which produce less than 110 tons of air-dried pulp per day and specifying emission test methods. A hearing on this matter will be held in Portland on April 21, 1980. The proposed amendments, if adopted, will be submitted to the Environmental Protection Agency as a revision of Oregon's State Clean Air Act Implementation Plan.

WHAT IS THE DEQ PROPOSING?

Interested parties should request a copy of the complete proposed rule package. Some highlights are:

- ** The proposed amendment deletes the requirement for small sulfite mills to monitor ambient sulfur dioxide levels.
- ** The regulation would also be updated, by eliminating sections which are no longer applicable and specify emission testing methods.

WHO IS AFFECTED BY THIS PROPOSAL:

The only facility which would be affected is the Crown Zellerbach mill in Lebanon. They would be required to measure stack emissions more frequently in lieu of monitoring ambient air sulfur dioxide levels.

HOW TO PROVIDE YOUR INFORMATION:

Written comments should be sent to the Department of Environmental Quality, Air Quality Division, Box 1760, Portland, Oregon 97207, and should be received by April 21, 1980.



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Oral and written comments may be offered at the following public hearing:

<u>City</u>	<u>Time</u>	<u>Date</u>	<u>Location</u>
Portland	10 a.m.	April 21, 1980	Department of Environmental Quality, Room 511 522 Southwest 5th Avenue Portland, Oregon 97204

WHERE TO OBTAIN ADDITIONAL INFORMATION:

Copies of the proposed rules may be obtained from:

Charles R. Clinton
DEQ Air Quality Division
Box 1760
Portland, Oregon 97207
Phone: 229-6955

LEGAL REFERENCES FOR THIS PROPOSAL:

This proposal amends OAR 340-25-350 through 390.
It is proposed under authority of ORS 468.020.

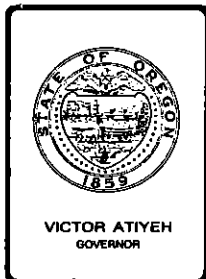
This proposal does not affect land use as defined in the Department's coordination program with the Department of Land Conservation and Development.

FURTHER PROCEEDINGS:

After public hearing the Commission may adopt rule amendments identical to the proposed amendments, adopt modified rule amendments on the same subject matter, or decline to act. The adopted regulations will be submitted to the Environmental Protection Agency as part of the State Clean Air Act Implementation Plan. The Commission's deliberation should come in May as part of the agenda of a regularly scheduled Commission meeting.

A Statement of Need and Fiscal Impact Statement are attached to this notice.

AL0772



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

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

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. E , March 21, 1980, EQC Meeting

Request for Authorization to Conduct a Public Hearing
to Consider Changes to the Sulfite Pulp Mill Regulation
OAR 340-25-350 through 390

Background

The Sulfite Mill Regulation was adopted in 1971. It requires that small mills monitor ambient levels of sulfur dioxide. In addition, it requires that special studies be conducted and compliance schedules be completed. The Department has recently evaluated the accumulated ambient monitoring data and has concluded that continuation of the monitoring requirement is no longer necessary. Also, some provisions of the regulation have been completed and should be deleted. In addition, the emission testing methods need to be specified in the regulation. Therefore, the Department is seeking authorization to hold a public hearing to delete the ambient monitoring requirements for small mills and all items which are no longer applicable and to specify emission testing methods in the regulations.

Discussion

The Sulfite Pulp Mill Regulation has a special section which applies to mills having a production of less than 110 air-dried tons of pulp per day. This section exempts these mills from the emission limitations of the regulations if the mill maintains an eighty percent (80%) collection efficiency for sulfur dioxide and it continually monitors the ambient air to demonstrate compliance with state and federal ambient air standards. This section of the regulation was intended to spare the small mills the economic hardship of installing sophisticated control systems. The only facility subject to this section of the regulation is and has been the Crown Zellerbach mill in Lebanon.

Determination of compliance with the eighty percent (80%) control efficiency limit is done in accordance with a Department approved program as required by the regulation. The Crown Zellerbach permit requires that



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the sulfur dioxide emission sources be source tested twice per year. These tests have indicated that SO₂ emissions have been reduced since the regulation was initially adopted.

Crown Zellerbach had used the mill manager's residence as an ambient air monitoring site. However, they sold the residence and proposed that they locate the monitor at a new site. The Department in its review of this site determined that Crown Zellerbach was not using a monitor that employs one of the current EPA reference methods.

The monitoring that has been done by Crown Zellerbach indicates that the levels of SO₂ are low in the Lebanon area. The maximum levels of sulfur dioxide have been less than 0.5 part per million (ppm) which is the Department's three hour ambient standard since about 1974 when Crown Zellerbach achieved eighty percent control efficiency. The daily average has been less than 0.1 ppm of sulfur dioxide which is the Department's daily ambient standard. In addition, the Department has not received any odor complaints regarding Crown Zellerbach emissions.

The Department determined that if Crown Zellerbach were to continue ambient monitoring, the monitor would have to be replaced with one which employed a reference method. It is estimated that this would cost approximately \$10,000. The annual cost of operating this monitor would be approximately \$15,000.

Ambient air monitoring gives the source very little indication of the emission levels of the plant. The levels obtained by the monitor are affected by the weather and other sources. Source testing, on the otherhand, gives a direct indication of emissions and can be used to maximize control of emissions. Therefore, the Department now feels that source testing the digesters more frequently in lieu of ambient monitoring with a non-reference method will provide better information for control program purposes.

EPA is currently requiring that the emission testing/monitoring methods be specified in regulations. Also, several items in the Sulfite Pulp Mill Regulation have been completed. The proposed modifications address these items by specifying the test methods and deleting the items which have been completed and are no longer applicable.

ORS 468.020 authorizes the Commission to adopt rules as it considers necessary and proper in performing the functions vested in it by law.

Alternatives and Evaluation

There are two alternatives that exist to solve the problem of monitoring the ambient air in the vicinity of Crown Zellerbach Lebanon mill. The first is to not change the Sulfite Pulp Mill Regulation and require that Crown Zellerbach purchase and operate a reference method ambient monitor. The second alternative is to modify the Sulfite Pulp Mill Regulation to eliminate the ambient monitoring requirement for the small mills.

The first alternative would require that Crown Zellerbach expend \$10,000 to purchase an air monitor. Additional money would have to be spent annually to operate and maintain this monitor. It is the Department's opinion that a more effective use of this money could be made by having the company do more source tests.

The second alternative would allow Crown Zellerbach to stop monitoring ambient sulfur dioxide levels. The Department would modify the approved source testing program by increasing the source testing frequency from biannual to quarterly. This information could be used by the company to minimize emissions and establish a better data base.

The Department proposes to modify the Sulfite Pulp Mill Regulation by deleting the ambient sulfur dioxide monitoring for sulfite mills with less than 110 tons of air-dried pulp production per day. The Willamette Valley Regional office has reviewed the file for complaints and other pertinent information and concurs with this change. Also, the Department proposes to delete items in the regulation that are no longer applicable. In addition, compliance determination methods would be specified as required by EPA. A public hearing, preceded by public notice of the hearing, is necessary to make these modifications.

Specifically the Department proposes to make the following changes:

Definition 340-25-350	No change
State of Purpose 340-25-355	No change
Minimum Emission stds. 340-25-360	Amend the subsection C to require an 80 percent collection efficiency
Compliance Schedule 340-25-365	Delete this section as no longer applicable
Monitoring & Reporting 340-25-370	Amend this section to require approved source test procedures and establish Source Test Method 6 of the Department as the compliance determination method unless alternatives are approved in writing.
Special Studies 340-25-375	Delete
Exceptions 340-25-380	No change
Public Hearing 340-25-385	Delete as no longer applicable
Notice of Construction 340-25-390	Delete as no longer applicable. Modifications would be required to be submitted by existing NC & Permit Rules

Summation

1. The Crown Zellerbach mill in Lebanon is required by the Sulfite Pulp Mill Regulation to monitor ambient sulfur dioxide levels. The monitor that they have been using is not a reference method monitor.
2. Crown Zellerbach would have to purchase a new monitor at a cost of \$10,000 if they were required to continue monitoring ambient sulfur dioxide levels.
3. There is no known sulfur dioxide problem in the Lebanon area.
4. By increasing the source monitoring frequency to quarterly and eliminating the ambient monitoring, emissions from the mill could be minimized and thereby reduce ambient sulfur dioxide levels.
5. The Department has concluded that the Sulfite Pulp Mill Regulation should be modified to eliminate the ambient monitoring requirement for the Crown Zellerbach mill. Also, the Department would delete items which are no longer applicable and add compliance determination methods as required by EPA. Therefore, a public hearing is required to receive testimony on the proposed changes.

Director's Recommendation

Based on the Summation, it is recommended that the Commission authorize a public hearing to take testimony on the proposed changes to the Sulfite Pulp Mill Regulation, OAR 340-25-350 through 390.



William H. Young

Attachments: Draft Statement of Need for Rulemaking
Draft Hearings Notice
Draft Rule (OAR 340-25-350 through 390)

F. A. Skirvin:l
229-6414
February 20, 1980

AL0772.B

STATEMENT OF NEED FOR RULEMAKING

Pursuant to ORS 183.335(2), this statement provides information on the intended action to amend a rule.

Legal Authority

ORS 468.020 authorizes the Commission to adopt rules as it considers necessary and proper in performing the functions vested in it by law.

Need for the Rule

The proposed amendment would eliminate monitoring that is required because the Department does not use the data.

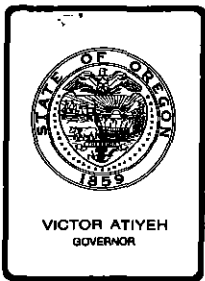
Principal Documents Relied Upon

The principal documents relied on were the monitoring data reports from the Crown Zellerbach mill in Lebanon which are on file at the DEQ.

Fiscal Impact Statement

The only economic effect that this proposed amendment would have is to save the Crown Zellerbach mill in Lebanon approximately \$10,000 in capital costs and \$15,000 in annual operating costs. Since no additional or new requirements are being considered, the other sulfite mills in Oregon will not incur any economic impact.

AL0772.A



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

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

MEMORANDUM

To: Environmental Quality Commission
From: Director
Subject: Agenda Item No. 0 , May 16, 1980, EQC Meeting

Proposed Adoption of Amendments to Noise Control Regulations Establishing Noise Emission Limits for New Motorboats, OAR 340-35-025

Background

Oregon Revised Statutes Chapter 467 directs the Environmental Quality Commission to establish maximum permissible levels of noise emissions. In 1974, standards were adopted that established maximum limits for some newly manufactured products. These new product regulations presently include automobiles, trucks, buses, motorcycles, and snowmobiles. The Oregon State Marine Board requested the Department propose noise emission standards for new motorboats. The Commission authorized a public hearing on a proposal at its January 18, 1980 meeting. The proposal would amend an existing rule to add an emission standard for motorboats offered for sale after June 30, 1980. It would also amend the motor vehicle measurement procedure manual to add necessary testing procedures.

A public hearing was held in Portland on March 25, 1980. The Commission may amend this rule and procedure pursuant to ORS 467.030. The attached Statement of Need provides information on the Commission's intention to amend this rule.

Problem

A statewide attitudinal survey conducted by the Department indicated that motorboat noise was a moderate problem in Oregon. During the development of motor vehicle noise rules, the consideration of new product regulations for boats was discarded as having only a moderate impact on the problem. Standards were proposed and adopted that established operational noise limits for motorboats. These standards are identical to those included in State Marine Board administrative rules.



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Presently, a large number of complaints are received due to operations of noisy boats. The State Marine Board provides boating rule enforcement through contracts with various county sheriffs. Department staff has assisted this effort by providing training and other technical assistance. However, this enforcement is not effective due to the limited numbers of enforcement personnel and the difficulty of monitoring operating motorboats for noise emissions.

Alternatives and Evaluation

As the State Marine Board does not believe the in-use operational noise standards for motorboats are totally effective in controlling this problem, they have requested that a new product rule be adopted by the Commission.

Testimony from the Clackamas County Sheriff's marine patrol noted that additional manpower would assist their enforcement efforts. They also believe that this proposal would reduce noise as some new motorboats are being sold with ineffective exhaust systems.

A representative of a citizens group that is concerned with excessive boat noise, supports the proposal. They believe the solution lies in the control of the manufactured equipment and modifications to motorboat exhaust systems. They will also seek legislation prohibiting modification of exhaust systems.

A motorboat noise impacted couple thought the proposed 82 dBA too liberal and recommended a standard of 77 dBA. They agreed with the proposed exemption of motorboats with underwater exhausts as they create no noise problems.

A manufacturer of boat motors agreed with the proposed rule and "appreciates the practical approach" taken with the proposal.

If adopted, this proposal would prohibit the sale of any new motorboat after June 30, 1980, that exceeds 82 dBA under a standard test procedure. Motorboats powered by an outboard motor designed to exhaust beneath the surface of the water would be exempt from this rule, as they are believed to be well within the proposed 82 dBA limit. The sale of non-complying racing motorboats may be exempted after the purchaser agrees to operate such boats only at designated racing areas.

Summation

Based upon the Background and Evaluation, the following conclusions are offered:

1. Excessive motorboat noise continues to be a problem in Oregon, despite the present efforts to enforce in-use operational noise standards. New product standards would assist in solving this problem.

2. The proposed rule would, after June 30, 1980, prohibit the sale of new motorboats that exceed 82 dBA under a standard test. This proposal would amend an existing rule and procedure manual to add these provisions.
3. Outboard motorboats that exhaust under the surface of the water would be exempt as well as non-complying racing boats that operate at designated racing areas.
4. No opposition to this proposal was offered during the rulemaking process. However, at least one party asked for a more stringent emission limit.

Director's Recommendation

Based on the Summation, it is recommended that the Commission adopt Attachment 1 as permanent rule amendments to OAR 340-35-025, Noise Control Regulations for the Sale of New Motor Vehicles and Motor Vehicle Sound Measurement Procedure Manual, NPC-21.



William H. Young

Attachments

1. Proposed Amendments to OAR 340-35-025 and Procedure Manual NPC-21
2. Hearing Report
3. Statement of Need for Rulemaking

John Hector:b
(503) 229-5989
April 24, 1980
NB1389

Proposed Amendments
for Motorboats

Department of Environmental Quality
Chapter 340, Oregon Administrative Rules

Division 35

Noise Control Regulations for
the Sale of New Motor Vehicles

May, 1980

New Material is Underlined, and
Deleted Material is [Bracketed]

Definitions

340-35-015 As used in this division:

- (1) "Air Carrier Airport" means any airport that serves air carriers holding Certificates of Public Convenience and Necessity issued by the Civil Aeronautic Board.
- (2) "Airport Master Plan" means any long-term development plan for the airport established by the airport proprietor.
- (3) "Airport Noise Abatement Program" means a Commission-approved program designed to achieve noise compatibility between an airport and its environs.
- (4) "Airport Proprietor" means the person who holds title to an airport.
- (5) "Ambient Noise" means the all-encompassing noise associated with a given environment, being usually a composite of sounds from any sources near and far.
- (6) "Annual Average Day-Night Airport Noise Level" means the average, on an energy basis, of the daily Day-Night Airport Noise Level of a 12-month period.
- (7) "Any one hour" means any period of 60 consecutive minutes during the 24-hour day.
- (8) "Commission" means the Environmental Quality Commission.
- (9) "Construction" shall mean building or demolition work and shall include all activities thereto such as clearing of land, earthmoving, and landscaping, but shall not include the production of construction materials.
- (10) "Day-Night Airport Noise Level (Ldn)" means the Equivalent Noise Level produced by airport/aircraft operations during a 24-hour time period, with a 10 decibel penalty applied to the level measured during the nighttime hours of 10 pm to 7 am.

(11) "Department" means the Department of Environmental Quality.

(12) "Director" means the Director of the Department.

(13) "Emergency Equipment" means noise emitting devices required to avoid or reduce severity of accidents. Such equipment includes, but is not limited to, safety valves and other pressure relief devices.

(14) "Equivalent Noise Level (Leq)" means the equivalent steady state sound level in A-weighted decibels for a stated period of time which contains the same acoustic energy as the actual time-varying sound level for the same period of time.

(15) "Existing Industrial or Commercial Noise Source" means any Industrial or Commercial Noise Source for which installation or construction was commenced prior to January 1, 1975.

(16) "Farm Tractor" means any Motor Vehicle designed primarily for use in agricultural operations for drawing or operating plows, mowing machines, or other implements of husbandry.

(17) "Impulse Sound" means either a single pressure peak or single burst (multiple pressure peaks) for a duration of less than one second as measured on a peak unweighted sound pressure measuring instrument.

(18) "In-Use Motor Vehicle" means any Motor Vehicle which is not a New Motor Vehicle.

(19) "Industrial or Commercial Noise Source" means that source of noise which generates Industrial or Commercial Noise Levels.

(20) "Industrial or Commercial Noise Levels" means those noises generated by a combination of equipment, facilities, operations, or activities employed in the production, storage, handling, sale, purchase, exchange, or maintenance of a product, commodity, or service and those noise levels generated in the storage or disposal of waste products.

(21) "Motorboat" as used in OAR 340-35-025 means a water craft propelled by an internal combustion engine but does not include a boat powered by an outboard motor designed to exhaust beneath the surface of the water.

(22) [21] "Motorcycle" means any Motor Vehicle, except Farm Tractors, designed to travel on not more than three wheels which are in contact with the ground.

(23) [22] "Motor Vehicle" means any vehicle which is, or is designed to be self-propelled or is designed or used for transporting persons or property. This definition excludes airplanes, but includes water craft.

(24) [23] "New Airport" means any airport for which installation, construction, or expansion of a runway commenced after January 1, 1980.

(25) [24] "New Industrial or Commercial Noise Source" means any Industrial or Commercial Noise Source for which installation or construction was commenced after January 1, 1975 on a site not previously occupied by the industrial or commercial noise source in question.

(26) [25] "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 New Motor Vehicle for purposes other than resale. The model year of such vehicle shall be the year so specified by the manufacturer, or if not so specified, the calendar year in which the new motor vehicle was manufactured.

(27) [26] "Noise Impact Boundary" means a contour around the airport, any point on which is equal to the airport noise criterion.

(28) [27] "Noise Level" means weighted Sound Pressure Level measured by use of a metering characteristic with an "A" frequency weighting network and reported as dBA.

(29) [28] "Noise Sensitive Property: means real property normally used for sleeping, or normally used as schools, churches, hospitals or public libraries. Property used in industrial or agricultural activities is not Noise Sensitive Property unless it meets the above criteria in more than an incidental manner.

(30) [29] "Octave Band Sound Pressure Level" means the sound pressure level for the sound being measured within the specified octave band. The reference pressure is 20 micropascals (20 micronewtons per square meter).

(31) [30] "Off-Road Recreational Vehicle" means any Motor Vehicle, including water craft, used off Public Roads for recreational purposes. When a Road Vehicle is operated off-road, the vehicle shall be considered an Off-Road Recreational Vehicle if it is being operated for recreational purposes.

(32) [31] "One-Third Octave Band sound Pressure Level" means the sound pressure level for the sound being measured within the specified one-third octave band at the Preferred Frequencies. The reference pressure is 20 micropascals (20 micronewtons per square meter).

(33) [32] "Person" means the United States Government and agencies thereof, any state, individual, public or private corporation, political subdivision, governmental agency, municipality, industry, co-partnership, association, firm, trust, estate, or any other legal entity whatever.

(34) [33] "Preferred Frequencies" means those mean frequencies in Hertz preferred for acoustical measurements which for this purpose shall consist of the following set of values: 20, 25, 31.5, 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, 10,000, 12,500.

(35) [34] "Previously Unused Industrial or Commercial Site" means property which has not been used by any industrial or commercial noise source during the 20 years immediately preceding commencement of construction of a new industrial or commercial source on that property. Agricultural activities and silvicultural activities of an incidental nature shall not be considered as industrial or commercial operations for the purposes of this definition.

(36) [35] "Propulsion Noise" means that noise created in the propulsion of a Motor Vehicle. This includes, but is not limited to exhaust system noise, induction system noise, tire noise, cooling system noise, aerodynamic noise and where appropriate in the test procedure, braking system noise. This does not include noise created by Road Vehicle Auxiliary Equipment such as power take-offs and compressors.

(37) [36] "Public Roads" means any street, alley, road, highway, freeway, thoroughfare, or section thereof in this state used by the public or dedicated or appropriated to public use.

(38) [37] "Quiet Area" means any land or facility designated by the Commission as an appropriate area where the qualities of serenity, tranquility, and quiet are of extraordinary significance and serve an important public need, such as, without being limited to, a wilderness area, national park, state park, game reserve, wildlife breeding area or amphitheater. The Department shall submit areas suggested by the public as Quiet Areas, to the Commission, with the Department's recommendation.

(39) [38] "Racing Events" means any competition using Motor Vehicles, conducted under a permit issued by the governmental authority having jurisdiction, or, if such permit is not required, under the auspices of a recognized sanctioning body. This definition includes, but is not limited to, events on the surface of land and water.

(40) [39] "Racing Vehicle" means any Motor Vehicle that is designed to be used exclusively in Racing Events.

(41) [40] "Road Vehicle" means any Motor Vehicle registered for use on Public Roads, including any attached trailing vehicles.

(42) [41] "Road Vehicle Auxiliary Equipment" means those mechanical devices which are built in or attached to a Road Vehicle and are used primarily for the handling or storage of products in that Motor Vehicle. This includes, but is not limited to, refrigeration units, compressors, compactors, chippers, power lifts, mixers, pumps, blowers, and other mechanical devices.

(43) [42] "Sound Pressure Level (SPL)" means 20 times the logarithm to the base 10 of the ratio of the root-mean-square pressure of the sound to the reference pressure. SPL is given in decibels (dB). The reference pressure is 20 micropascals (20 micronewtons per square meter).

(44) [43] "Statistical Noise Level" means the Noise Level which is equalled or exceeded a stated percentage of the time. An $L_{10} = 65$ dBA implies that in any hour of the day 65 dBA can be equalled or exceeded only 10 percent of the time, or for six minutes.

(45) [44] "Warning Device" means any device which signals an unsafe or potentially dangerous situation.

**Noise Control Regulations for the Sale of New Motor Vehicles
340-35-025 (1) Standards and Regulations.**

(a) No person shall sell or offer for sale any new motor vehicle designated in this section which produces a propulsion noise exceeding the noise limits specified in Table 1, except as otherwise provided in these rules.

(b) Subsequent to the adoption of a Federal Environmental Protection Agency procedure to determine sound levels of passenger cars and light trucks, or a nationally accepted procedure for these vehicles not similar to those specified and approved under subsection (2)(a), the Department shall conduct an evaluation under such new procedure.

(c) After an appropriate evaluation of noise emission data measured under the procedure specified under subsection (1)(b), the Department shall make recommendations to the Commission on the adequacy of the procedure and the necessity of amendments to this rule for incorporation of the procedure and associated standards.

(d) Notwithstanding the provisions of subsections (1)(b) and (1)(c) the Department shall present a progress and status report on passenger car and light truck noise emission controls to the Commission no later than July 1, 1982.

(2) Measurement:

(a) Sound measurements shall conform to test procedures adopted by the Commission in Motor Vehicle Sound Measurement Procedures Manual (NPCS-21), or to standard methods approved in writing by the Department. These measurements will generally be carried out by the motor vehicle manufacturer on a sample of either prototype or production vehicles. A certification program shall be devised by the manufacturer and submitted to the Department for approval within 60 days after the adoption of this rule.

(b) Nothing in this section shall preclude the Department from conducting separate or additional noise level tests and measurements on new motor vehicles being offered for sale. Therefore, when requested by the Department, a new motor vehicle dealer or manufacturer shall cooperate in reasonable noise testing of a specific class of motor vehicle being offered for sale.

(3) Manufacturer's Certification:

(a) Prior to the sale or offer for sale of any new motor vehicle designated in Table 1, the manufacturer or a designated representative shall certify in writing to the Department that vehicles listed in Table 1 made by that manufacturer and offered for sale in the State of Oregon meet applicable noise limits. Such certification will include a statement by the manufacturer that:

(A) The manufacturer has tested sample or prototype vehicles.

(B) That such samples or prototypes met applicable noise limits when tested in accordance with the procedures specified.

(C) That vehicles offered for sale in Oregon are substantially identical in construction to such samples or prototypes.

(b) Nothing in this section shall preclude the Department from obtaining specific noise measurement data gathered by the manufacturer on prototype or production vehicles for a class of vehicles for which the Department has reasonable grounds to believe is not in conformity with the applicable noise limits.

(4) Exceptions. Upon prior written request from the manufacturer or designated representative, the Department may authorize an exception to this noise rule for a class of motor vehicles, if it can be demonstrated to the Department that for that specific class a vehicle manufacturer has not had adequate lead-time or does not have the technical capability to either bring the motor vehicle noise into compliance or to conduct new motor vehicle noise tests.

(5) Exemptions:

(a) All racing vehicles, except racing motorcycles[,] and racing motorboats, shall be exempt from the requirements of this section provided that such vehicles are operated only at facilities used for sanctioned racing events.

(b) Racing motorcycles and racing motorboats shall be exempt from the requirements of this section provided that [such vehicles] racing motorcycles are operated only at facilities used for sanctioned racing events, racing motorboats are operated only at areas designated by the State Marine Board for testing or at an approved racing event, and the following conditions are complied with:

(A) Prior to the sale of a racing motorcycle or racing motorboat, the prospective purchaser shall file a notarized affidavit with the Department, on a Departmentally approved form, stating that it is the intention of such prospective purchaser to operate the vehicle only at facilities used for sanctioned racing events; and

(B) No racing vehicle shall be displayed for sale in the State of Oregon without notice prominently affixed thereto:

(i) That such vehicle will be exempt from the requirements of this section only upon demonstration to the Department that the vehicle will be operated only at facilities used for sanctioned racing events; and

(ii) that a notarized affidavit will be required of the prospective purchaser stating that it is the intention of such prospective purchaser to operate the vehicle only at facilities used for sanctioned racing events; and

(C) No racing vehicle shall be locally advertised in the State of Oregon as being for sale without notice included:

(i) which is substantially similar to that required in (B)(i) and (B)(ii) above, and

(ii) which is unambiguous as to which vehicle such notice applies.

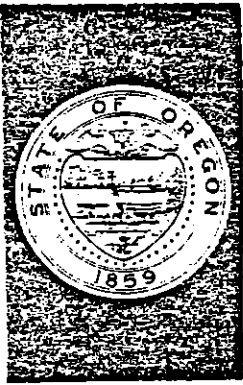
TABLE 1

(340-035-025)

New Motor Vehicle Standards

Moving Test at 50 Feet (15.2 Meters)

<u>Vehicle Type</u>	<u>Effective for</u>	<u>Maximum Noise Level, dBA</u>
Motorcycles	1975 Model	86
	1976 Model	83
	1977-1982 Models	81
	1983-1987 Models	78
	Models after 1987	75
Snowmobiles as defined in ORS 481.048	1975 Model	82
	Models after 1975	78
Trucks in excess of 10,000 pounds (4536 kg) GVWR	1975 Model	86
	1976-1981 Models or Models manufactured after January 1, 1982	83
	Models manufactured after January 1, 1982, and before January 1, 1985	80
	Models manufactured after January 1, 1985	(Reserved)
Automobiles, Light Trucks, and All Other Road Vehicles	1975 Model	83
	Models after 1975	80
Buses as defined under ORS 481.030	1975 Model	86
	1976-1978 Models	83
	Models after 1978	80
<u>Motorboats</u>	<u>Models Offered for Sale after June 30, 1980</u>	<u>82</u>



MOTOR VEHICLE
SOUND
MEASUREMENT
PROCEDURES
MANUAL

Proposed Amendments

for

Motorboats

New Material is Underlined

Deleted Material is [Bracketed]

January 1980

CHAPTER 4

NEW VEHICLE SOUND LEVEL MEASUREMENT

4.1 Scope. This Chapter establishes procedures for setting up and calibrating sound measuring equipment and conducting tests to determine vehicle sound level output.

4.2 Test Area and Personnel.

4.2.1 Test Area. Generally, the test area shall be a flat open space free of large upright sound-reflecting surfaces, such as parked vehicles, signboards, buildings, or hillsides, located within 100 feet radius of the microphone [and of the following unmarked points on the vehicle path] as shown in Figure 4-1. Detailed test area layouts are provided in Section 4.5 for specific vehicle categories.

[a. The microphone point, which is the location on the vehicle path closest to the microphone.]

[b. A point fifty feet before the microphone point.]

[c. A point fifty feet beyond the microphone point.]

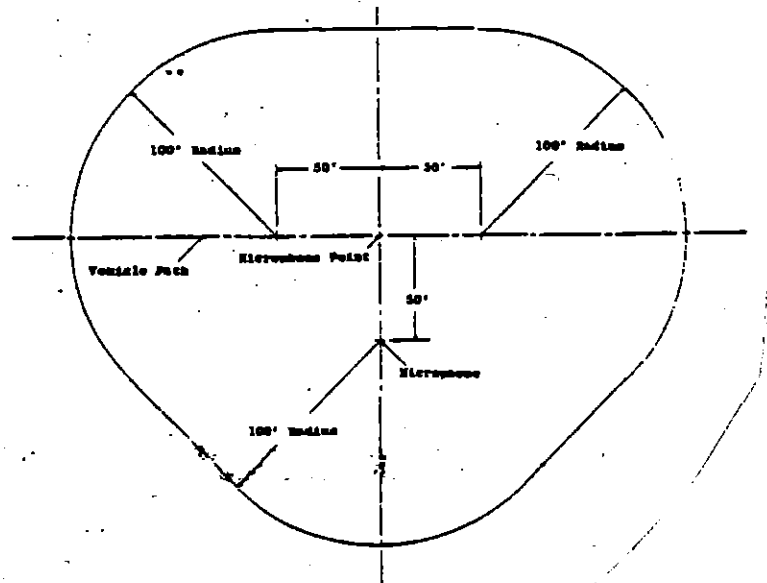


Fig. 4-1. New Vehicle Test Area Layout

- 4.2.2 [Ground]Surface Condition. The surface of the ground within the measuring site for ~~road vehicles~~ shall be smooth asphalt or concrete free of snow, soil or ashes in at least the triangular area formed by the microphone location and points on the vehicle path 50 feet before and beyond the microphone point. The ground surface in the above area for snowmobiles shall be live vegetation (grass) no more than four inches in height. Motorboats shall be tested on a calm water surface.
- 4.2.3 Roadway Surface. The surface of the vehicle path shall be dry, smooth asphalt or concrete pavement free of extraneous material, except that the pathway for snowmobiles shall be covered with live vegetation (grass) no more than four inches in height or a maximum of 3 inches of loose snow over a base of at least 2 inches of compacted snow.
- 4.2.4 Wind. Do not conduct sound measurements when wind velocity at the test area exceeds ten miles per hour.
- 4.2.5 Personnel Location. Exercise care to prevent interference with sound level measurements caused by personnel in the measuring area.
- a. Bystander Location. Bystanders shall remain at least fifty feet from the microphone and the vehicle being measured during sound level measurements.
- b. Technician Location. The technician making direct readings from the sound level meter with microphone attached shall stand with the instrument positioned in accordance with the manufacturer's instructions.
- 4.3 Equipment Setup and Use.
- 4.3.1 General. All types of sound level meters shall be field calibrated immediately prior to use using the procedures described in the factory instruction manual.
- 4.3.2 Battery Check. Batteries in both the meter and calibrator shall be checked before calibration.
- 4.3.3 Instrument Calibration. The instrument shall be set to the correct level range, weighting scale, and meter response. The calibrator shall be placed on the microphone of the meter. The output indicated on the meter shall then be adjusted to the correct calibration level.
- 4.3.4 Microphone Location. Attached the microphone or sound level meter to the tripod, extending the tripod legs so that the microphone, when aimed at the microphone point, will be at a height of 4+ 1/2 ft. above the plane of the roadway or water surface. Position the tripod so the microphone is at a distance of 50+ 1 ft. from the center of the lane of travel.

COMMENT Connect extension cable between the instruments. Secure the cable to the foot of the tripod leg nearest the recorder location. This will help prevent the tripod from being pulled over by an accidental tug on the cable.

- 4.3.5 Windscreens. Windscreens made of open cell polyurethane foam furnished by the instrument manufacturer shall be placed over the microphone after calibration.

COMMENT The windscreen reduces the effect of wind noise and protects the microphone diaphragm from dust or other airborne matter.

- 4.3.6 Annual Calibration. Within one year prior to use, each set of sound measuring instruments, sound level meter including octave band filter, and calibrator, shall receive a laboratory calibration in accordance to the manufacturer's specifications. This calibration shall be traceable to the National Bureau of Standards.

COMMENT An inspection label will be attached to each instrument set to determine when the calibration was performed.

4.4 Sound Level Measurement

- 4.4.1 Preliminary Steps. The following steps shall be followed before taking a measurement.

- a) Turn meter on
- b) Switch meter to "A" weighting scale
- c) Switch meter to "FAST" response
- d) Set the meter to the appropriate range to measure the anticipated sound level.

- 4.4.2 Mounting. The sound level meter shall be placed on a tripod according to the manufacturer's instructions.

- 4.4.3 Orientation. The orientation of the sound level meter microphone shall be according to the manufacturer's instructions to obtain random incidence.

- 4.4.4 Variations. Allowances are necessary due to unavoidable variations in measurement sites and test equipment. Vehicles are not considered in violation unless they exceed the regulated limit by 2 dBA or more.

- 4.4.5 Weather Measurement. Record wind velocity and direction with a wind gauge and temperature and relative humidity with a sling psychrometer or other Department approved instruments.
- 4.4.6 Data Recording. Record all required vehicle data, type of test equipment, and weather information on the New Vehicle Test Form, (NPCS-26), as shown in Figure 4-2 or any other form approved in writing by the Department.

NEW VEHICLE NOISE TEST					DEPARTMENT OF ENVIRONMENTAL QUALITY				DATE		
YEAR	VEHICLE MAKE			VEHICLE TYPE			LICENSE NO.		MODEL		
REGISTERED OWNER				ADDRESS							
DRIVER			D.L. NO.		ADDRESS						
ENGINE TYPE			HP	ENGINE DISPLACEMENT			LOCATION		VEHICLE MILEAGE		
EXHAUST OUTLET <input type="checkbox"/> Single <input type="checkbox"/> L. Side <input type="checkbox"/> Rear <input type="checkbox"/> Dual <input type="checkbox"/> R. Side <input type="checkbox"/> Vertical			CHECK POSITION AND SIZE OF OUTLET <input type="checkbox"/> Straight <input type="checkbox"/> 45° to rear <input type="checkbox"/> 45° to side <input type="checkbox"/> ___ dia.			RESONATORS <input type="checkbox"/> Single <input type="checkbox"/> Dual		MUFFLER TYPE	TIRE SIZE	GEAR RATIOS	
									_____ x _____	Diff. _____: _____ Spkt. _____: _____ (No. of Teeth)	
RECORDER MODEL AND DEQ NO.			METER MODEL AND DEQ NO.		VEHICLE SUPPLIED BY			CALIBRATOR AND DEQ NO.			
TEST DRIVER			TEST ENGINEER			METER CHECK <input type="checkbox"/> BAT. <input type="checkbox"/> WINDSCREEN <input type="checkbox"/> "A" SCALE <input type="checkbox"/> FAST <input type="checkbox"/> CALIB.					
OPERATING CONDITIONS		TIME	DBA READINGS		MAXIMUM		TEST CONDITIONS				
			L.S.	R.S.	RPM	MPH					
							WEATHER CONDITION		TEMP.	%RH	WIND VEL.
							Indicate by proper symbols the direction of the wind, vehicle path, and microphone location.				

INSTRUMENTATION SET UP AT 50 FT. FROM CENTERLINE OF TRAVEL.

NPGS-26

Figure 4-2
New Vehicle Test
-25-

4.5 New Vehicle Test Procedure

4.5.1 Vehicle Sound Level. The sound levels for new motor vehicles shall be determined by tests performed according to procedures established for each particular class of vehicle.

4.5.2 Definitions. For the purpose of these procedures, the following terms have the meanings indicated:

- a. Maximum RPM. "Maximum rpm" means the maximum governed engine speed, or if uncontrolled, the rpm at maximum engine horsepower as determined by the engine manufacturer in accordance with the procedures in Society of Automotive Engineers Standard, Engine Rating Code - Spark Ignition - SAE J245, April 1971, or Engine Rating Code Diesel - SAE J270, September 1971.
- b. Microphone Point. "Microphone point" means the unmarked location on the center of the lane of travel that is closest to the microphone.
- c. Vehicle Reference Point. "Vehicle reference point" means the location of the vehicle used to determine when the vehicle is at any of the points on the vehicle path. The primary vehicle reference point is the front of the vehicle.

4.5.3 Operation.

- a. Preliminary Runs. Sufficient preliminary runs shall be made to enable the test driver to become familiar with the operation of the vehicle and to stabilize engine operating conditions.
- b. Test Runs. At least four test runs shall be made for each side of the vehicle.
- c. Reported Noise Level. The reported sound level for each side of the vehicle shall be on the average of the two highest readings on that side which are within 2 dBA of each other. The sound level reported for the vehicle shall be the sound level of the loudest side.
- d. Visual Reading and Recording. Visual readings shall be taken from the sound level meter during preliminary test runs and recorded. The readings from the sound level meter shall be compared with those of the recorder and there shall be no more than ± 0.5 dBA variation between the readings. When the variation is greater, the equipment shall be checked and recalibrated. If the variation still exists, the test shall be conducted using only direct readings from the sound level meter.

4.5.4 Motorcycles. Motorcycles shall be tested as follows:

- a. Vehicle Path. The test area shall include a vehicle path of sufficient length for safe acceleration, deceleration, and stopping of the vehicle.
- b. Test Area Layout. The following points and zones shown in Figure 4-3 where only one directional approach is illustrated for purposes of clarity, shall be established on the vehicle path so that measurements can be made on both sides of the vehicle:
 1. Microphone point.
 2. Acceleration point - a location 25 feet before the microphone point.
 3. End point - a location 100 feet beyond the microphone point.

4. End zone - the last 75-foot distance between the microphone point and the end point.

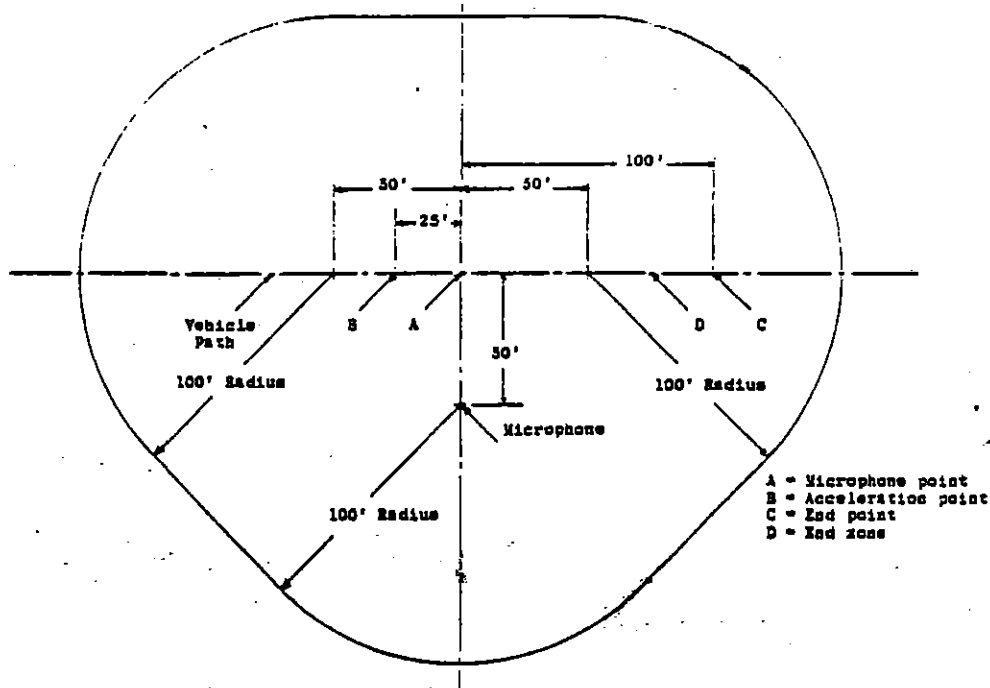


Fig. 4- 3. Test Area Layout for Motorcycles

- c. Test Procedures. Vehicles shall be tested according to the following procedures:

1. Gear Selection. Motorcycles shall be operated in second gear. Vehicles which reach maximum rpm at less than 30 mph or before a point of 25 feet beyond the microphone point shall be operated in the next higher gear.

If the motorcycle has an automatic transmission or torque converter, then gear selection shall follow the following procedure:

If the gear range is selectable, employ the lowest range. If the vehicle reaches maximum rpm at less than 30 mph or before a point 25 feet beyond the microphone point (see Figure 4-3), use the next higher range. If maximum rpm is reached before a point 25 feet beyond the microphone point when the vehicle is in the highest gear range, then the throttle shall be opened less rapidly, but in such a manner that full throttle and maximum rpm are attained while within the end zone.

If the gear range is not selectable, then the throttle shall be opened less rapidly, but in such a manner that full throttle and maximum rpm are attained while within the end zone.

2. Acceleration. The vehicle shall proceed along the test path at a constant approach speed which corresponds either to an engine speed of 60 percent of maximum rpm or to 30 mph, whichever is lower. When the vehicle reference point reaches the acceleration point, the throttle shall be rapidly and fully opened. The throttle shall be held open until the vehicle reference point reaches the end point or until the maximum rpm is reached within the end zone, at which point the throttle shall be closed. Wheel slip shall be avoided.
3. Deceleration. Tests during deceleration shall be conducted when deceleration noise appears excessive. The vehicle shall proceed along the vehicle path at maximum rpm in the same gear selected for the tests during acceleration. When the reference point on the vehicle reaches the acceleration point, the throttle shall be rapidly closed and the vehicle shall be allowed to decelerate to less than 1/2 of maximum rpm.
4. Engine Temperature. The engine temperature shall be within normal operating range before each test run.
5. Test Weight. The total weight of test driver and test instrumentation shall be 165 lbs. For small drivers, additional weights shall be used to bring the total to 165 lbs.

4.5.5. Snowmobiles. Snowmobiles shall be tested as follows:

- a. Vehicle Path. The test area shall include a vehicle path of sufficient length for safe acceleration, deceleration, and stopping of the vehicle.
- b. Test Area Layout. The following points and zones shown in Figure 4-3, where only one directional approach is illustrated for the purposes of clarity, shall be established on the vehicle path so that measurements can be made on both sides of the vehicle.
 1. Microphone point.
 2. End point - a location 50 feet beyond the microphone point.
 3. Acceleration point - a location on the vehicle path established as follows: Position the vehicle headed away from the microphone point with the vehicle reference point at 25 feet from the microphone point. From a standing start with transmission in low gear, rapidly apply wide-open throttle, accelerating until maximum rpm is attained. The location on the vehicle path where maximum rpm was attained is the acceleration point for test run in the opposite direction.
 4. Maximum rpm zone.

- c. Test Procedures. From a standing start, with transmission in low gear and the vehicle reference point positioned at the acceleration point, the throttle shall be rapidly and fully opened and held through the maximum rpm zone until the reference point on the vehicle reaches the end point after which the throttle shall be closed.

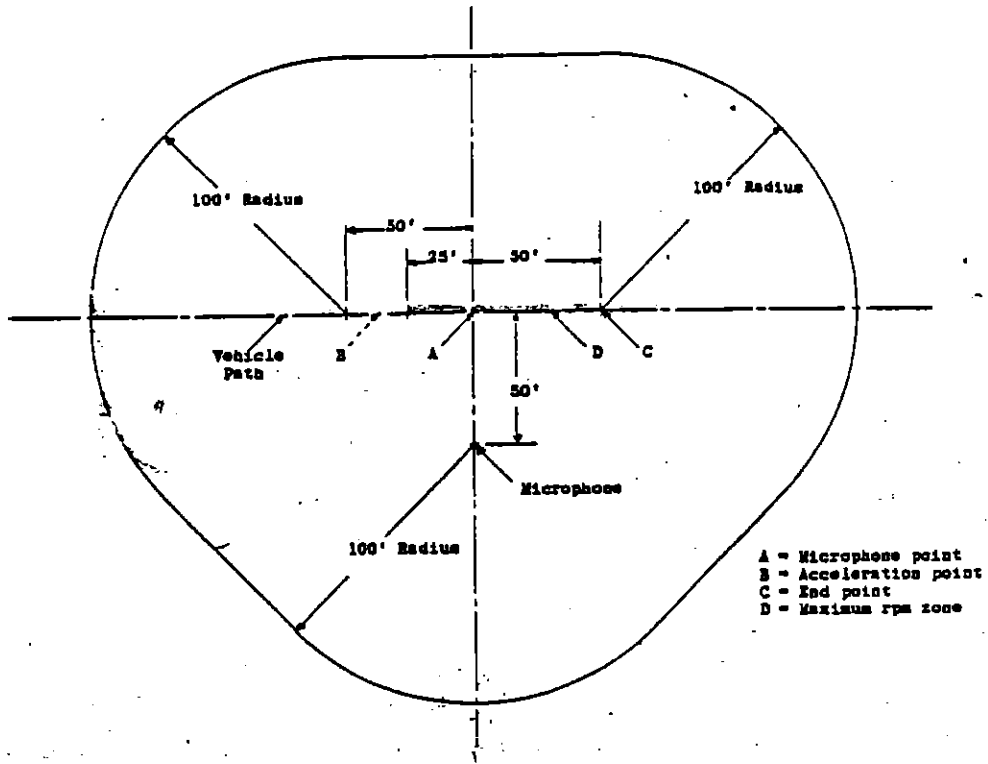


Fig. 4-4. Test Area Layout for Snowmobiles

4.5.6 Heavy Trucks, Truck Tractors, and Buses. The test procedure for vehicles with a manufacturer's gross vehicle weight rating of 10,000 lbs or more shall be as follows:

- (1) Test Area Layout. The test area shall include a vehicle path of sufficient length for safe acceleration, deceleration, and stopping of the vehicle. The following points and zones shall be established on the vehicle path as shown in Figure 4, where only one directional approach is illustrated for purposes of clarity.
 - (A) Microphone point
 - (B) Acceleration point - a location 50 ft before the microphone point
 - (C) End point - a location 50 ft beyond the microphone point.
 - (D) End zone - the last 40-ft distance between the microphone point and the end point.

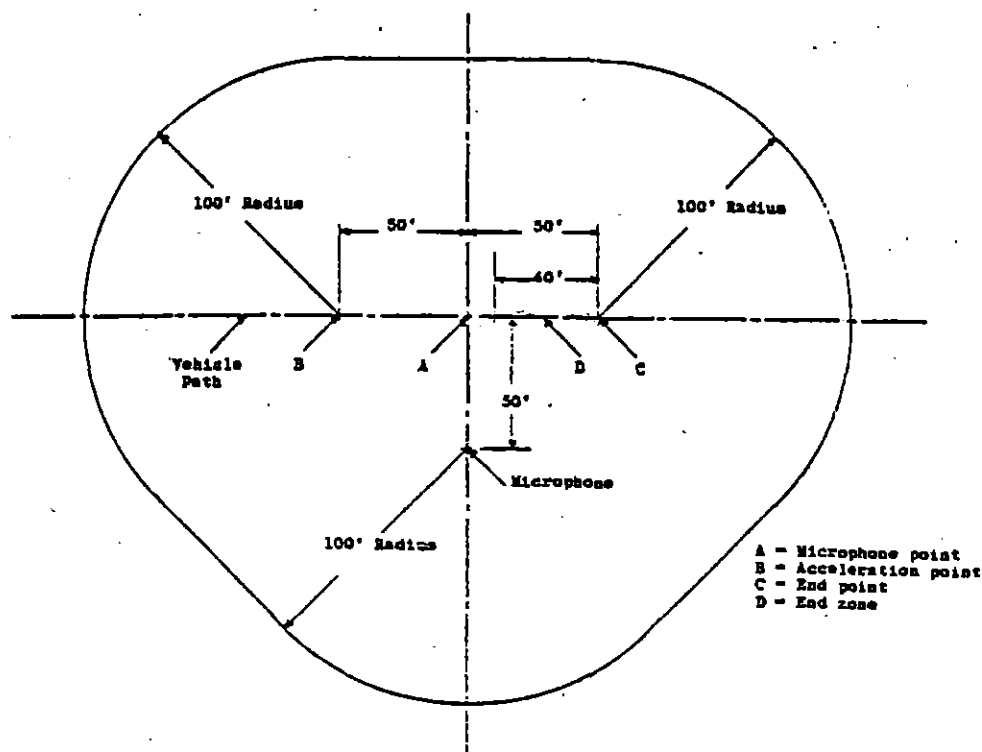


Figure 4-5 Test Area Layout for Trucks

(2) Gear Selection. A gear shall be selected (manual or automatic transmission) which will result in the vehicle beginning at an approach rpm of no more than $2/3$ maximum rpm at the acceleration point and reaching maximum rpm within the end zone without exceeding 35 mph.

(A) When maximum rpm is attained before reaching the end zone, the next higher gear shall be selected, up to the gear where maximum rpm produces over 35 mph.

(B) When maximum rpm still occurs before reaching the end zone, the approach rpm shall be decreased in 100 rpm increments until maximum rpm is attained within the end zone.

(C) When maximum rpm is not attained until beyond the end zone, the next lower gear shall be selected until maximum rpm is attained within the end zone.

(D) When the lowest gear still results in reaching maximum rpm beyond the end zone, the approach rpm shall be increased in 100 rpm increments above $2/3$ maximum rpm until the maximum rpm is reached within the end zone.

(3) Acceleration. The vehicle shall proceed along the vehicle path maintaining the approach engine rpm in the gear selected for at least 50 ft before reaching the acceleration point. When the vehicle reference point reaches the acceleration point, the throttle shall be rapidly and fully opened and held open until maximum rpm is attained within the end zone, at which point the throttle shall be closed.

(4) Deceleration. Tests during deceleration shall be conducted when deceleration noise appears excessive. The vehicle shall proceed along the vehicle path at maximum rpm in the same gear selected for the tests during acceleration. When the vehicle reference point reaches the microphone point, the throttle shall be rapidly closed and the vehicle allowed to decelerate to less than $1/2$ maximum rpm. Vehicles equipped with exhaust brakes shall also be tested with the brake full on immediately following closing of the throttle.

(5) Engine Temperature. The engine temperature shall be within normal operating range throughout each test run.

(6) Demand-Activated Fans. If the test vehicle contains a demand-activated fan, the fan may be in the "off" position during the test.

4.5.7 Light Trucks, Truck Tractors, Buses, Cars and All Other Vehicles. The test procedure for trucks, truck tractors, and buses with a manufacturer's gross vehicle weight rating of less than 10,000 lbs, and all passenger cars shall be as follows:

(1) Test Area Layout. The test area shall include a vehicle path of sufficient length for safe acceleration, deceleration, and stopping of the vehicle. The following points and zones shall be established on the vehicle path as shown in Figure 5, where only one directional approach is illustrated for purposes of clarity:

(A) Microphone point

(B) Acceleration point - a location 25 ft before the microphone point

(C) End point - a location 100 ft beyond the microphone point

(D) End zone - the last 75-ft distance between the microphone point and the end point.

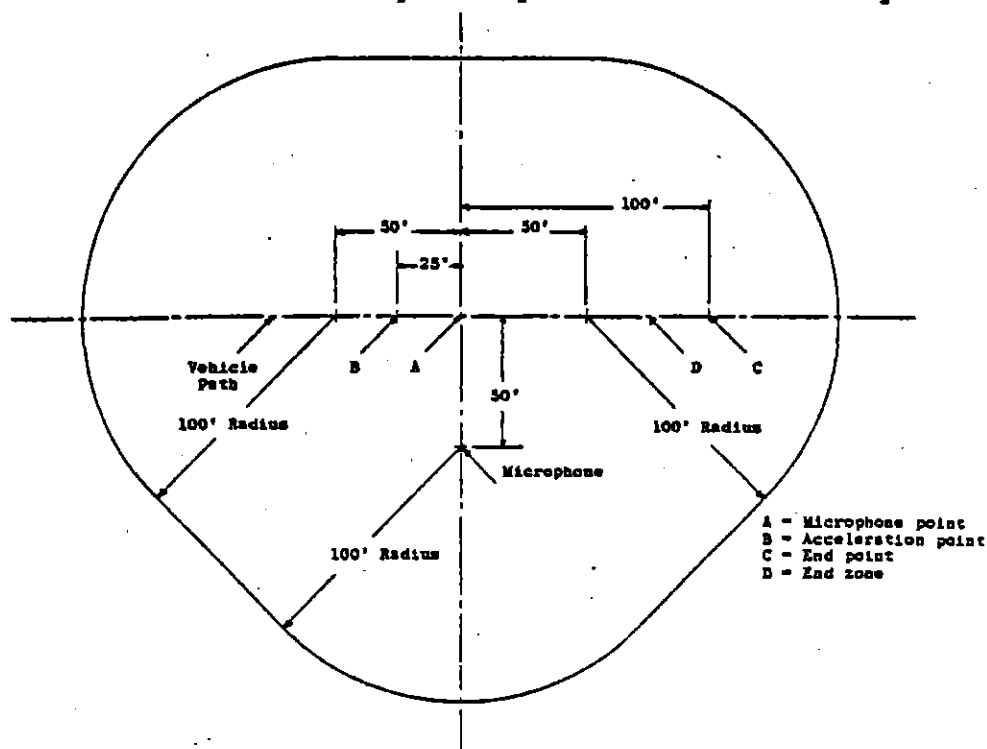


Figure 4-6 Test Area Layout for Passenger Cars

(2) Gear Selection. Motor vehicles equipped with three-speed manual transmissions and with automatic transmissions shall be operated in first gear. Vehicles equipped with manual transmissions of four or more speeds shall be operated in first gear and in second gear. Vehicles which reach maximum rpm at less than 30 mph or before reaching the end zone shall be operated in the next higher gear. Auxiliary step-up ratios (overdrive) shall not be engaged on vehicles so equipped.

(3) Acceleration. The vehicle shall proceed along the vehicle path at a constant speed of 30 mph in the selected gear for at least 50 ft before reaching the acceleration point. When the vehicle reference point reaches the acceleration point, the throttle shall be rapidly and fully opened. The throttle shall be held open until the vehicle reference point reaches the end point or until maximum rpm is reached within the end zone. At maximum rpm, the throttle shall be closed sufficiently to keep the engine just under maximum rpm until the end point, at which time the throttle shall be closed.

(4) Deceleration. Tests during deceleration shall be conducted when deceleration noise appears excessive. The vehicle shall proceed along the vehicle path at maximum rpm in the same gear selected for the tests during acceleration. When the vehicle reference point reaches the acceleration point, the throttle shall rapidly be closed and the vehicle allowed to decelerate to less than 1/2 of maximum rpm.

(5) Engine Temperature. The engine temperature shall be within normal operating range throughout each test run. The engine shall be idled in neutral for at least one minute between runs.

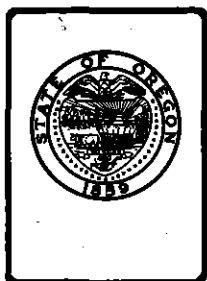
4.5.8 Motorboats. The test procedure for motorized water craft (motorboats) shall be as follows:

(1) Test Area Layout. A suitable test site is a calm body of water, large enough to allow full-speed pass-bys. The area around the microphone and boat shall be free of large obstructions, such as buildings, boats, hills, large piers, breakwater, etc., for a minimum distance of 100 ft (30 m). Three markers (buoys or posts) will be placed in line, 50 ft (15 m)

apart, to mark the course the boat is to follow while being tested.

(2) Test Procedure. The boat shall pass all three markers on a straight course at wide-open throttle with the engine operating at the midpoint of the manufacturer's recommended full-throttle rpm range. The engine speed tolerance shall be ± 100 rpm if this falls in the recommended full-throttle speed range. If a single top speed rpm is recommended, the tolerance shall be +0, -100 rpm.

(3) Measurements. The microphone shall be placed 50 ft (15 m) from the line determined by the three markers, normal to the line and opposite the center marker. It will also be placed $3\frac{1}{2}$ - $4\frac{1}{2}$ ft (1.1 - 1.4 m) above the water surface, and no closer than 2 ft (0.6 m) from the surface of the dock or platform on which the microphone stands, as near to the end of the dock as possible or overhanging the end of the dock. Measurements shall be taken while the boat is passing no more than three (3) feet (0.9 m) on the far side of all three markers.



Environmental Quality Commission

POST OFFICE BOX 1760, PORTLAND, OREGON 97207 PHONE (503) 229-5696

MEMORANDUM

TO: Environmental Quality Commission

FROM: Hearing Officer

SUBJECT: Hearing Regarding Proposed Amendments to Rule Establishing Noise Emission Limits for New Motorboats

Background

Maximum permissible levels of noise emissions for newly manufactured motor vehicles are specified in DEQ's noise regulations (OAR 340-35-025). Motor vehicles currently regulated include automobiles, trucks, buses, motorcycles, and snowmobiles. The Oregon State Marine Board has requested that the Department amend the motor vehicle regulations to also include motorboats.

The Department's proposed rule amendment would require new motorboats to meet a noise emission limit of 82 dBA under the standard fifty (50) foot pass-by test procedure. The proposed rule would apply to all new motorboats except outboard motorboats with underwater exhausts. Outboard boats are believed to be well within the proposed standards and thus should not be burdened with the regulation.

Pursuant to Commission authority, a public hearing on the proposed amendment was held in Portland on March 25, 1980. Approximately 15 persons attended that hearing. A summary of the oral testimony received at that hearing and of written testimony received within 10 days subsequent to the hearing follows.

Summary of Testimony

Dean Hartley, Marine Officer, Clackamas County Sheriff's Department

Sheriff Hartley stated that his biggest headache as Marine Officer is the noise problem. Because he is the only Marine Officer for the County, there are too many boats for him to conduct a noise emissions field test on each. Sheriff Hartley believes that motorboats are being sold with ineffective exhaust systems and that the proposed rule amendment will help relieve some of Clackamas County's noise problems. Sheriff Hartley stated his biggest problem in dealing with motorboat noise to be a lack of adequate manpower.

Donald D. Welch, citizen

Mr. Welch is concerned with the motorboat noise impacting his neighborhood and predicts that it will magnify as recreational and economic use of the river increases. He stated that enforcement on the river is not the best solution if the noise is to be controlled before the problem gets out of hand. Mr. Welch believes that the solution lies in control of the manufacture and use of motorboat equipment, and is seeking legislation to prohibit modification of motorboat exhaust systems.



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Mr. Welch submitted the following exhibits:

- Exhibit A) Letter to Senator Brown from Mal McMinn, Director, Oregon State Marine Board. In his letter, Director McMinn summarizes the Marine Board's activities in attempting to control excessive noise from boats on the Willamette River; these activities are:
1. Working with the Oregon Sheriffs' Association on issuing warnings to inadequately muffled motorboats.
 2. Manufacturer specifications for motorboat noise emissions.
 3. Attempting to adopt state-wide, a noise control rule that was placed as a temporary rule for Cottage Grove Lake in 1979 and has proved to be workable.
- Exhibit B) Letter to Mal McMinn, Director, Oregon State Marine Board from Don Welch, citizen. Mr. Welch's letter states that he represents citizens who intend to impact administrative decisions to reduce what they consider an unreasonable noise level emanating from the recreational use of the Willamette River between the Oregon City falls and the Portland industrial area. In keeping with this mission, the group's position is that "true noise control in Oregon's recreational waters will be impossible until controlling legislation is enacted demanding manufacturers or retailers to adequately equip boats and requiring boat owners to avoid equipment modification." The group supports the proposed rule changes.
- Exhibit C) Letter to Director McMinn, Oregon State Marine Board signed by 10 citizens. This letter supports that written by Don Welch and emphasizes the unreasonable noise levels created by motorboats with straight pipes. The citizens support efforts to monitor motorboat noise and to increase enforcement of laws pertaining to their operation.
- Exhibit D) Letter to Hugh D. Dwight from Director McMinn, Oregon State Marine Board. In this letter, Director McMinn notes that residents on the Willamette in Multnomah County, along the Rogue River, and recreationists on just about every waterway in the state have complained of motorboat noise. In reference to the proposed rule amendment, Director McMinn encourages support and states, "It would have the effect of stopping the flow of noise polluting boats directly from showroom floor to river."
- Exhibit E) Letter to the Editor sent to seven local newspapers, written by Don Welch. An outline of the motorboat noise problem and a request for help in enhancing public awareness.

Hugh D. Dwight, citizen

Mr. Dwight states that he has talked to all of his neighbors and they are very concerned about motorboat noise. Mr. Dwight is a painter whose studio is in his home; he works there all day, and protests the noise impacting his living and work areas. Mr. Dwight does not object to boats if they can operate without excessive noise.

Ernest Drapela, Director, City of Eugene Parks and Recreation Department

Is interested in controlling noise on their rivers and intend to develop proposals unique to their own situation. Feels the proposed amendment would have little affect in Eugene because their noise problems are largely from "jet sleds".

Mary Jubitz, Terwilliger Community League and Boat Noise Committee

Ms. Jubitz has been gathering several hundred signatures asking for better enforcement of existing motorboat noise regulations. She feels that the proposed amendment may be helpful in the long run.

Craig S. Dawson, citizen

Supports amendment. Is particularly concerned about the lack of noise control enforcement.

Robert C. Cowger, M.D., citizen

Supports amendment, feels existing limits are unenforceable on the waterways because of current inadequacies in law enforcement facilities.

Morrison Conway, citizen

Wonders if it is possible to ban noisy boats from populated areas. Is concerned with the existing motorboats because they won't be quieted by the proposed amendment. Mr. Conway wants the Department to consider the possibility of boats being altered after marketing and conducting the noise emission tests at full throttle.

Richard S. Springer, Chairman, Terwilliger Community League

Excessive motorboat noise creates an unhealthy and bothersome intrusion into their neighborhood. The League urges adoption of the proposed amendment.

Frank H. Lockyear, citizen

Mr. Lockyear finds the noise caused by boat traffic on the river to be unbearable. He hopes that "boats can be required to use noise control devices in the near future."

Earlen Perry and Varrez Perry, citizens

The Perrys feel that existing motorboat restrictions are too liberal and would like to see them as restrictive as the snowmobile noise emission standards, which are at 77 dBA. Their problem is with inadequately muffled motorboats and they believe that boats with underwater exhausts create no noise problems.

Hearing Officer Report
April 15, 1980
Page 4

T. Natori, General Manager, Suzuki International

Suzuki believes the proposed rule amendment to be quite practical and appreciates DEQ's approach.

H. E. Higley, et al., citizens

Residents of the Corbett-Terwilliger and Riverdale areas of Portland who have been working to find solutions to the excessive motorboat noise problem on the Willamette River. The group of eleven urges adoption of the proposed amendment.


Exhibits are:

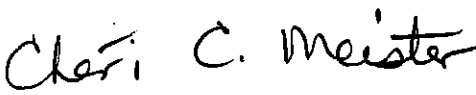
Exhibits A - E	Testimony submitted by Don Welch
Exhibit F	Letter from Craig S. Dawson, D.C.
Exhibit G	Letter from Robert C. Cowger, M.D.
Exhibit H	Letter from Morrison Conway
Exhibit I	Letter from Richard S. Springer
Exhibit J	Letter from Frank H. Lockyear
Exhibit K	Letter from Earlan and Varrez Perry
Exhibit L	Letter from Suzuki
Exhibit M	Letter from Corbett-Terwilliger and Riverdale Residents

Recommendation

Your Hearing Officer makes no recommendations in this matter.

Respectfully Submitted,


Jerry V. Jensen


Cheri C. Meister

CCM:pw
April 15, 1980
229-5092

STATEMENT OF NEED FOR RULEMAKING

Pursuant to ORS 183, this statement provides information on the Environmental Quality Commission's intended action to adopt a rule.

1. Legal authority

This rule may be amended pursuant to ORS 467.030.

2. Need for the rule

New motorboats cause noise impacts detrimental to the public health, safety, or welfare. The Oregon State Marine Board also believes such a rule is needed to control excessive motorboat noise.

3. Principal documents relied upon in this rulemaking:

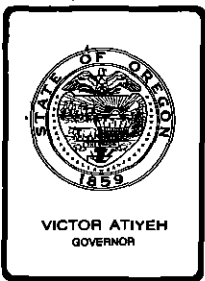
- a) Letter to the Department from Oregon State Marine Board, dated June 20, 1979.
- b) SAE Recommended Practice - Exterior Sound Level Measurement Procedure for Pleasure Motor Boats - SAE J34.
- c) California Motorboat Noise Regulations - Harbor and Navigation Code; Sections 654.05 and 654.06.
- d) Washington Watercraft Noise Performance Standards - Washington Administrative Code, Chapter 173-70.

The above documents may be reviewed at the Department's offices at 522 Southwest Fifth Avenue, Portland, Oregon.

4. Fiscal impact

It is believed that many new motorboats presently comply with the proposed noise emission limit. Therefore, a minimal adverse economic impact to the manufacturers may result.

John Hector:b
(503) 229-5989
April 24, 1980
NB1389.A



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

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

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. P, May 16, 1980, EQC Meeting

Water Quality Rules - Proposed Adoption of Amendments to Water Quality Rules Which Describe Responsibility for Pretreatment of Industrial Wastes Discharged to Sewerage Systems (OAR 340-45-063)

Background

Often industries discharge their process waste waters to a municipal sewerage system for treatment rather than operating their own treatment system. Because of the nature of these industrial wastes, it is often necessary for the industry to provide a certain level of pretreatment prior to discharging to the sewerage system. If pretreatment does not take place, the industrial wastes may cause sewage treatment plant upsets, deposit heavy metals in sewage sludges, and/or pass on through the sewage treatment plant and create problems in the receiving stream.

The Environmental Protection Agency has adopted general industrial waste pretreatment rules and is in the process of developing and adopting categorical pretreatment standards for several categories of industries. EPA rules provide for NPDES states to administer the federal pretreatment program. In fact, the EPA rules state that refusal of an NPDES state to seek approval of a pretreatment program constitutes grounds for withdrawal of NPDES program approval.

Oregon has always dealt with industrial waste pretreatment problems as they have developed and has very few outstanding problems. It is not the intent to embark on a new crusade but only to do what is necessary to help the municipalities implement pretreatment programs including those facets promulgated by EPA.



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In order for the Department to administer the federal pretreatment requirements so that EPA is not administering them in Oregon, some minor rule modifications are necessary. The proposed rules require each owner of a sewerage system which receives industrial waste to develop and implement an industrial waste pretreatment program and to comply with state and federal pretreatment requirements. The rules delineate the Department's role and the sewerage system owner's responsibility with respect to administering the pretreatment requirements. The rules also provide the mechanism for public participation as the Department reviews pretreatment programs submitted by the sewerage system owners for approval.

Evaluation and Alternatives

The only alternative to adopting these rules or something substantially similar would be to let EPA administer pretreatment in Oregon. The Department believes that the interests of Oregon citizens are better served by the Department administering the program rather than EPA.

Through the public participation process there was only one concern expressed. The concern was that the regulations as written would impose unlimited financial liability upon a sewerage system owner in the event of a damaging industrial discharge. After discussing this matter with the Attorney General's Office, it was decided that the language imposed no more liability than should be imposed to implement existing laws and, therefore, the language was left the same. A letter explaining this decision has been sent to the person who raised the concern.

Summation

1. EPA has adopted pretreatment rules and is in the process of adopting pretreatment standards for many industries.
2. Oregon does not have severe pretreatment problems but it would be to our advantage to administer the federal pretreatment program rather than leaving it to EPA.
3. The proposed rules will provide us the mechanism for implementing the required pretreatment program.
4. After public participation, no changes in the proposed rules are recommended.

EQC Agenda Item No. P
May 16, 1980
Page 3

Director's Recommendation

Based on the Summation, it is recommended that the rules contained in Appendix A be adopted as proposed.

Bill

WILLIAM H. YOUNG

Attachments: Appendix A - Proposed Rules OAR 340-45-063
Appendix B - Statement of Need
Appendix C - Hearing Officer Report

Harold L. Sawyer:pl
(503) 229-5324
May 2, 1980

PROPOSED ADDITIONS TO OREGON ADMINISTRATIVE RULES CHAPTER 340Water Quality ControlIndustrial Waste Pretreatment

340-45-063 (1) All owners of sewerage systems which receive industrial waste subject to federal or state pretreatment standards shall develop and implement a pretreatment program for controlling those industrial contributors. The program shall be submitted to the Director for approval. Prior to approval, the Director shall provide opportunity for public comment by issuing a public notice of the receipt of a pretreatment program. Opportunity shall also be provided for a public hearing. Any person or group of persons may request or petition for a public hearing. A public hearing will be held if the owner of the affected sewerage system so requests. Also, if the Director determines that useful information may be produced thereby, or if there is significant public interest, a hearing will be held.

(2) The Director will review requests for revisions of categorical pretreatment standards to reflect removals achieved by the sewerage system. No removal credit is allowed unless approved by the Director.

(3) Both the owners of sewerage systems receiving industrial wastes and the industrial contributors shall comply with applicable pretreatment provisions of the federal Clean Water Act and the rules of the Department.

(4) Where a question exists as to whether or not an industrial contributor falls within a particular industrial subcategory, the Director shall make a written finding and shall submit it to the EPA Regional Enforcement Division Director for a final determination, unless the Enforcement Division Director waives the receipt of the Director's determination as provided in the federal regulations. In that case the Director's determination shall be final.

(5) The owner of a sewerage system receiving industrial waste is responsible to assure that the industrial contributor meets the prohibited discharge or categorical pretreatment standards established by the United States Environmental Protection Agency or the Department, whichever is most limiting. The owner of the sewerage system may impose more stringent pretreatment standards if deemed necessary by the owner for the proper operation and maintenance of the sewerage system or disposability of the sewage sludge.

(6) The Director will review requests for Fundamentally Different Factors variances and shall either deny them or concur with them and submit the concurrence to the United States Environmental Protection Agency for approval, as provided in federal regulations.

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
OF THE STATE OF OREGON

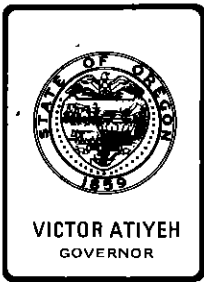
In the Matter of the Adoption of an)
Addition to the Water Quality) STATEMENT OF NEED
Control Rules, OAR Chapter 340,)
Section 45-063)

The Environmental Quality Commission intends to adopt an additional section to the Water Quality Control Rules, OAR Chapter 340, Section 45-063.

- A. Legal Authority ORS 468.730 1973 Amendments
B. Need for Rule.

The proposed rule is needed to establish policy regarding state implementation of a federally required industrial waste pretreatment program and to establish public participation procedures for the review of pretreatment programs prepared by publicly owned treatment works.

- C. Documents relied upon.
1. Federal Clean Water Act, Public Law 95-466
 2. 40 CFR Part 403 - General Pretreatment Regulations for Existing and New Sources of Pollution.
 3. Oregon Department of Environmental Quality Pretreatment Program. Submittal dated September 6, 1979.



Department of Environmental Quality

522 SOUTHWEST 5TH AVE. PORTLAND, OREGON

MAILING ADDRESS: P.O. BOX 1760, PORTLAND, OREGON 97207

APPENDIX C

MEMORANDUM

To: Environmental Quality Commission

From: Charles K. Ashbaker, Hearing Officer

Subject: Report of Public Hearing Held to Receive Testimony Regarding Proposed Modification of Water Quality Rules to Add Provisions for Implementing Federal Pretreatment Program.

Procedures Followed

A public notice of the proposed rules was mailed March 24, 1980, to the Department rulemaking notice list. In addition, it was sent to the Secretary of State for publication in the Secretary of State's Bulletin, and to all cities where an industrial waste pretreatment program will probably be required.

We had a lot of interest from persons requesting copies of the proposed rules.

A hearing was held at the Yeon Building on April 24, 1980, at 1:00 p.m. Seventeen people attended. The hearing officer gave a brief explanation of the proposed rules and why they were necessary. The hearing was then opened for public testimony. Only one person testified for about one minute. After the close of the formal testimony, the hearing officer and other staff remained and answered questions for about 45 minutes.

Summary of Testimony

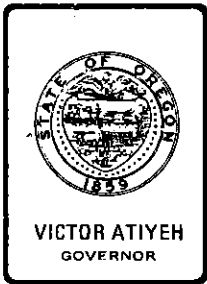
Mr. Gary Bradshaw from the Metropolitan Service District, testified in behalf of their Water Resources Policy Advisory Committee, which thought that the municipalities would be accepting unlimited financial liability if the rules were promulgated with the present language in paragraphs 3 and 5. He suggested that paragraph 5 be deleted and replaced with language which limited their scope of liability to instances where it could be shown that they failed to properly monitor the program.

The hearing officer requested that their comments be submitted in writing to avoid any misunderstanding. In response to that request, a letter was submitted by the Unified Sewerage Agency of Washington County. A copy of the letter and the hearing officer response is attached for your information.

This concludes the testimony received and is respectfully submitted to the Environmental Quality Commission for their consideration.

C. K. Ashbaker:pl
(503) 229-5325
May 2, 1980

Attachments



Department of Environmental Quality

522 SOUTHWEST 5TH AVE. PORTLAND, OREGON

MAILING ADDRESS: P.O. BOX 1760, PORTLAND, OREGON 97207

May 2, 1980

Mr. Gary F. Krahmer, General Manager
Unified Sewerage Agency of Washington County
150 North First Avenue
Hillsboro, OR 97123

Dear Mr. Krahmer:

Thank you for your written comments regarding the pretreatment rules.

Paragraph 3 refers to the applicable pretreatment provisions of the Clean Water Act in general, including development of a pretreatment program by a POTW, reporting requirements, handling of removal credits, and etc.

Paragraph 5 refers specifically to prohibited discharge standards and categorical standards established pursuant to the Act and is not necessarily redundant to paragraph 3 but is helpful in clarifying the sewage works owner's responsibility.

When the owner of a sewerage system elects to receive waste from an industrial contributor they do assume responsibility of that waste and must have an enforcement mechanism for requiring the industrial contributor to meet applicable standards.

After discussing your comments with Mr. Ray Underwood, Assistant Attorney General, it was concluded that the present language in paragraphs 3 and 5 is appropriate and no change is recommended at this time.

Sincerely,

Charles K. Ashbaker, Supervisor
Source Control Section
Water Quality Division

CKA:l
WLS

cc: Raymond P. Underwood, Department of Justice



Unified Sewerage Agency of Washington County

150 N. First Avenue
Hillsboro, Oregon 97123
503 648-8621

April 29, 1980

RECEIVED
MAY 01 1980

C. Kent Ashbaker
Oregon Department of Environmental Quality
P.O. Box 1760
Portland, Oregon 97207

DEPT. OF ENVIRONMENTAL QUALITY

Dear Mr. Ashbaker:

SUBJECT: INDUSTRIAL WASTE PRETREATMENT REGULATIONS (OAR 340-45-063)

The Metropolitan Service District advised us that you needed a written statement to supplement oral testimony presented by MSD at your April 24, 1980, Public Hearing. Basically, the Agency recommends that Paragraph (5) of the proposed regulations be deleted in its entirety, for the following reasons:

#1 - Paragraph (3) of the proposed regulations refers to compliance with pretreatment provisions of the federal Clean Water Act, which makes Paragraph (5) superfluous.

#2 - The wording in Paragraph (5) implies that the sewerage system owner must assure that no industrial discharge violates any pretreatment standard at any time, which is completely unrealistic. This paragraph also infers that the sewerage system owner assumes liability for industries' actions, whether or not those actions results in non-compliance with the effluent discharge standards placed on the owner's treatment plant.

#3 - The last sentence in Paragraph (5) is unnecessary, since sewerage agencies already have this authority.

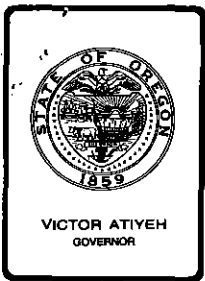
Thank you for the opportunity to comment on these proposed regulations. Please send us a copy of the revised regulations that will be presented to the Environmental Quality Commission for adoption.

Very truly yours,


Gary F. Kraemer
General Manager

THB:jf

cc: John LaRiviere, MSD



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

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

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. Q, May 16, 1980, EQC Meeting

Proposed Adoption of Temporary Rule
Amending OAR 340-71-017, Inspection
of Installed Subsurface Systems

Background and Problem Statement

Administrative Rules governing subsurface and alternative sewage disposal, OAR 340-71-017, requires that each installed subsurface sewage disposal system be inspected.

House Bill 2621, 1979 Legislative Session, provides for Department flexibility in system inspections. That flexibility has not been incorporated into Administrative Rules.

At its meeting April 18, 1980, the Commission heard testimony from an installer located in the Lane County coastal area regarding his inspection difficulties. Lane County has an inspector travel from Eugene to the coast on Wednesdays and Thursdays each week. When the installer completes an installation he must wait for the inspector to arrive from Eugene. Often the wait can be several days. The waiting period costs both the installer and his client money as well as time.

Alternatives and Evaluation

Alternatives are:

1. Leave Administrative Rules as they are and implement the provisions of the statutes directly. Amend the rules as part of a larger rule package later this year.
2. Adopt amendments to the Rules, using permanent rule procedures of public hearings, etc.



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3. Adopt a temporary rule which would go into effect immediately.

After an evaluation of alternatives, staff is of the opinion that the third is the better alternative. It has the advantages of being effective immediately that the second alternative does not. In addition, it spells out criteria for waiving inspections so that the better installers are given recognition for good work.

Summation

1. House Bill 2621, 1979 Legislative Session, provides for flexibility in inspecting installed subsurface systems. That flexibility has not been incorporated into Administrative Rules.
2. Adoption of a temporary rule to become effective immediately is the alternative of choice, in dealing with this situation.

Director's Recommendation

Based upon the summation and the Findings in Attachment "B", it is recommended that the Commission adopt the proposed temporary rule amending OAR 340-71-017, as set forth in Attachment "C".



William H. Young

Attachments: 3

- Attachment "A" Statement of Need for Rulemaking and Fiscal Impact Statement
- Attachment "B" Findings
- Attachment "C" Proposed Temporary Rule Amending OAR 340-71-017

T. Jack Osborne:lcl
229-6218
April 29, 1980
XL1405

STATEMENT OF NEED FOR RULEMAKING
and
FISCAL IMPACT STATEMENT

Pursuant to ORS 183.335, this statement provides information on the Environmental Quality Commission's intended action to adopt a rule.

Proposed amendment to OAR Chapter 340 Division 71, amend subsection 340-71-017, Inspection of Installed Systems and Certificates of Satisfactory Completion.

- A. Legal authority for rules governing subsurface and alternative sewage disposal is ORS 454.625.
- B. The need for rulemaking is based upon the fact that House Bill 2621, 1979 Legislative Session, provides for Department flexibility in whether to inspect installed subsurface sewage disposal systems. That flexibility has not been incorporated into administrative rules. At least one system installer in the Lane County coastal area pleads for relief from the more restrictive rules now in effect. He states that the rules require him to wait an inordinate amount of time for inspections. The extra time costs both he and his client. It is Department's opinion that this relief can be best provided by adoption of a temporary rule.
- C. Principal documents relied upon: House Bill 2621.
- D. Fiscal Impact. Fiscal impact will fall upon the Department and contract counties as well as licensed sewage disposal service companies. The fiscal impact should be positive in that work time will be saved by all concerned whenever an inspection is waived.

Jack Osborne:lcl
229-6218
XL1405.A

STATE OF OREGON
ENVIRONMENTAL QUALITY COMMISSION

FINDINGS

The Environmental Quality Commission of the State of Oregon finds that its failure to act promptly, by adopting a temporary rule, amending OAR 340-71-017, will result in serious prejudice to the public interest or the interest of the parties concerned, for the following reason:

House Bill 2621, 1979 Legislative Session, provides for flexibility in whether to inspect installed subsurface sewage disposal systems. That flexibility has not been incorporated into Administrative Rules. At least one system installer pleads for relief from the more restrictive rules now in effect. He states that the rules require him to wait an inordinate amount of time for inspections due to distance and travel time required by the inspecting jurisdiction. The extra waiting time costs both him and his client.

Joe B. Richards, Chairman

XL1405.B

PROPOSED
AMENDMENT TO OAR 340-71-017

OAR 340-71-017 is rescinded in its entirety and the following language is substituted:

340-71-017 Pre-cover Inspection.

- (1) When construction is complete, except for backfill (cover), the permit holder shall notify the Director or his authorized representative. The Director or his authorized representative shall inspect construction to determine if it complies with rules of the Commission.

Exception. The Director or his authorized representative may, at his own election, waive the pre-cover inspection provided:

- (a) The installation was made by a sewage disposal service licensed pursuant to ORS 454.695; and
 - (b) The inspecting jurisdiction has developed an impartial method of identifying those installers who have a history of proper installations without excessive numbers of corrections; and
 - (c) Inspections waived are for installations made by installers identified as having a good history of proper installation; and
 - (d) A list of installers whose inspections may be waived is available for inspection by the Department; and
 - (e) A representative sample of every installers systems is inspected, regardless of installation history; and
 - (f) After system completion the installer certifies that the system complies with rules of the Commission.
- (2) When feasible, the Director or his authorized representative shall notify the permit holder, whose work is to be inspected, whether the pre-cover inspection is expected to be made within seven (7) days.
 - (3) Certificate of Satisfactory Completion. The Director or his authorized representative shall issue a Certificate of Satisfactory Completion, for that construction inspected, unless construction does not comply with rules of the Commission.

If inspected construction does not comply with rules of the Commission, the permit holder shall be notified in writing. System deficiencies shall be explained and satisfactory completion required. Follow-up inspections may be waived by the Director or his authorized representative. After satisfactory completion a Certificate shall be issued.

If the inspection is not made within seven (7) days after notification, a Certificate of Satisfactory Completion shall be considered to have been issued.

Neither the permit holder, the system installer, nor any other person may backfill (cover) a system that does not comply with applicable rules and permit conditions.

Failure to meet requirements for satisfactory completion within thirty (30) days after written notification constitutes a violation of ORS 454.605 to 454.745.

- (4) No person shall operate or use any system, completed on or after January 1, 1974, unless a Certificate of Satisfactory Completion has been issued for the construction.
- (5) A Certificate of Satisfactory Completion shall be valid for a period of one (1) year, for connection of the system to the facility for which it was constructed. After the one (1) year period, rules for connection to existing systems shall apply.
- (6) Denial of a Certificate of Satisfactory Completion may be appealed in accordance with ORS 183.310.

XL1405.C

ENVIRONMENTAL QUALITY COMMISSION

May 16, 1980

BREAKFAST AGENDA

1. Willamette Valley Regional Manager's Report
2. Air Quality Offsets and Banking (Weathersbee)

LUNCH AGENDA

1. Status Report on Program Evaluation Study
2. Review of Hearing Officer Duties



TO: Distribution Below

FROM: Carol Splettstaszer

SUBJECT: May 16, 1980 EQC Breakfast and Lunch

DATE: 5-6-80

Because we will be having breakfast and lunch in the Blue Room of the Capitol Building, we are ABSOLUTELY LIMITED to 20 persons. Please note that those of you on the list below, and the 5 Commission members add up to 19 persons.

Please let me know as soon as possible if you will be unable to attend breakfast and lunch with the Commission and who, if anyone, will be taking your place.

REMEMBER, WE CAN HAVE NO MORE THAN 20 PERSONS!!! If someone appears that I'm not expecting (especially staff) they won't be included!!!

DISTRIBUTION

- ~~x Young~~
- ~~x Downs~~
- ~~x Swenson~~
- ~~x Weathersbee~~
- x Sawyer
- x Schmidt
- x Bolton
- x Westgarth
- x Underwood
- Vlastelicia
- Zucker
- x Kessler
- ~~x [unclear]~~

Carol

Others
~~[scribble]~~
 x Borden

Payne
 5 EQC
 Splettstaszer



EQC BREAKFAST/LUNCH REGULARS

Richards
Somers
Densmore
Bishop
Burgess

Young
Downs
Swenson
Splettstaszer
Weathersbee
Sawyer
Schmidt
Bolton
Westgarth
Underwood
Vlastelicia
Zucker
Kessler
M. Friteler

STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE MEMO

TO: All Satellite Support Units

DATE: May 13, 1980

FROM: Meredith Windsor

SUBJECT: Work Orders

As previously discussed, you need not prepare work orders for certain kinds of typing done in your satellite support areas.

These include short letters, memos, reports, general conditions for permits and tax credits.

Please keep a daily line count estimate for future work load identification in your unit.

Work orders should be sent to the Correspondence Center for all work that is to be stored in the system, whether done in the satellite units or in the Correspondence Center. Soon we should have the system programmed to record line count automatically.

ES:w

MW2

cc: Debby Onishi
Hazel Altig
Anna Kingsfather
Mary Bright
Phyllis Winters
Hallie Kraetsch
Carol Spletstaszer
Jan Shaw
Alice Everest
Pam Contessa

Attending PMH Classes

Cosmo Airtel 255-6510

Tues - Job of Supervision

Wed - Motivation & Discipline

I will call in at morning and
afternoon breaks -

Carol



MULTNOMAH COUNTY OREGON

DIVISION OF PLANNING AND DEVELOPMENT
2115 S.E. MORRISON
PORTLAND, OREGON 97214
(503) 248-3591

DONALD E. CLARK
COUNTY EXECUTIVE

May 15, 1980

Environmental Quality Commission
522 S.W. Fifth Avenue
Portland, Oregon 97204

Att'n: William Young, Director

Re: Columbia Sand and Gravel Co. Application

Dear Mr. Young:

We understand that the applicants have re-applied for approval of the necessary permit to conduct a disposal operation in their gravel pit at N.E. 122nd Avenue and San Rafael Street.

The County, through the Hearings Council and the Board of County Commissioners has approved the use proposed under the Community Service provisions of the Zoning Ordinance, with specified operation and management conditions and subject to approval by DEQ.

We are interested in assuring that the property is converted to a productive urban use as part of the residential-commercial pattern of the area.

Secondly, we wish to see that filling or other reclamation activities are conducted under measures which result in safety for those concerned and freedom from hazardous conditions. The management conditions imposed in the County approval were designed for this purpose.

The East County Groundwater Plan, recently approved, is evidence of the County's position regarding the quality of the groundwater resource in this area.

The purpose of this letter is to indicate our dual interests in achieving adequate groundwater quality and satisfactory restoration of the site for beneficial uses under safe operating procedures.

Yours very truly,

MULTNOMAH COUNTY DIVISION OF
PLANNING AND DEVELOPMENT

Robert S. Baldwin,
Acting Director



Sweet, Edwards & Associates, Inc.
P.O. Box 328 • Kelso, WA 98626 • 206-423-3580
Environmental Geology, Ground Water, Engineering Geology & Drilling Services

MEMORANDUM

TO: Environmental Quality Commission
FROM: Randy Sweet, Geologist/Hydrogeologist
DATE: May 16, 1980
SUBJECT: Land Reclamation Application for Landfill Permit

CORRECTION TO THE APPLICANTS BRIEF

Under Technical Concerns, page 10, No. 4, line 19-22 should read:

- 4) It is common to evaluate leachate adsorption in soil on the basis of cation exchange capacity (CEC) in meq/100 gm. We have assumed the sands and gravels have a CEC of 1 meq/100 gm and nitrogen sorption is the most important mechanism at the site. This is acknowledged to be a conservative estimate and nitrogen is the water coincident contaminant of greatest concern in East Multnomah County. We estimate that, if 100% of the leachate generated...

COMMENTS ON DEQ BRIEF

The comparison of this site to the Turner wood waste disposal site is totally invalid given the fact that fresh hemlock bark was used to fill an abandoned gravel borrow pit with standing water, i.e., the water table, in the bottom of the pit and that the Turner site was not covered with soil.

Durham pits have a history of contamination from gravel processing wash water taken from the fecally contaminated Fanno Creek. Durham pit is also excavated below the water table, not more than 100 feet above it as the Columbia Sand and Gravel site is.

I have in fact found no documented case of ground-water degradation resulting from a demolition fill in a similar hydrogeologic environment even without engineered leachate collection and a capping seal.

GROUND WATER PROTECTION CONCERNS

Yesterday, in a discussion with Kent Mathiot of the WRD that related only to technical considerations of the proposed site development and operation, he generally concurred with our responses to his technical concerns as outlined in his memos of May 11 and November 2, 1979. Specifically we agreed on:

- 1) estimated volumes of leachate generation;
- 2) adequacy of the leachate collection system;
- 3) estimated volumes of leachate leakage; and
- 4) treatment capacity of the clay liner and underlying unsaturated sands and gravels.

We also agreed that additional testing is necessary prior to final design, approval and construction of the proposed leachate skimming contingency system.

The legal and institutional questions in Mathiot's memo regarding construction certification and perpetual care are valid and were addressed by Bryan Johnson.

Finally, my professional opinion is that the proposed design and operation will not result in a violation of existing drinking water quality standards or any significant ground-water degradation.



STATE OF OREGON

INTEROFFICE MEMO

DEQ, WVRS
DEPT378-8240
TELEPHONE

TO: Joe Richards, Chairman,
Environmental Quality Commission

DATE: May 12, 1980

FROM: John Borden, Manager, Willamette Valley Region

SUBJECT: Significant Willamette Valley Region Activities

Lane County (AQ)

Don Arkell, Lane Regional Air Pollution Authority Director, offers the following informational items:

1. LRAPA and Kingsford have agreed upon a compliance schedule for fugitive and stack emissions. Fugitives should be in compliance by June, 1980 and stack emissions by December, 1982.

The EWEB cogeneration project at Kingsford will be abandoned. But Springfield is considering one of their own either starting from scratch with woodwaste boilers, or using Kingsford's retorts.

2. Lane County veneer dryer compliance schedules are still set for December 31, 1980. The depressed timber industry situation may affect those schedules.
3. LRAPA is reviewing Lane County's variance request for their refuse derived fuel (RDF) plant air system "bleed off" vent. The current question is what is the best technology for controlling the vent emissions.

Lane County (WQ and SW)

1. River Road/Santa Clara: Following your April 18, 1980 repeal of the septic tank moratorium, DEQ and the Lane County Department of Environmental Management agreed upon a procedure for implementation of the temporary regional subsurface sewage disposal rule. And meetings have begun on the stipulated agreement which involves all parties. Agreement has been reached on several issues.
2. In my 1978 report, I mentioned that Junction City proposed use of disinfected sewage lagoon effluent on mint crops. That project has operated successfully through its first year.

3. MWMC is struggling to maintain a viable project in the face of the freeze of EPA FY80 funds. The principal focus is the East Bank Interceptor. Advance authorization has been granted for pipe purchase and delivery, but not for trench construction. Accordingly, large cost increases will occur since the pipe must be temporarily stored rather than delivered to the side of the trench as previously planned.

Brown and Caldwell is working on an interim sludge management program. The likely alternative is disposal at Short Mountain Landfill, then sludge use on a demonstration plot on agricultural land at a yet-to-be-determined site.

Springfield hired Kramer, Chin & Mayo to look at their treatment plant and collection system. They will actually identify the anticipated life expectancy of sewer segments, and what may be needed to extend STP life. They too are heavily counting on timely construction of the East Bank Interceptor.

4. Creswell and Oakridge are weaning themselves from the federal grant program. Creswell will be committing local funds to enlargement of their treatment system, summer effluent irrigation, and infiltration repairs. Oakridge is already spending significant local dollars on inflow and infiltration improvements.
5. Lowell has experienced extremely difficult financial problems for years. Recently, they were divorced from a possible joint venture with Dexter community, and the situation looked especially grim. But Lowell has begun looking at how to repair their sewerage system. Current emphasis is on collector sewer upgrades with LCOG and FmHA assistance.
6. After a year of hard times (plant explosion in November, 1979; defeated bond election and special levy on March, 1980), the situation may be improving for the Lane County RDF Plant in Glenwood. Soaring energy prices and woodwaste fuel shortages have caused many potential customers to reconsider the merits of RDF. Limited quantities of RDF are again being produced. And the plant may be fully operational yet this month. The most likely customers at this time are the University of Oregon and Georgia Pacific in Springfield.

Linn County

1. Teledyne Wah Chang Albany has continued to make environmental gains in accordance with Department requirements. The contested

case on their Air Contaminant Discharge Permit has been resolved, and the plant is now in compliance with all permit conditions. Two recent control installations under evaluation are electrostatic scrubbers on the magnesium recovery furnace and the zirconium and hafnium calciners.

TWCA's NPDES Permit and Permit Addendum (No. 2), contested primarily because of effluent limitations, are yet to be resolved. For the most part, the plant has operated in compliance with the conditions of the permit and addendum, except for "upsets" and occasional excursions. The Department has negotiated with TWCA to isolate those "upsets" that are avoidable and subject to civil penalty. All civil penalties that have been assessed have either been settled or paid.

2. Duraflake has significantly reduced air pollutant emissions. Our current priorities are:
 - a. Fugitive emission reductions by closing doors or reducing door sizes, retraining bucket loader operators, enclosing belt conveyors, ductwork repair, increasing pavement sweeping frequency, etc.
 - b. Upset conditions--reduce frequency of occurrence.
 - c. Stack emission from the 85 predryer--Duraflake has modified their sanderdust burners and installed a medium-efficiency scrubber on the dryer to control emissions. This combination was unsuccessful, and flue gases are now permanently bypassed.

The mass and grain loading results are in compliance. Opacity will be checked between June 1 and August 1, 1980. If opacity noncompliance is determined, another control strategy will be needed. This could be very costly and would probably require EQC involvement.

3. Drapersville/Century Drive is a declared health hazard area east of Albany that will ultimately be annexed and served by Albany. On April 14, 1980, a public hearing was held by CH2M/Hill on the draft Facility Plan Report. The most cost effective alternative is conventional gravity sewerage and construction of an interceptor to the Albany sewage treatment plant. Estimated cost is about \$3.5 million.

4. Champion Building Products, Lebanon has completed installation of air pollution controls on their plywood and hardboard plants. The company has reduced their fuel (natural gas) consumption by 85% by using waste heat from their hogged fuel boilers. Boiler flue gases pass through a heat exchanger which supplies hot air for the hardboard plant dryers. Emissions from the dryers are "recycled" for hydrocarbon and particulate emission control by blending a portion of the emissions with the incoming hot air.
5. City of Brownsville is nearing completion of its expanded municipal waste treatment system. The City has been under a Stipulated Consent Agreement to complete the facilities. The treatment system consists of two separate lagoon systems, one with a discharge during the winter and the other with summer spray irrigation and no discharge.
6. City of Lebanon began operating its expanded municipal waste treatment system in March, 1979. The Department has been working with the City to develop a program to reduce excessive inflow and infiltration from their combined sewers.

Benton County

1. An extensive DEQ/Benton County survey of all the septic tank systems in North Albany has been completed. Approximately 600 residences were surveyed and approximately 150 failures were identified. Due to location and topographical differences, the survey was broken down into three separate sectors; 1, 2, and 3. In sectors 1 and 3, on-site repairs were determined to be feasible, and an extensive repair program has been started. In sector 2, the soils were so restrictive that options are now being explored with both the City of Albany and Benton County for a community type solution. Citizens in the affected areas have been involved in this process.
2. Evans Products Company, Corvallis has submitted its fugitive TCE emission reduction plan. The ambient sampling for TCE has been postponed due to technical difficulties in developing a suitable sampling program, and the need to sample when poor meteorological conditions exist. Willamette Valley Region staff have suggested modifications to both the fugitive study and ambient sampling.

Evans has successfully reduced the noise levels at the hardboard plant to less than 51 dBA at the nearest noise sensitive property. The nighttime standard is 50.
3. The Roche Road Disposal Site is on schedule for an October,

1980 closure. This site was the cause of numerous odor complaints from the City of Corvallis. Due to improved operational techniques, no odor complaints were received last fall or in 1980.

Marion County

1. Siltec Corporation, a California-based silicon ingot and wafer manufacturing firm, has been granted construction approvals and an Air Contaminant Discharge Permit for its proposed Salem facility. The plant is scheduled to be producing wafers by the end of July, although construction is presently behind schedule. The plant will ultimately employ up to 750 people.
2. Marion County has launched an extensive solid waste planning program in cooperation with Polk County to address the long range solid waste disposal needs of both counties. Currently, the joint county planning process involves approximately 140 citizen advisory group members broken down into several sub-committees.

Emphasis is to phase the Brown's Island Landfill out of operation by July, 1983. The planning process to date indicates Brown's Island will be replaced by an energy recovery system followed by the establishment of a new regional landfill. The committee is well organized and active.

3. City of Salem: Salem is coming to grips with its major sewerage problems, which include:
 - a. Severe infiltration/inflow and 73 identified bypass points to the Willamette River within the collection and transport system.
 - b. A 1985 maximum design life at Willow Lake STP (solids capacity problems now).
 - c. Occasional effluent violations due to the quality and quantity of raw wastewater.
 - d. Existing limitations and the apparent need for more flexibility in their sludge disposal program (BIOGRO).

The enormous costs anticipated for alleviating these problems will require a very detailed financial program. Dwindling EPA Construction Grants, coupled with prevailing economic conditions, will necessitate extremely complex solutions.

4. Salem Cannerys: The mayor and city council recently appointed an Industrial Waste Disposal Study Committee, charged with developing wastewater alternatives (e.g., spray irrigation) for the food processing industry. Implementation of such a program would prolong Willow Lake treatment plant life, and enable the City to focus on their other pressing sewerage problems. An EQC agenda item, probably a Stipulated Consent Agreement, is anticipated in the near future.
5. Salem Sludge Disposal: On September 13, 1979, EPA promulgated "interim final" regulations affecting municipal sludge disposal practices. Those regulations were issued under the Resource Conservation and Recovery Act (RCRA), and have serious implications for sludge disposal practices in the Willamette Valley, especially for the City of Salem. Two RCRA requirements are most significant for Salem:
 - a. Soil pH must be maintained at 6.5 or greater. Common valley farming practice is to be in the 5.5 to 5.8 range. Thus considerable quantities of lime would be necessary, with incremental costs being borne by Salem. This requirement applies to all food chain crops.
 - b. An 18 months waiting period is specified between sludge application and crop planting, for crops grown for direct human consumption. It is unclear if cannery processing (canned or frozen) is considered "direct human consumption".

Salem has approximately 5,000 acres of approved sludge disposal sites, none of which are city owned. Of this acreage, about 60% is allocated to the production of cannery crops affected by the above requirements.

Discussions are continuing with EPA and Del Monte representatives. Some type of variance program may be possible under a "good quality sludge" concept.

6. City of St. Paul recently passed a \$450,000 bond issue to finance the local share for construction of sewage collection and treatment facilities. Design work is currently being done under a Step II grant. Surfacing sewage due to malfunctioning drainfields has been located throughout the City.

7. City of Donald has severe problems with surfacing sewage and sewage being diverted to drainage tile. Two bond elections for the local share of financing for construction have failed. Design for sewage facilities is in progress, under a Step II grant. The City may not have the financial resources to cover the local share of construction. Their tax rate has increased from \$20.48 to \$27.36 per thousand during the period 1978 to 1980, largely due to major improvement in their water system. It could be as high as \$40.00 per thousand with a sewerage project.
8. City of Woodburn is nearing completion of its new sewage treatment plant and sewerage system upgrade. The estimated cost of these improvements is \$6.9 million, and the project gained support through an intensive community-wide effort.
9. City of Silverton has infiltration and inflow problems, and large amounts of raw sewage are bypassed during the winter. The City also has a sizable health hazard annexation area and several areas where the failure rate for septic tanks is high.

The EQC and Silverton recently entered into a Stipulated Consent Agreement which provides for upgrading sewage collection and treatment, and for sewerage the health hazard area. In addition, the Department will be working with the City to require service to the areas having failing septic tanks. Upgrading of the Silverton treatment and collection systems must proceed, even if grant funds are unavailable.

10. City of Gervais recently passed a bond levy authorizing upgrading of their sewage treatment facilities. A self-imposed building moratorium has been in place for some time due to limited treatment capacity. Design for the new facilities is being completed under a Step II grant.
11. Boise Cascade, Salem has continued to operate in compliance with both its Air Contaminant and Waste Discharge Permits. Odors and visible emissions have not been a problem in the vicinity of the plant since installation of the mist eliminator and taller stack in 1975.

The Department is currently working on an intensive study to investigate the impacts, if any, on groundwater and slough areas from historic liquor disposal practices on Minto Island. Previous studies have indicated that groundwater under Minto Island, where the Company's waste treatment lagoons are now located, may have been contaminated by liquor that was previously stored in unlined ponds. Conspicuous black plumes can be seen in the river.

Yamhill County

1. Publishers Paper, Newberg: The Company's \$127 million expansion program is well underway. The paper machine may start up as early as November. Included with the expansion program are:
 - a. A new 180,000 lb/hr hogged fuel fired boiler (estimated cost \$12 million).
 - b. Doubling their de-inking facilities to 200 tons per day (estimated cost of \$2.5 million).
 - c. Major modification and expansion of their wastewater treatment facilities (estimated cost of \$3.7 million).

Extensive Department involvement was necessary for this expansion program. The new hogged fuel fired boiler also required the Environmental Protection Agency's approval under their regulations for the Prevention of Significant Deterioration (PSD). EPA's approval required the Company to not only use Best Available Control Technology (0.04 gr/dscf particulate emissions), but to obtain offsets for projected hydrocarbon emissions (569 tons/year). The Company is still pursuing this latter requirement.

2. Yamhill County has resolved their need to establish a long term regional solid waste disposal site to serve as a regional facility for that county. On April 17, Yamhill County approved a zone change and planned unit overlay to develop a new regional disposal facility. The new site is located adjacent to the existing Whiteson Landfill, and is expected to last approximately 50 years.

We expect a permit application soon, and no major approval difficulties are expected. This new site will replace both the Whiteson and Newberg Landfills currently in use.

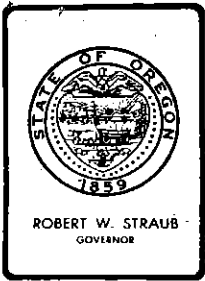
Miscellaneous

1. Tire disposal problems at landfills in Marion, Polk, Yamhill, Linn and Benton Counties are becoming a thing of the past. Valley Landfills, Inc., has recently opened a shredder operation for processing tires. Rather than stockpiling or burial at landfills, tires are now transported to Portland for shredding.

Shredded tires are sold in bulk to the Georgia Pacific mill in Toledo, Lincoln County, as a fuel supplement.

About 5,000 tires a day are processed, resulting in approximately 40 tons of fuel per day. Valley Landfills, Inc. expects their market to expand as they are financially able to bring more processing equipment on line.

wr



Department of Environmental Quality

SOUTHWEST REGION

1937 W. HARVARD BLVD., ROSEBURG, OREGON 97470 PHONE (503) 672-8204

November 17, 1978

Lynn Newbry
Medford Corporation
North Pacific Highway
Medford, Oregon 97501

RE: AQ-Jackson County
Medford Corporation
File No. 15-0048

Dear Mr. Newbry:

As a result of the recent changes in regulations for the Medford area, an Air Contaminant Discharge Permit has been drafted for your plant. A discussion draft of the permit is enclosed for your review. After you have reviewed it, we would like to sit down with you and discuss it before we prepare a final permit draft. A copy of the pertinent regulations is also enclosed, as well as the calculation of the plant site emission limit. Some of the changes since your last permit are discussed briefly below.

New Emission Control Equipment

Compliance schedules which we have previously agreed on are included.

Source Testing

Under the new regulations, regular source testing to determine whether a piece of equipment is operating within the rules is required. Equipment to be tested after compliance schedules are completed are hogged fuel boilers, veneer dryers, particle dryers, and charcoal producing plants. If any of these test consistently within the rules, we will likely reduce the source testing frequency. Each source will be looked at individually for this. Particleboard and fibreboard press vents will be tested to determine the particulate emissions (for inclusion in the plant site emission limits).

Plant Site Emission Limit

A plant site emission limit has been set for your plant, based on the most recent production figures (and hours of operation) and using emission factors assuming the required emission controls are installed. The plant site emission



Contains
Recycled
Materials

DEQ/RO-601

Lynn Newbry
November 17, 1978
Page Two

limit will not come into effect until your last compliance schedule is completed.

The regulations recently adopted provide no margin for industrial growth without offsetting emission reductions (in addition to the planned controls). We therefore expect significant increases in production, without reducing emissions rates at existing plants, will result in violations of air standards. This will occur even after the planned controls are completed.

What this means for your plant is that if you decide to significantly increase production over your recent rate, (such as by adding a shift), you may be required to add further emission controls or increase the efficiency of existing control equipment. The plant site limit is generally based on the rules' emission limits (such as 0.50 gr/scf for hogged fuel boilers), but whether or not the limit is met by your company will be based on actual tested emissions. This will allow a company operating control equipment below the Rules' limits some flexibility in increasing production.

In some cases, no source test data was available and an average emission rate was used. As more accurate data becomes available, the plant site limits may be re-calculated.

I will be contacting you in the near future to set up a meeting to discuss the enclosed draft permit. Someone from the Portland Air Quality staff will also be there. Feel free to call me at 776-6010 if you have any questions on the above.

Sincerely,

Barbara A. Burton

Barbara A. Burton
Environmental Specialist

BAB:mc
Encls.

cc: Air Quality Division

CALCULATIONS FOR PLANT SITE EMISSION LIMITS

Plywood Mill

Veneer dryers

1977 production 173,292,000 ft²
 5th dryer: 4300 ft²/hr maximum production, on 24 hr/day,
 7 days/wk, 50 wks/yr schedule = 36,120,000 ft²/yr.
 Emission factor for steam fired dryers: 1.01#/1000ft².
 Assume 45% control of particulate when opacity limits reached.
 Yearly emission = 1.01#/1000ft² X (173,292,000 + 36,120,000) X
 (1.00 - .45) X $\frac{1 \text{ ton}}{2000\#}$ = 58.2 tons/yr.

Cyclones

Operating schedule: 24 hrs/day, 5 days/wk, 49 wks/yr.
 Cyclones # 1,2,3 will likely be baghouse controlled at
 98.5%. Source tested, emit total of 16.5 + 22.0 + 35.0 =
 73.5 tons/yr. At 98.5% controlled, total yearly emissions = 1.1 tons/yr.
 Cyclone # 4. Source tested at 3.2 tons/yr.
 Cyclone # 5. Throughput unknown. Emissions estimated at
2 tons/yr.
 Cyclone # 6. Will likely be baghouse controlled at 98.5%.
 Current emissions estimated at 22.0 tons/yr. At 98.5%
 controlled, total yearly emissions = 0.3 tons/yr.
 Total plywood mill site limit = 58.2 + 1.1 + 3.2 + 2 + 0.3 =
 65 tons/yr.

6 APR 21 - 0 20

Sawmill and Planing Mill

Hogged fuel boilers

Boilers # 1&2. Source tested 5/75 at 0.033 gr/scf, 16.3#/hr.
 Allowed 0.05 gr/scf, operates 24 hrs/day, 7 days/wk, 50 wks/yr.
 Total yearly emission = $\frac{0.050}{0.033}$ X 16.3#/hr X 24 hrs/day X 7 days/wk
 X 50 wks/yr X $\frac{1 \text{ ton}}{2000\#}$ = 104 tons/yr.

Boiler # 3. Source tested 8/72 at 0.177 gr/scf, 60.6#/hr.
 At 0.05 gr/scf and same operating schedule.
 Total yearly emission = $\frac{0.050}{0.177}$ X 60.6#/hr X 24 hr/day X 7 days/wk
 X 50 wks/yr X $\frac{1 \text{ ton}}{2000\#}$ = 72 tons/yr.

Cyclones

Cyclone # 7. Source tested at 0.054 gr/scf, 3#/hr.
 Operating schedule of 16 hrs/day, 5 days/wk, 50 wks/yr. To
 be source tested, emissions appear heavier than source tested
 at. May be baghouse controlled.
 Total yearly emissions = 3#/hr X 16 hrs/day X 5 days/wk X
 50 wks/yr X $\frac{1 \text{ ton}}{2000\#}$ = 6 tons/yr.

CALCULATIONS FOR PLANT SITE EMISSION LIMITS - Medco, Page Two

Cyclones # 10,11,12, & 13. Schedule 8 hrs/day, 5 days/wk, 43 wks/yr (1974). 62,500 scfm, comes to 10.7#/hr assuming 0.02 gr/scf.

Total yearly emissions = 10.7#/hr X 8hr/day X 5 days/wk X 43 wks/yr X $\frac{1 \text{ ton}}{2000\#}$ = 9.2 tons/yr.

Cyclones # 14&15. Schedule same as above. 20,000 scfm, assume 0.02 gr/scf, comes to 3.4#/hr.

Total yearly emissions = 3.4#/hr X 8 hr/day X 5 days/wk X 43 wks/yr X $\frac{1 \text{ ton}}{2000\#}$ = 2.9 tons/yr.

Cyclone # 9. Same schedule. 13,000 scfm, assume 0.02 gr/scf, comes to 2.2#/hr.

Total yearly emissions = 2.2 #/hr X 8 hr/day X 5 days/wk X 43 wks/yr X $\frac{1 \text{ ton}}{2000\#}$ = 1.9 tons/yr.

Total plant site emissions for sawmill and plywood mill = 104 + 72 + 6 + 9 + 3 + 2 = 196 tons/yr.

Medium Density Fiberboard Plant

A plant site emission limit of 65 tons/yr has been agreed on by DEQ and Medford Corporation.

MEMORANDUM

lane county



TO Environmental Quality Commission
FROM Roy Burns, ^{RB}Water Pollution Control Div.
SUBJECT Pre-cover Inspection Amendment 340-71-017 DATE May 15, 1980

On behalf of Lane County as a contract county for subsurface and alternative system management I submit Resolution 80-5-13-1 supporting subsurface program improvements: The attached resolution was unanimously adopted by the Lane County Board of Commissioners May 13, 1980.

From June 1, 1979 thru ~~January~~, 1980 792 systems were installed by licensed installers and 154 were installed by individual citizens. Owner installed systems have a 32% correction rate. Licensed installers had a 11% correction rate. We have a total of 63 licensed installers who have a business address within Lane County. We have identified 21 of the 63 installers from our records who appear certifiable. The proposed rule would allow program management the flexibility in order to concentrate our training and assistance to citizens installing their own systems and to those licensed installers who are not certifiable. We in Lane County support the amendments and urge adoption. We do not believe consumer protection and quality control will be sacrificed by the proposed rule.

RLB/jbw

IN THE BOARD OF COUNTY COMMISSIONERS, LANE COUNTY, OREGON

Resolution 80-5-13-1

(IN THE MATTER OF ADOPTING
(RESOLUTIONS SUPPORTING
(PROGRAM IMPROVEMENT IN
(SUBSURFACE DISPOSAL

WHEREAS, the Board of Commissioners for the County of Lane have entered into a contract agreement with the Department of Environmental Quality to administer the subsurface and alternative systems program on behalf of Lane County Citizens, and

WHEREAS, the Board has established directives to implement continued improvement in the subsurface and alternative systems program to achieve increased levels of County service consistent with energy conservation and efficient management of personnel, and,

WHEREAS, the Board recognizes program improvements in allowing qualified licensed sewage installers to be exempt from final installation inspection in certain instances and capping fill construction can best be administered by County staff, and ,

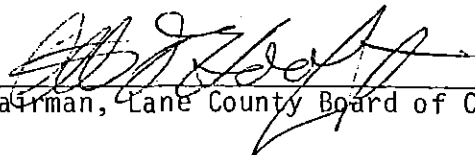
WHEREAS, the Board recognizes two areas of subsurface and alternative system program improvement will be considered by the Environmental Quality Commission during May and June of 1980 that will achieve energy savings, increase program efficiency and provide better citizen service, and

NOW, THEREFORE, BE IT RESOLVED that the Board supports the change in the Department of Environmental Quality rules allowing;

1) Licensed installers to make their own final inspection, and 2) Authorizing capping fills as an alternative system.

BE IT FURTHER RESOLVED, that County staff may appear at the D.E.Q. hearings and offer testimony in support of the rule changes

ADOPTED this 13th day of May 1980.


Chairman, Lane County Board of Commissioners

In the Matter of Adopting Resolutions Supporting Program Improvement
in Subsurface Disposal

APPROVED AS TO FORM
DATE <u>5/13/80</u> <small>has county</small>
<u>Teresa J. Wilk</u>
<small>CITY OF CLATSOP COUNTY COUNSEL</small>

June 1979 to January 15, 1980

Installer	# of Jobs Needing Correction	Total # of Jobs	Correction Rate (%)
A & S	1	2	-
Andy Baily	3	10	30
Ball	1	11	9
Barry & Son	3	16	18
Bedortha	4	20	2
Benge Paving		1	
Black	1	10	10
Bravado	6	27	22
Brooks	3	9	-
Builders Unlimited		1	
Bush	0	19	0
Chalkers	1	4	
Chrestman	1	12	8
Cooper	1	9	
Crow Valley	0	14	0
Drainmaster	3	10	30
Dunes Excavation	1	23	4
Earth Action	2	19	10
Emerald	0	18	0
Eugene Drop Box	3	10	30
Fanger Construction	0	2	
Fegles	0	4	
G. P. Excavation	4	17	23
Gibson & Morley	0	69	0
Greensuns	4	26	15
Greentag	1	8	

Installer	# of Jobs Needing Correction	Total # of Jobs	% of Correction Rate
Grimes	4	10	40
Hake, George	1	3	-
Hall, Russ	0	4	-
Hamlin & Eck	0	21	0
Harpers	0	29	0
Heceta Head	1	23	4
Hindmans	7	25	28
Holt, H.	1	8	12
Home Framing	3	12	25
J & V Excavating	3		
Jackson	4	25	16
Jenkins	0	2	-
Johnson, Mike	3	44	7
Kelly, Earl	0	2	-
Kempf, Rod	3	4	-
Lorang, Earl	1	45	2
Mann Can Do	2	5	-
Master's	2	3	-
McBride	0	8	-
McCormicks	0	13	0
Mels Backhoe	1	39	2
Morley, Everett	1	6	-
Norwest	1	12	8
Olson		2	
Perrco	0	20	0

Installer	# of Jobs Needing Correction	Total # of Jobs	% of Correction Rate
Proudfoot's	0	8	-
Pruett, Ross	3	1	-
Randall's	1	22	4
R & T Tractor		2	
Robert's	2	7	-
Rob's	2	15	13
Shorty's	3	6	-
Sprague	0	3	-
Stegner	0	4	-
Tractor Factors	4	7	-
V & P Backhoe	1	6	-
Williams, R	0	2	-
Owner	49	154	
TOTAL	95	792	

DATA SUMMARY

- Owner installed systems have a 32% (49 out of 154) correction rate due to lack of knowledge in construction techniques.

- Lane County has 18 installers, (out of 63) who have installed at least 10 consecutive systems in 11 months) correctly the 1st time. An additional 3 installers have a correction rate of 10% or less. The remaining 23 installers have a 36% correction rate. Total industry correction rate is 11%.

CK/jbw