MULTNOMAH COUNTY, OREGON

BOARD OF COMMISSIONERS

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ANY QUESTIONS? CALL BOARD CLERK DEB BOGSTAD @ 248-3277
Email: deborah.l.bogstad@co.multnomah.or.us

INDIVIDUALS WITH DISABILITIES MAY CALL THE BOARD CLERK AT 248-3277, OR MULTNOMAH COUNTY TDD PHONE 248-5040, FOR INFORMATION ON AVAILABLE SERVICES AND ACCESSIBILITY.

DECEMBER 8 & 10 1998 BOARD MEETINGS

FASTLOOK AGENDA ITEMS OF INTEREST

Pg 2	9:30 Tuesday Community and Family Services @ SEI, 3920 N. Kerby
Pg 2	9:00 Thursday Regular Board Meeting
Pg 4	9:05 Law Enforcement Plan Update
Pg 4	9:20 North Rivergate Jail Site Update
Pg 4	11:00 Land Use De Novo Hearing
Pg 5	2:00 Executive Session/Labor Issues
✷	**No Board Meetings are Scheduled Between December 21, 1998 through January 6, 1999**
✷	**Check the County Web Site: http://www.multnomah.lib.or.us**

Thursday meetings of the Multnomah County Board of Commissioners are cable-cast live and taped and may be seen by Cable subscribers in Multnomah County at the following times:

Thursday, 9:00 AM, (LIVE) Channel 30
Friday, 10:00 PM, Channel 30
Sunday, 1:00 PM, Channel 30
Produced through Multnomah Community Television

Tuesday, December 8, 1998 - 9:30 AM
Center for Self Enhancement, Inc., Auditorium
3920 N. Kerby Avenue, Portland

BOARD BRIEFING

B-1 Department of Community and Family Services Briefing and Work Session to Review Performance Trends and Key Results Measures and to Discuss Upcoming Issues and Opportunities. Presented by Lolenzo Poe, Iris Bell, Susan Clark, Howard Klink, Mary Li, Floyd Martinez, Kathy Tinkle, Tony Hopson, James Kent, George Scott and Delores Morgan. 2.5 HOURS REQUESTED.

Thursday, December 10, 1998 - 9:00 AM
Multnomah County Courthouse, Boardroom 602
1021 SW Fourth Avenue, Portland

REGULAR MEETING

CONSENT CALENDAR

NON-DEPARTMENTAL

C-1 Appointment of Cynthia M. Shorter to the DUII COMMUNITY ADVISORY BOARD

SHERIFF'S OFFICE

C-2 Intergovernmental Agreement 800878 with Grant County Sheriff's Office to Provide for Jail Space in the Amount of Fifteen Beds for the Secure Custody, Care and Safe Keeping of Multnomah County Inmates at the Rate of $45.00 per Bed

DEPARTMENT OF COMMUNITY AND FAMILY SERVICES

C-3 ORDER Authorizing Designees of the Mental Health Program Director to Direct a Peace Officer to Take an Allegedly Mentally Ill Person into Custody

C-4 Intergovernmental Agreement 9910290 Between Clackamas, Clatsop, Columbia, Multnomah and Washington Counties for the Operation of the

Regional Crisis Diversion Plan for Consumers with Developmental Disabilities

C-5 Intergovernmental Revenue Agreement 9910360 with the City of Portland Providing Funding for the 1998-99 Block by Block Weatherization Program

C-6 Intergovernmental Revenue Agreement 9910363 with the U.S. Department of Labor for Administration of Urban/Rural Opportunities Grant Funds

DEPARTMENT OF HEALTH

C-7 Amendment 3 to Intergovernmental Agreement 201224 with Oregon Health Sciences University for Health Information System Computer Hardware and Software Support

C-8 Amendment 1 to Intergovernmental Agreement 9910452 with Oregon Health Sciences University Hospital for Nurse Consult Program Services

DEPARTMENT OF ENVIRONMENTAL SERVICES

C-9 ORDER Cancelling Land Sale Contract 15644 with Freddie Fletcher Upon Default of Payments and Performance of Covenants

C-10 ORDER Authorizing Private Sale of Certain Tax Foreclosed Property to Teragram Investments, Inc., Including Direction to Tax Title for Publication of Notice Pursuant to ORS 275.225

REGULAR AGENDA

PUBLIC COMMENT

R-1 Opportunity for Public Comment on Non-Agenda Matters. Testimony Limited to Three Minutes Per Person.

DEPARTMENT OF ENVIRONMENTAL SERVICES

R-2 Second Reading and Possible Adoption of an ORDINANCE Amending the Multnomah County Zoning Ordinance Regarding the Provisions for Large Fill Operations

NON-DEPARTMENTAL

R-3 First Reading and Possible Adoption of an ORDINANCE Amending MCC 5.005 Prescribing Procedures for Designation of Interim Officers for Vacant Elective Offices and Declaring an Emergency (As Approved by Voters at the November 3, 1998 Election)

SHERIFF'S OFFICE

R-4 Law Enforcement Division Strategic Plan and Description of Planning Process Presentation by Deputies Kevin Platt and Richard Biles and Sergeant Karlan Hutchison. 15 MINUTES REQUESTED.

COMMISSIONER COMMENT

R-5 Opportunity (as Time Allows) for Commissioners to Provide Informational Comments to Board and Public on Non-Agenda Items of Interest. Comments Limited to Three Minutes Per Person.

Thursday, December 10, 1998 - 9:20 AM
(OR IMMEDIATELY FOLLOWING REGULAR MEETING)
Multnomah County Courthouse, Boardroom 602
1021 SW Fourth Avenue, Portland

BOARD BRIEFING

B-2 Presentation and Discussion of the GeoTech Report on the North Rivergate Site, Leadbetter Peninsula, for Multnomah County's New Corrections Facility. Presented by Sheriff Dan Noelle, Lieutenant Bobbi Luna and Staff. 1 HOUR, 15 MINUTES REQUESTED.

Thursday, December 10, 1998 - 11:00 AM
(OR IMMEDIATELY FOLLOWING BOARD BRIEFING)
Multnomah County Courthouse, Boardroom 602
1021 SW Fourth Avenue, Portland

LAND USE PLANNING MEETING

P-1 PRE 4-98/PRE 5-98 DE NOVO HEARING WITH TESTIMONY LIMITED TO 20 MINUTES PER SIDE on the Appeal of the Hearings Officer Decision to Uphold the Planning Director Approval of Two Farm Dwelling Approval Validations and Determination of Substantial Compliance

with Approved Farm Management Plans for Property Located at 12955 and 12989 NW SKYLINE BLVD., PORTLAND

Thursday, December 10, 1998 - 2:00 PM
Multnomah County Courthouse, Boardroom 602
1021 SW Fourth Avenue, Portland

EXECUTIVE SESSION

E-1 The Multnomah County Board of Commissioners Will Meet in Executive Session Pursuant to ORS 192.660(1)(d) for Labor Negotiator Consultation Concerning Labor Negotiations. Presented by Darrell Murray. 1 HOUR REQUESTED.

#1

SPEAKER SIGN UP CARDS

DATE Dec 10, 1998

NAME Frank Opila "OPEELAH"

ADDRESS 2234 N. Wygant St.

Portland 97217

PHONE 283-1145

SPEAKING ON AGENDA ITEM NUMBER OR TOPIC B-2

GIVE TO BOARD CLERK

#2

SPEAKER SIGN UP CARDS

DATE 12/10/98

NAME Nancy Hendrickson

ADDRESS 6004 SE Ivon

Portland OR 97204

PHONE 823-6001

SPEAKING ON AGENDA ITEM NUMBER OR TOPIC Jail Siting

GIVE TO BOARD CLERK

#3

SPEAKER SIGN UP CARDS

DATE Dec. 10, 1998

NAME Jay Mower "BOWER"
Columbia Slough Watershed Council

ADDRESS 7040 NE 47th Ave

Portland, OR 97218

PHONE 281-1132

SPEAKING ON AGENDA ITEM NUMBER OR TOPIC B-2 - Rivergate Jail

GIVE TO BOARD CLERK

#4

SPEAKER SIGN UP CARDS

DATE 12/10/98

NAME CHUCK HARRISON

ADDRESS 14211 SE CRYSTAL CT.
PORTLAND, OR. 97236

PHONE 280-1540

SPEAKING ON AGENDA ITEM NUMBER OR TOPIC JAIL SITING

GIVE TO BOARD CLERK

REPRESENTING: Columbia CORRIDOR ASSOC

#5

SPEAKER SIGN UP CARDS

DATE 12-10-98

NAME Donna Babbitt

ADDRESS 9941 N. Willamette Blvd.
Ptld 97203

PHONE 503-735-4960

SPEAKING ON AGENDA ITEM NUMBER OR TOPIC Concerned Citizens of N. Ptld

GIVE TO BOARD CLERK

#6

SPEAKER SIGN UP CARDS

DATE 12-10-98

NAME Kevin O'Sullivan

ADDRESS St. Johns ~~Ass~~ Neigh Assoc
7624 N. Kellogg St. 97203

PHONE 285-5322

SPEAKING ON AGENDA ITEM NUMBER OR TOPIC Jail Site

GIVE TO BOARD CLERK

MEETING DATE: DEC 1 0 1998
AGENDA #: B-2
ESTIMATED START TIME: 9:20

(Above Space for Board Clerk's use only)

AGENDA PLACEMENT FORM

SUBJECT: Briefing Board on Rivergate Jail Site

BOARD BRIEFING: DATE REQUESTED: **December 10, 1998**
REQUESTED BY: **Dan Oldham**
AMOUNT OF TIME NEEDED: **1 Hour & 15 minutes**

REGULAR MEETING: DATE REQUESTED:

AMOUNT OF TIME NEEDED:

DEPARTMENT: Non-Departmental DIVISION: Sheriff's Office

CONTACT: Dan Oldham TELEPHONE #: 251-2519
BLDG/ROOM #: 313/103

PERSON(S) MAKING PRESENTATION: **Sheriff Dan Noelle; Lt. Bobbi Luna and Staff**

ACTION REQUESTED:

[X] INFORMATIONAL ONLY [ ] POLICY DIRECTION [ ] APPROVAL [ ] OTHER

SUGGESTED AGENDA TITLE:

Presentation and Discussion of GeoTech Report on Rivergate Jail Site

SIGNATURES REQUIRED:

ELECTED OFFICIAL: Dan Noelle
(OR)
DEPARTMENT MANAGER:

BOARD OF COUNTY COMMISSIONERS
98 NOV -7 AM 8:31
MULTNOMAH COUNTY OREGON

ALL ACCOMPANYING DOCUMENTS MUST HAVE REQUIRED SIGNATURES

Any Questions? Call the Board Clerk @ 248-3277

EXECUTIVE SUMMARY

Project History

Multnomah County officials began the search for a site for a new corrections facility in May 1996 when voters approved Measure 26-45, authorizing the County to issue $43.9 million in general obligation bonds for the facility.

In August 1996, the Board of County Commissioners adopted Resolution 96-148 creating a 15-member citizens panel, called the Siting Advisory Committee, to select a site for the new jail. Beginning its meetings in September 1996, the committee evaluated eight candidate sites which had been screened from a longer list of alternatives. The County published a *Siting Newsletter* on a monthly basis to keep citizens appraised of the committee's progress. The County held community workshops as the committee approached key decisions, and conducted mail-in surveys through the *Siting Newsletter*. All told, several hundred citizens participated in the committee's deliberations. On January 31, 1997, the committee presented the Multnomah County Sheriff and Board of Commissioners a report containing its recommendations.

The committee recommended the Radio Towers site as its top choice. It also presented two alternatives in ranked order. The first alternative was the Rivergate site owned by the Port of Portland (Reference Attachment 1-1, which indicates the location of the first two Rivergate sites). (Note: This attachment also indicates the relative proximity of the new proposed site to the original two sites.) The second alternative was the Northwest Industrial District site.

The County Board accepted the Siting Advisory Committee's report and recommendation, and in February 1997 asked for additional information regarding each site's "environmental concerns, fill and site preparation, permits and zoning and public involvement."

In April 1997, Multnomah County retained a team of technical experts to conduct preliminary site assessments of the three top-ranked sites for a new Multnomah County Corrections Facility. The Team conducted a systematic analysis of engineering, environmental, land-use and permitting issues at each of the three sites. The team also reviewed cost and schedule implications for the full range of design and construction issues.

In the course of investigating these sites, the consultants identified challenges each site posed to the design, construction and operation of the corrections facility. For most, the consultants were able to identify solutions that could have been enacted within the County's budget and schedule constraints.

The primary mission of the first preliminary site assessment, presented in July 1997, was to determine if a site had any "fatal flaws." *Fatal flaws are conditions that would not allow the corrections facility to be designed, constructed and operated within the financial and time requirements of the County.*

If the site had a "fatal flaw" it would not be a viable site for the corrections facility. In the first preliminary site assessment, Rivergate had one potential "fatal flaw", property acquisition. At that time, the Port of Portland did not wish to sell property in Rivergate to Multnomah County for a corrections facility and the County lacked clear condemnation authority over the Port of Portland.
Based on the initial Preliminary Site Assessment and public input, the Board of County Commissioners in August 1997 unanimously selected the Radio Towers site for the new jail and directed the Sheriff to proceed with development. In December 1997 the County engaged a Team of consultants and a designer to pursue the planning, permitting, design and construction of the new corrections facility on the Radio Towers site.

In January 1998, a 15-member Citizens Working Group was formed by the Sheriff to provide input into the location of the facility on the site, the design of the public areas of the facility and the buffering/screening of the facility. This committee first met in February and met monthly through September. Two community workshops were also held to obtain feedback and comments from the general interested public.

Current Events

On September 24, 1998 the Board of County Commissioners, citing concerns about costs, environmental impacts and permitting, adopted a resolution to discontinue the pursuit of the Radio Towers site. They then directed Sheriff Dan Noelle to investigate and conduct a "fatal flaws" analysis, over a 60-day period, on a portion of the Leadbetter Peninsula in North Rivergate as a site for the new corrections facility.

This study explored the engineering, environmental and land-use challenges a jail will pose on the parcel currently owned by the Port of Portland. (Reference: Attachment 1-2, Vicinity Map; Attachment 1-3, an aerial photograph of the Rivergate area; Attachment 1-4, the current Zoning Map; Attachment 1-5, a map of adjacent businesses; and Attachment 1-6, a map of the Port of Portland's proposed access road system.)

The detailed technical work consisted of conducting a geotechnical analysis of the site to determine the parcel's soil composition and seismic characteristics, a traffic survey, a cultural resources study, a hazardous materials investigation, a review of the site in relationship to the 100 flood plain, a review of the facility in relationship to adjacent environmental zones and a review of land-use issues. Meetings with City of Portland Bureaus to solicit comments and concerns were held immediately following the action by the County Commissioners. Additionally, a Pre-Application Conference was held on November 17, 1998 to ensure every agency and bureau had an opportunity to express their comments and concerns related to the development of a corrections facility on this site.

The conceptual facility design prepared for the Radio Towers site fits the proposed North Rivergate parcel as well. This conceptual facility plan was used as the basis for evaluating the traffic, visual, lighting, storm water and land use impacts. This design also affords substantial opportunities to visually buffer and screen the facility from view from the Columbia Slough and Bybee Lake with trees and vegetation.

Another key component of the study is input from the community. Sheriff Noelle met with a dozen key neighborhood, business and environmental groups during October and November. The purpose of the meetings was to obtain feedback about issues of greatest concern to the surrounding community.

The "fatal flaw" identified as, property acquisition, for the original Rivergate sites no longer exists for this site. The Port of Portland is now willing to sell the subject property to the County for their new corrections facility. While the negotiations for the purchase of the property are not finalized, it appears that a fair price for the property can be negotiated.

A Fair Market Value appraisal of the site was also performed, at the direction of the County, by an independent firm. The results of appraisal will be kept confidential pending the completion of negotiations with the Port of Portland for the sale of the property.

The following summary describes the proposed project site, size and access, presents the findings of the consultant Team and discusses potential "fatal flaws" for this site:

Site Description

The proposed site is located in the North Rivergate Industrial development in a region known as the Leadbetter Peninsula which is owned by the Port of Portland. It consists of approximately 25 acres of gross land area with a net buildable area of 22 acres. It borders environmentally sensitive areas on three sides, Bybee Lake to the west, south and east, the Columbia Slough also on the west. The Rivergate Development borders the site to the north.

Project Description

Phase I

The project is currently planned to house two hundred and twenty-five (225) medium security male offenders. It will also include inmate programs, administration and staff services required to operate the facility. To meet the current architectural program, the conceptual design requires a building with approximately 70,000 square feet. Inmate Housing will consist of three (3) seventy-five (75) bed dormitory style housing units each having a ground floor and a mezzanine. The remainder of the facility will be single story. The housing units will be the tallest part of the structure and will be approximately 25 feet above the finished floor elevation. Management of the jail will be accomplished using the "direct supervision" model.

Build-out

The site is being planned so that the facility can accommodate a maximum capacity, at full build-out, of two thousand (2000) male and female inmates. Expansion of the facility would be both vertical and horizontal on the site. Expansion beyond Phase I would increase the overall building height to approximately forty-five (45) feet above finished floor and the building area would increase to approximately five hundred and forty thousand (540,000) square feet. Housing in future phases will include additional 75 bed dormitory housing units as well as 40 bed administrative segregation units.

Property Acquisition

The Port of Portland owns the unimproved site being investigated in this report. The site is zoned IHh which is appropriate for a jail facility. Issues that will affect the acquisition of the property are as follows:

1. The site is currently part of a lawsuit (Jones v. Thorne) currently pending in the United States District Court for the District of Oregon (No. CV 97-1674 ST). This case was reviewed, as part of this assessment, by D. Dan Chandler of O'Donnell Ramis Crew Corrigan & Bachrach. A summary of the review indicates that the case alleges the Port of Portland illegally filled 200 acres of wetlands, and alleges violations of the Clean Water Act and the National Environmental Policy Act. The complaint contains 38 pages of allegations against the Port of Portland, the U. S. Army Corps of Engineers, the Environmental Protection Agency and the Federal Highway Administration. A copy of the complaint is included as part of this report (Attachment 1-8). The key allegations of the complaint are as follows:
    a. The Port illegally filled areas set aside as buffers in previous agreements, including buffers along the Columbia Slough.
    b. The Port illegally filled areas which had been designated as wetlands in previous

agreements.

A "worst case scenario" presented in the review is that the court could prohibit further development on fill material in Rivergate "until full compliance with the Clean Water Act and NEPA are achieved and filled wetlands along the Columbia Slough, Marine Drive and Smith and Bybee Lakes are restored." This scenario might delay or foreclose the possibility of developing a jail on the subject property.

The Port is in negotiations with the Plaintiff, EPA and the Corps of Engineers. As related to the proposed project site, the negotiations revolve around the slopes and plantings at the perimeter of the fill.

While there is a legal possibility that development of the site might be delayed or foreclosed by the lawsuit, attorneys working the case do not believe that there is any substantial likelihood of this happening. Given the current procedural posture of the case, it is not possible to independently evaluate the potential outcomes of the case in the event settlement discussions break down and the case is ultimately decided by the court.

There are a range of options available at this time to address the issues created by Jones v. Thorne. The first would be to assume the outcome is near, as suggested by the Port's attorney, and proceed to seek permits and approvals. The second option would be to wait and see if the case settles. A third option would be to seek some representations and warranties from the Port regarding the potential effect of the lawsuit or a fourth option to press the Port to seek a partial settlement with respect to the subject property.

2. Initial property acquisition negotiations indicate that the Port will require the County to pay for and construct the roads and utilities necessary for access and operation of the facility as part of their project. These costs are estimated to be between $4.5 and $6.0 million. Recovery of a portion of these costs is anticipated from new businesses who also benefit from these roads and utilities as they develop.

3. It is assumed that a Fair Market Price for the property can be negotiated. An independent appraisal to determine the Fair Market value was completed in early December 1998.

4. In the assumptions for the infrastructure improvements constructed by the County, "dry" type developments have been assumed. If "wet" type developments locate in the area served by these improvements then the developer will be responsible for any upgrades in service.

The Port of Portland will be responsible for platting/subdividing the parcel being offered to the County for the new jail facility. Since it is anticipated that acquisition negotiations will be finalized in January of 1999 and the platting process will not be completed until several months later, the County is requesting a guarantee or warranty from the Port that the site can be developed as planned. If the requested warranties and guarantees are given and the Port can supply the design team with right-of-way and parcel descriptions in mid January then design activities can be concurrent with the property subdivision process expected to take three to six months.

Land Use Issues

A key element of this site assessment is to determine what land use permits may be required, and the outlook for a successful outcome. In Portland, detention facilities must be located in industrial zones and require a conditional use permit. Other land use approvals may also be required.

To determine if other approvals would be required and the likelihood of obtaining a conditional use permit, interviews were conducted in-person and by telephone by Barney and Worth. Some 15 agency personnel and other persons interested in the proposed facility were interviewed. (A list of the persons interview is included in the body of the report.)

A summary of key points offered during the interviews follows:

1. The outlook for land use approvals is favorable. To date, City of Portland staff have not identified any land use permitting issues which can not be adequately addressed during the permitting and design stages of the project. A Pre-application Conference was held on November 17, 1998 to test that conclusion with the full range of interested City bureaus.
2. The Conditional Use Permit is expected to be the main permit review process required. Other permits or approvals which may be required include:
   a. Land division approval by the City of Portland
   b. Oregon Department of Transportation approval of new at-grade rail crossing
3. The major Conditional Use Permit issue is anticipated to be how the facility's visual impact will be buffered from Smith and Bybee Lakes. The Natural Resource Management Plan for Smith and Bybee Lakes calls for protecting and enhancing wildlife habitat, along with passive and active recreation.
4. Many transportation issues remain to be ironed out. While the corrections facility itself won't generate substantial traffic, there are questions about where and how access will be provided to the site. Specific questions center on how the project will impact existing conditions on Marine Drive; how to solve rail/auto conflicts; design of the new access road and what standards will apply; and construction costs and funding sources for the improvements.
5. Agency comments on the proposed Radio Towers facility will offer guidance for Rivergate. Many expect their Conditional Use Permit comments to be very similar despite the change in location.
6. Although the site is outside the E-Zone, environmental issues will be considered in the conditional use permit review of the project.
7. Storm water outfall facilities for the project will discharge into the Columbia Slough. These outfall facilities must be constructed through an environmentally protected zone and will trigger environmental review.
8. The need for a Master Plan remains an open question. While the initial facility is planned for only 225 inmates, agencies appear to be more interested in anticipating the impact for the facility at buildout.
9. Some observers see the new corrections facility as an opportunity to improve public access to the natural area. The 40-Mile Loop Trail is designated to be developed along the Slough next to the site. A few also encourage the County to explore other on-site opportunities to improve public access to the Slough and Smith and Bybee Lakes.
10. Current litigation may cloud development potential for the site. A citizen lawsuit claims the

Port of Portland illegally filled 200 acres in North Rivergate, including the candidate site. Agencies ask whether the legal action could thwart MCNCF development.

11. Issues raised by citizens closely parallel those identified by agencies. Intitial public outreach suggests the top priorities will be visually buffering the facility from Bybee Lake and the Columbia Slough, and developing the site in a manner that's consistent with the NRMP.

Environmental Review

The environmental analysis included investigation of potential constraints due to factors related to natural resources, cultural resources and the presence of hazardous materials. Detailed studies included review of available records, field reconnaissance, laboratory analysis of soils and groundwater and conducting a resource and hazardous materials inventory for the site.

Natural Resources

The entire facility would be located on a layer of recently deposited (1993) dredge sands that is sparsely vegetated and provides poor habitat for wildlife. However, the presence of highly sensitive natural areas adjacent to the site will require efforts on the part of the County to provide adequate screening and buffering to mitigate possible lighting and noise impacts to the offsite areas.

Our investigations of the Leadbetter Peninsula site did not reveal any "fatal flaws" to development due to the presence of natural resources.

Cultural Resources

As presently planned, construction and development of the corrections facility would have no Federal involvement and would therefore not be subject to provisions of the National Historic Preservation Act. Any proposed development would be subject, however, to the provisions of ORS 97.745, 358.920 and 390.235 which prohibit the disturbance of Indian graves and significant archaeological sites on public lands in Oregon. Additionally, the County has agreed to develop the site in a manner that is compatible with the Smith and Bybee Lakes Natural Resources Management Plan (NRMP), although the proposed corrections facility is situated just outside of the NRMP boundaries. Policies 27 and 28 of the NRMP state the importance of the archaeological resources of the management area and require archaeological surveys for proposed projects that "include dredging, excavation, fill, or possible changes in the hydrological regime of the lakes and Columbia Slough."

There is a high likelihood that native soils beneath the layer of fill at the site contain prehistoric archaeological deposits. Within a 3,500 foot radius of the site there are 12 known archaeological sites, situated along the shoreline of Bybee Lake and along the banks of the Columbia and North Sloughs. This frequency suggests an archaeological site density of at least one site per 15-20 acres.

Use of the proposed pile foundation system to support the structure would disturb native soils and would potentially impact archaeological or other cultural resources. Subsurface exploratory excavations, limited to the proposed area where piles will be driven, are required to determine if there are archaeological resources present in the native soils underlying the fill material. These preliminary studies are expected to take a maximum of 60 days and cost approximately $20,000. If deposits of prehistoric artifacts are found, obtaining the required permits, coordination with agencies and

conducting required additional studies is expected to take a maximum of 6 months and result in additional costs ranging form $25,000 to $130,000, depending on the significance of the artifacts.

The subsurface exploratory excavations can be done concurrently with the design of the facility and will not impact the project schedule.

Hazardous Material Investigation

The proposed project site was not identified in any Federal or State databases indicating the presence or release of hazardous materials at the site. Soil samples taken in October of 1998 did not identify any hydrocarbons in the gasoline, diesel or oil ranges but did indicate the presence of polychlorinated biphenyls (PCBs) in one of the borings. The level of PCBs detected was at the clean-up level for residential uses. Additional samples were then commissioned and were conducted in early November. The extended sampling indicated no additional evidence of PCBs. However, since PCBs were found on the site consultation with the Oregon Department of Environmental Quality (DEQ) has been initiated in order to determine whether a letter of no further action (NFA) can be obtained. If DEQ will not issue the NFA, it is recommended that the PCB contaminated soil be removed from the site. The estimated cost to remove these soils is expected to range from $5,000 to $15,000.

Based on the records search and the testing conducted to date, there are no significant development constraints on this site due to the presence of hazardous materials.

Compatibility of Facility with Adjoining Environmentally Sensitive Areas

The perimeter road is the outermost element of construction. As currently planned, the outer edge of the perimeter road will be set back from the environmental zone boundary by approximately ninety (90) feet. The distance from there to the building will be no less than the width of the road, which is twenty (20) feet at its narrowest, plus an additional fifty (50) feet of secure space. The shortest total distance from an environmental boundary to the facility (building) will be one hundred and sixty (160) feet.

As currently planned, buffering and screening of the facility from Bybee Lake and the Columbia Slough will be accomplished in the ninety (90) feet between the environmental zone boundary and the outer edge of the perimeter road. The Port of Portland is responsible for planting the first fifty (50) feet and maintaining the plants and vegetation for three (3) years. At the end of the third year the responsibility for maintaining this area may be transferred to Multnomah County.

In the buffer area between the outer edge of the perimeter road and the area the Port will initially plant and maintain, Multnomah County will use a combination of terms, swales and plant materials to further enhance the buffering and screening of the facility. The exact details of the buffering and screening plan will be finalized with the aid of a Citizen Work Group and other interested persons.

Light escaping from the site into the environmentally sensitive areas is also a concern. This issue has been investigated and can be accomplished by implementing the lighting standard from Section II-F of the Port of Portland Development Standards. Light fixtures that "cut-off" or direct the light emitted are used extensively and are commercially available. These "cut-off" light fixtures coupled with a dense buffering and screening plan would minimize the amount of light visible from Bybee Lake or the Columbia Slough.

Public Access To Smith and Bybee Lakes

Current plans for the project do not include plans for a public access to Bybee Lake or the Columbia Slough. If access to these areas becomes a significant community issue the County will work with the community and the Port of Portland to locate an access and associated parking. The County will have to work closely with the Port of Portland to implement any plan since any access will cross land they own.

Geotechnical and Seismic Concerns

The building will be of Type I construction (noncombustible materials). The site is located in Seismic Zone 3 and the building will be designed as an "essential facility" with an importance factor of 1.25.

A preliminary seismic hazard and geotechnical investigation has been conducted on the site. The investigation found major technical concerns with the site. The concerns were layers of loosely consolidated soils, the potential for liquefaction and the fact that the site has three (3) unconfined faces to its fill. In a seismic event it is estimated that this could mean certain areas of the site could experience from 6 to 16 inches of horizontal displacement and from 2 to 15 inches of vertical settlement. Horizontal displacements and vertical settlements of this magnitude would cause significant damage to the structure.

Three viable solutions exist for overcoming these potential "fatal flaws". They all center around the use of load bearing piles to support the building and various densifications methods to reduce the problems with liquefaction, settlement and horizontal displacement. Vibroflotation, Dynamic Compaction and closely spaced compaction piles were evaluated as potential solutions to minimize the effects of these problems. With the current site orientation, Dynamic Compaction coupled with load bearing structural piles appear to be the most economical solution for Phase I. This combination will provide a suitable foundation system for the Phase I facility that minimizes differential settlement.

It should be noted that while the building will be stable in a seismic event the roads and utilities serving the site, as well as, other roads in the vicinity could be severely damaged or destroyed. Utility connections to the building will be designed to allow for the expected differential movement.

Site Access

The City of Portland has indicated that the area road system is adequate to handle the additional traffic generated by this facility. Trips generated, from all sources, for the Phase I facility are expected to be 200 trips per day and for the facility at full build-out they are expected to be 800 trips per day. Other allowed uses, such as, warehouseing and manufacturing would generate 1280 trips per day and 855 trips per day respectively.

1. Road Configuration

Access to the site, as proposed by the Port of Portland, is shown on Attachment 1-6. It would involve extending North Leadbetter Road from its current termination to the west where it becomes North Pacific Gateway Boulevard. North Pacific Gateway Boulevard would be constructed from that point to where it intersects North Marine Drive opposite the access road to Terminal 6. The construction of North Pacific Gateway Boulevard would also require the construction of an at-grade rail crossing. Signalizing the new rail crossing would cost from

$80,000 to $100,000. The intersection of North Pacific Gateway Boulevard, North Marine Drive and the access road to Terminal 6 would be signalized when sufficient development occurs and traffic warrants it. The present cost of signalizing this intersection would be approximately $100,000.

Near the point where North Leadbetter Road becomes North Pacific Gateway Boulevard, an access road would be constructed southward to near the proposed property line of the project. Construction of the access roads would also include installation of all utilities needed for the County's proposed jail at full build-out, as well as providing for future development of the vacant land in this area of the Rivergate Industrial Park. Roads and utilities would be designed and constructed to Port of Portland and City of Portland standards. The streets and right-of-ways would be deeded to the City of Portland.

Road configuration and access issues were discussed with Multnomah County Sheriff's Office, City Planners and the City Fire Marshal and it does not appear that the construction of North Pacific Gateway Boulevard is required to meet the needs of Multnomah County's New Corrections Facility. Utility routings however, will follow the proposed North Pacific Gateway Boulevard alignment to where they will tie-in to main lines located in North Marine Drive.

2. Traffic

Primary access routes to the area will be North Marine Drive, Columbia Boulevard or Lombard Street. Based on a travel time study it appears most of the staff and visitors to the facility would use I-5 and North Marine Drive to access the facility. While Columbia Boulevard and Lombard Street provide excellent alternative routes the travel times from a downtown location would be longer along these routes. All of these access routes experience some congestion during peak conditions and from rail traffic which periodically blocks streets.

Construction of the proposed site access roads described above, would require the construction of another at-grade railroad crossing. The new at-grade crossing has not been permitted and would require approval by the Oregon Department of Transportation, Rail Safety Division. To be approved the new crossing must meet the following criteria:

a. Be both useful and needed.
b. Must be at-grade. Grade separation isn't feasible or effective due to land constraints, existing development, cost, or other factors.
   Note: A grade separation at the proposed new at-grade crossing has already been investigated and insufficient distances exist, in the current configuration, for a grade separation to be constructed.
c. New at-grade crossing is safe for public use. It is designed with the appropriate signage, signals, sidewalks and site distances.

It has also been reported by several of the local business owners that rail traffic has blocked the roads in the area for extended periods of time. By ORS 824.222 and OAR 741-125-0010 railroads are not allowed to block roadways for longer than 10 minutes between 6 am and 10

pm with a non moving train. There are however, no restrictions on the length of time a road can be blocked if a train is moving, or has equipment failure or other issues which create a legitimate reason for blocking a crossing. Each reported violation is investigated by State rail safety staff and the railroad can be fined up to $3000 per occurrence. In the 1.5 years that the Burlington Northern/Sante Fe track crossing Leadbetter Road has been open, there has been one complaint actually filed, which was dismissed due to the railroads legitimate reason for exceeding a 10 minute blockage.

Burlington-Northern/Sante Fe is not supportive of another crossing in the area at this time. A new at-grade crossing at the proposed location would interfere with B-N/SF's ability to stage unit trains, which are from 5000 feet to 6500 feet in length, until the grade separation is constructed at Lombard Street. If they decide to oppose the permit the appeals process would be through the Circuit Court to the Court of Appeals to the State Supreme Court. The Multnomah County Sheriff's Office will work with B-N/SF to manage the delays caused by rail traffic. Even if the new access is not permitted it appears that delays caused by rail traffic will be managed so that this will not be a "fatal flaw."

Transit service for the site is indirect and limited. Tri-Met Bus 6-MLK to and from the North Rivergate Industrial Area along Marine Drive is limited to weekday peak period service, approximately 6 a.m. to 9 a.m. and 2:30 p.m. to 6 p.m. Transit is expected to carry a very small share of the site-generated trips because the distance from the site to the nearest transit stop is well over ½ mile, generally considered to be the maximum acceptable distance for transit access. Relocating the transit stop as close as possible to the site on North Marine Drive would still leave it about 3/4 mile from the site entrance.

3. Rail Issues

When North Leadbetter Road is extended to intersect with a new North Pacific Gateway Boulevard and loop back to North Marine Drive the additional at-grade crossing would be approximately two-thirds of a mile from the proposed project site. According to Burlington-Northern/Sante Fe staff, the rail line currently carries two unit trains per day traveling at approximately 10 mph. Currently, unit trains on this route average one mile (5280 feet) in length. Under these conditions, a unit train would block each crossing on North Leadbetter Road for six minutes. Considering the new at-grade crossing would be only 3200 feet west of the existing North Leadbetter Road at-grade crossing, a one mile long unit train could block both crossings simultaneously for 2.4 minutes. The daily schedule of train movements would vary according to arrival of seagoing freighters.

The Port of Portland plans to double-track this line within 5 to 10 years, once freight traffic increases warrant the expansion. Rail traffic on the double-track could range from six to twelve total train movements per day, including three to four full-size unit trains (6500 feet) per day. Assuming trains continue to move at 10 mph, under worst case conditions (trains arriving at the same crossing concurrently from opposite directions), individual crossings could be blocked for 14.8 minutes, and both crossings could be blocked simultaneously for 7.4 minutes.

Typical blockages are usually less than the 10 minutes allowed. Multnomah County Sheriff's

Office is aware of and can tolerate the length of potential delays and will develop operational plans and communication links with the railroad to minimize the delays.

Emergency Vehicle Access

The new corrections facility requires access be open to the site at all times for official and emergency vehicles. Due to the sites' location on a peninsula, however, only one access roadway connecting the site to the external roadway system will be possible. This does not appear to be a "fatal flaw" even with the rail crossing delays discussed above. Officials at the City Fire Marshall's Office have commented that it will be possible to secure the site with only one access route to the facility under the conditions that other safety measures are provided on-site. These measure should include sprinkler systems, an access road circling the facility and a loop road at the site that will provide enough area for emergency vehicles to turn around and maneuver. Additional measures could include a helicopter landing pad, a secure fire resistant area within the facility or a refuge area outside the facility but within the secure perimeter, to shelter inmates in the event of a major fire.

Domestic Water Supply

Water will be provided by the City of Portland. Adequate volume and pressure is available to service the site.

Fire Protection

Initial investigation indicates that adequate water volume and pressure is available to service the site.

Sanitary Sewer

Adequate capacity is available in North Marine Drive if "dry" industrial development is assumed to occur in this area of Rivergate. If "wet" type industries are assumed then 2100 feet of new 24 inch diameter pipe will need to be installed in North Marine Drive.

At this point in the design process it appears that a 12" diameter gravity pipe line would have adequate slope and cover to provide service to the new corrections facility as well as, this area of Rivergate assuming "dry" (low water use type industries such as, warehousing and manufacturing) type industries are developed. If the designers find, during detailed design, that there is not adequate slope for a gravity line then a lift station will have to be installed at the new corrections facility. While this is not a "fatal flaw", it would mean additional construction and operating costs.

Electrical Power

Power will be supplied by Portland General Electric. Adequate power is available in the area to meet the needs of the facility.

Natural Gas

Northwest Natural Gas will supply natural gas to the facility. Adequate supplies exist in North Marine Drive to service the site.

Infrastructure Costs

The proposed site is undeveloped. Access roads and utilities must be constructed to service the site. The distance to adequate utilities is about 3/4 of a mile. The cost for roads and utilities, following the routing proposed by the Port of Portland, would be in the range of $4.5 to $6.0 million. While these costs can be accommodated in the funds available for the project, a method of recovering some of these costs from future "benefitted" developments must be negotiated with the Port of Portland as part of the site acquisition agreement.

Storm Water Issues

A new storm water outfall into the Columbia Slough will need to be installed as part of this project. To install the outfall construction will cross approximately 150 feet of environmentally as well as culturally sensitive land. The County will be responsible for designing and installing this stormwater outfall that will service MCNCF as well as future developments in this section of the Rivergate Industrial Development. It will be designed in accordance with Policy 22 of the NRMP for Smith and Bybee Lakes.

The location of this new potential outfall had already been anticipated in the Natural Resource Management Plan for Smith and Bybee Lakes. While not permitted, the recognition of the need for this outfall in the NRMP should make it easier to obtain the necessary permits. Obtaining the permit to install the outfall will be rigorous but is not seen as a "fatal flaw". Wetland permitting and restoration costs are estimated to be approximately $20,000. Costs for the cultural resource investigation component are included in the costs addressed under the Environmental Review section.

Flood Plain Issues

The Federal Emergency Management Agency (FEMA) has established the 100 year flood plain elevation for the proposed site at 27 feet based on the National Geodetic Vertical Datum of 1929. The required finished floor elevation must be at least 2 feet above this elevation or at least elevation 29. The proposed elevation of the finished floor slab is currently planned to be elevation 32 feet.

An aerial photograph of the site (Attachment 1-9) obtained from the Corps of Engineers for the February 1996 floods show this site above water level, but access to the site would have been cut off based on this evidence.

Initial review and discussions with the Port of Portland indicate that Title 3 does not apply to the proposed site.

VIA CERTIFIED US MAIL

REQUEST FOR PUBLIC RECORDS (ORS 192.)

Office of Beverly Stein County Chair
Board Clerk Deborah Bogstad or Custodian of public records
1120 SW Fifth Avenue Suite 1515
Portland Oregon, 97204-1914

Dear Deborah Bogstad,

Thank you again for all of your kind help with providing all of the public records pertaining to the jail siting issue. I need two more items and I need to make this formal request.

I do hereby submit this request for documents of public record.

This request is made according to:
ORS 192.410 - *Inspection of public records defined.*
ORS 192.420 - *Right to inspect public records.*
ORS 192.430 - *Function of custodian of public records.*
ORS 192.440 - *Certified copies of public records.*

Please provide me with the mailing list, including Names, Address and Phone Numbers, if available, for the list that functions according to **ORS 192.640.** as the list of interested persons for the siting of the new corrections facility to be built with the funds approved through measure 26-45. This list was utilized to provide actual notice to interested persons for the Multnomah County Commission Regular Meeting on September 24, 1998, Agenda Item: R-6, Resolution # 98-147. Please also provide a copy of Resolution 95-245, adopted November 30, 1995. ✓ DONE 12/7/98

+ COPIES OF BOARD AGENDA DISTRIBUTION LISTS MAILED TO MR. MARCUS

Yours Truly,

Lewis

Lewis Marcus,
7318 North Syracuse Street
Portland Oregon, 97203
Phone: (503) 285-2850
FAX: (503) 285-2001

BOARD OF COUNTY COMMISSIONERS
'98 NOV 24 PM 8:36
MULTNOMAH COUNTY OREGON

NORTH PORTLAND CITIZENS COMMITTEE
P
C
C

Stein

Multnomah County Sheriff's Office

DAN NOELLE
SHERIFF

12240 N.E. GLISAN ST., PORTLAND, OREGON 97230

(503) 255-3600
TTY (503) 251-2484

December 3, 1998

Linda Hval, Chair
St. Johns Neighborhood Association
8316 North Lombard, Box #441
Portland, OR 97203

Dear Linda:

Thank you for your letter dated November 30, 1998, informing me that the St. Johns Neighborhood Association Board has endorsed the position paper submitted to us previously by the Concerned Citizens of North Portland regarding the proposed site for the new County jail in North Rivergate.

The Board and I are reviewing the position paper and I hope to have a response for that group in the near future.

As you are aware, when the Port of Portland in September offered to sell to the County a parcel on the south end of the Leadbetter Peninsula, the Board of County Commissioners directed me to conduct a technical study of the site.

The County has completed this site assessment and I am in the midst of a series of meetings presenting the findings to the community. Tonight for example, we are presenting the study results at Roosevelt High School in St. Johns. The study found no engineering, environmental or land-use/legal challenges on the site that the County cannot overcome within the project's budget and schedule.

On the evening of December 8th, I am hosting a public hearing to accept time-limited public testimony on the North Rivergate site. This continues the openness of the public outreach that has marked this site selection process. I hope you and members of the St. Johns Neighborhood Association attend to make your voices heard.

After this hearing, the action will shift to the Board of County Commissioners who will decide whether to proceed on this site. On December 10th, I am briefing the Board on the results of the technical site assessment. The Board wants to hear from a few key community representatives at that briefing. I also hope you will accept the opportunity we are offering your group to present three minutes of public comment to the Board on December 10th starting at 9:00 a.m. in the County Courthouse, Room 602, 1021 SW Fourth Avenue.

The Board will not consider resolutions regarding the jail siting until early next year. Public comment will be accepted at public meetings of the Board, and I again hope you and all interested citizens participate. Future editions of the New Jail Newsletter will publicize these Board meetings.

Thank you for your participation.

Sincerely,

Dan Noelle

DAN NOELLE,
Sheriff

cc: Board of County Commissioners
Portland Mayor and City Council
Serena Cruz, County Commissioner-Elect

Multnomah County Sheriff's Office

12240 N.E. GLISAN ST., PORTLAND, OREGON 97230

DAN NOELLE
SHERIFF

(503) 255-3600
TTY (503) 251-2484

December 3, 1998

Mayor Vera Katz
City of Portland
1220 SW Fifth Avenue
Portland, OR 97204

Dear Mayor Katz:

In September, the Board of County Commissioners decided to stop pursuit of the Radio Towers site for the new County jail, and directed me to investigate a site the Port of Portland has offered the County for the jail in North Rivergate.

We have completed our technical analysis of the engineering, environmental and legal/land use challenges associated with the site on the south end of the Leadbetter Peninsula. The project will undergo the City's Type III Conditional Land Use Review. Earlier this week, I had a copy of the full report delivered to your office. In short, we have found the site poses no hurdles that the County cannot overcome within the project's budget and schedule.

I am in the midst of a series of meetings presenting the results of this study to the community, and on December 8th I am hosting a public hearing to accept formal public comment on the suitability of the site.

The action then shifts to the Board of County Commissioners who will decide whether to proceed at this site. On December 10th, I am briefing the Board on the results of the technical site assessment. The Board will take up the issue in January 1999.

I will keep you posted as our work progresses. In the immediate, if you are interested, I am certainly eager to meet with you to share the highlights of the site assessment and to hear your views on the viability of this site for the new jail.

I will have Lt. Bobbi Luna, who will serve as commander of the new jail, call your office shortly to see if we can meet. In the interim, if the site assessment raises any questions for you, please give me a call at 251-2400.

Thank you for your assistance and guidance through what has been a rather long and twisted journey.

Sincerely,

DAN NOELLE,
Sheriff

cc: City Commissioners

★ BOARD AGENDA FOR 9/24/98
PUBLISHED & DISTRIBUTED 9/17/98 DKB

BCC ✓
CC ✓

12/7/98

TO: Multnomah County (MC) Bd of Commissioners

FR: Keepes
9622 N Pier Park Pl
Portland, OR 97203

RE: Newly Proposed Bybee Lake Jail site.

Dear MC Board of Commissioners,

At the 9/24/98 MC regular meeting a Resolution (Res) to pursue the newly proposed Bybee Lake Jail site, Res 98-147, was moved, seconded, discussed, voted upon, and adopted. This action was taken over the express objections of Mr Marcus and Mr Keepes. Mr Marcus objected re rules of notice. Mr Keepes objected re rules of interpretation. Further research supports these objections, and concludes the MC Bd action is null and void.

The Marcus objection.

Whether MC gave prescribed notice?

MC must give 3 days notice of MC regular meetings. MC Bd actions violating prescribed notice are null and void. [FN].

Here, MC gave less than 3 days notice for the Resolution to propose and pursue the new Bybee Lake Jail site.

MC did not give prescribed notice. MC Bd actions violating MC Charter prescribed notice are null and void. MC Bd action is null and void.

The Keepes objection.

Whether MC followed prescribed rules of interpretation?

When the meaning of the Charter, bylaws, adopted rules and documents are clear on their face, MC Bd may not interpret them otherwise even by unanimous vote; MC Bd must amend. MC Bd actions violating such documents are null and void. [FN].

When MC adopted Res 98-147, MC Bd failed to take the clear meaning of Res 97-173, and failed to reconsider or amend Res 97-173. In the record for Res 98-147, MC interpreted the SAC Rivergate site to be "anyplace in Rivergate," about 2800 acres, notwithstanding that Res 97-173 paragraph 8 clearly and unambiguously describes the SAC Rivergate site as only about 300 acres.

MC did not follow prescribed rules of interpretation. MC Bd actions violating MC Charter prescribed rules of interpretation are null and void. MC Bd action is null and void.

Please remedy the above ASAP to avoid litigation.
RSVP.

Very respectfully yours,

Dennis Keepes

Dennis Keepes

[FN] MC Charter 3.50(1), & (2);
MC Rules of procedure for conducting board meetings Section 5, & Section 13A;
Roberts Rules of Order Newly Revised, Scott Foresman, 9th ed, 1990 ed.
p 581-582, Principles of Interpretation, & p 337-338, Improper Motions.

12/7/96

Please file w/ MC Board Clerk
Deb Bogstad.

Please cc MC Board of Commissioners

Chair Stein
Commissioner Lisin
Commissioner Hansen
" Naito
" Kelley
Commissioner - Elect Cruz

Thanks
D Rapp

BCC ✓

December 9, 1998

To: Multnomah Co. Commissioners & Commissioners-Elect

From: Jeff McMahon, former member, Siting Advisory Committee

Dear Commissioners:

I served as the St. Johns Neighborhood Association representative on the SAC. I attended every meeting and, to the best of my ability, worked to help select a good jail site. It is, as you well know, not an easy thing to do.

Before you make your decision about siting this new facility, I would like to express a few comments and concerns.

1. The site currently being reviewed (the one on Smith and Bybee Lakes) was never reviewed by the SAC. There was a different site in Rivergate, that was reviewed. I have recently heard the view expressed that the SAC's review of that one site could be extrapolated to mean that the SAC reviewed and considered all of Rivergate on equal terms. To me, this is ludicrous. I never looked at the current site or any other in Rivergate. This is a leap of logic that might be applied to half of the other sites in outer Northeast that we looked into individually.

2. The former site in Rivergate is much preferable to the current one. This is for two reasons. First, the County must lay in all of the infrastructure services to this site (water, power, sewer, etc) at substantial cost. This violates one of the initial screening criteria used to pick sites for consideration by the SAC. Second, The current site sits adjacent to the "crown jewel" of North Portland, Smith and Bybee Lakes. The former site was not on the lake or slough.

3. The reduction of needed acreage to 22 acres (from 35) must mean that many sites were not subjected to review by the SAC. This is a very important point. While I am sure that the idea of reopening the search for site has limited appeal, the process of site selection has been tarnished. I would like to look at all possible sites around the County. As you know most of sites were in North and Northeast Portland; it would have pleased me to look at more sites in other parts the County.

The site selection process started out strongly and the SAC did a great deal of work and listened to hundreds of people. We selected a site. The site that was agreed to by the SAC, the Sheriff and County Commissioners. Then things changed and the site was removed for several reasons. (It is my belief that the site will be developed, even with the environmental concerns, in the next few yours.) This makes me personally very disappointed in the outcome of the process.

In fairness, I have always felt that Sheriff Noelle has done (and continues to do) a commendable job with public outreach and in listening to all stakeholders.

Finally, I wish for you to remember all of the social services the the St. Johns area bears. A large CSD office, a large proposed low income health center, a parole office, the sewage treatment plant for much of the city and let's not forget the St. Johns landfill. That is a lot. And now, probably what will become the largest County jail. It does seen an unfair distribution to me.

Respectfully,

Jeff McMahon

Home: 232-0429
Work: 241-3393, Voicemail: 203-3232

cc: Sheriff Dan Noelle
Concerned Citizens of North Portland

Multnomah County Sheriff's Office

DAN NOELLE
SHERIFF

12240 N.E. GLISAN ST., PORTLAND, OREGON 97230

(503) 255-3600
TTY (503) 251-2484

December 9, 1998

Mr. Lewis Marcus
7318 N. Syracuse
Portland, Oregon 97203

Dear Mr. Marcus,

Deb Bogstad, the Board Clerk, has forwarded your public records request for our jail siting mailing list. The list is 42 pages long and will cost $46.00 to duplicate; $5 for the first page and $1 for every page thereafter. Those fees are outlined in Multnomah County Ordinance 810. If you prefer, we can make arrangements for you to review those names in our office at no cost.

Please contact me at 251-2503 to let me know how you wish to proceed. Payment in advance will be required if you want the list mailed. Otherwise, I will be glad to set up a time as soon as possible for you to come to our office and review the list.

Sincerely,

Barbara Simon

Barbara Simon
Public Information Officer

cc: Lt. Luna
Deb Bogstad ✓

Public Hearing Summary
North Rivergate Site Assessment
New Multnomah County Jail

6:30 p.m., Tuesday, December 8, 1998
Exhibit Hall E
Portland Metropolitan Exposition Center
2060 North Marine Drive, Portland

I. Welcome — Sheriff Dan Noelle

Sheriff Dan Noelle opened the hearing. He said that the Board of County Commissioners would be holding a Board briefing on December 10th to hear the results of the technical site assessment of the North Rivergate site. The Sheriff wanted to hold this hearing to allow an opportunity for people to offer comment on whether, given the results of the site assessment, the Board should consider this site for the new jail. The Sheriff mentioned the commissioners would meet again in January after considering the technical report. At that time, the public would have additional opportunity to comment.

Sheriff Noelle summarized the history of the jail siting effort. He said that in May 1996, the County's voters passed a bond levy to build and operate a new jail. Then the Oregon Legislature passed a law that made Multnomah County responsible for housing more inmates. He said the need for a new jail is critical, citing the fact that over a ten-year period the County had to release 36,000 prisoners early because of inadequate jail space. At the present time, there is no need for early releases, but the jails are reaching capacity.

II. Project Overview — Lt. Bobbi Luna

Lt. Bobbi Luna presented basic information about the jail and the proposed Rivergate site. She said that the design prepared for the Radio Towers site would be adequate for use at Rivergate. The site will require about 22 buildable acres, not including area reserved for buffering. The facility will initially hold 225 inmates and will be expanded, probably sometime during the next 20 years, to hold 2,000. At build-out it will be 45 feet high at its peak and be approximately 500,000 square feet.

Sheriff Noelle invited testimony from the audience.

III. Public Testimony

Emily Roth: Ms. Roth is manager of Smith and Bybee Lakes, and she spoke on behalf of the Smith and Bybee Lakes Management Committee. She submitted written testimony.

She said that Smith and Bybee Lakes Wildlife Area is recognized regionally as a significant natural area protected primarily for wildlife values. Both Multnomah County and the City of Portland list this area as a unique environmental area for its wetlands and wildlife habitat.

The Smith and Bybee Lakes Management Committee represents Metro, Oregon Department of Fish and Wildlife, the Audubon Society of Portland, Friends of Smith and Bybee Lake, the Port of Portland, the City of Portland Bureau of Environmental Services and Parks and Recreation Bureau and private landowners. Her comments are submitted with support of the full committee with the exception of the Port of Portland.

The committee recommends that to protect wildlife and habitat, the facility should be placed a minimum of 150 feet back from the top of the bank. Her testimony cited a 1992 Washington State Department of Wildlife Report staying that buffers need to protect plant life 200 to 300 feet beyond the wetland in cases similar to the proposed site.

Sherry Dahlen: Ms. Dahlen thanked the Sheriff for coming to her community. She did comment on the low turnout from her community and said that she thought lack of notification might be the reason.

Her primary concern is the speed with which the process is proceeding and the apparent lack of time to involve the community. As recently as August, the County was proceeding with the Radio Towers site and in September they switched to Rivergate. There was not time for the community to speak to the commissioners. She feels that notification has been inadequate and suggested more mailings and use of community networks.

She also suggested holding meetings at the St. John's Community Center and Roosevelt High School and making sure the meetings are well publicized. She said the St. John's Review is the best way to get the community involved.

She said the footprint of the building has changed, but there has been no formal siting advisory committee process to review it. She referred to the previous week's siting committee meeting at which the committee members disagreed about what part of Rivergate was being considered.

She encouraged the County to reconsider this project.

Frank Opila: Mr. Opila is President of Friends of Smith and Bybee Lakes and spoke on behalf of that group. He submitted a written copy of his testimony. He feels optimistic that the County is ready to work with his group to resolve concerns.

The group conditionally supports the siting of a jail adjacent to Bybee Lake. They suggest that the County contribute community and environmental amenities for siting a jail adjacent to a wildlife area.

Their principal issue is preservation of at least 150 feet of vegetative buffers between construction and the wetlands,

They also have concerns about wildlife, canoe/kayak access, lighting, water quality and the 40-Mile Loop Trail.

A previous presentation showed only a 40-foot buffer, which they feel is not adequate. Some ways to protect the wetlands might be: to purchase more land from the Port of Portland; to limit the scope of potential expansion; or to modify the design to allow for a larger buffer.

They also acknowledge community concerns about the selection process.

Chuck Harrison: Mr. Harrison spoke in his capacity as vice president of the Columbia Corridor Association. He served on the Siting Advisory Committee and on the Design Review Committee.

The Columbia Corridor Association has endorsed the Rivergate site. He said that the siting committee had previously looked at another site in Rivergate. He thinks now that the Leadbetter Peninsula is a better site than those looked at previously in Rivergate. It has more marginal value for industrial development than the other sites.

Ray Piltz: Mr. Piltz spoke as a 55-year resident of North Portland who is very familiar with the proposed site. He referred to environmental damage that has occurred on the site. He questioned putting a jail close to areas used by children and the public.

He said he only learned about the siting issue the previous night. He said the siting process for facilities puts off people in his area, and they feel as if the decisions have already been set in concrete before they have the opportunity to speak at hearings. Mr. Piltz complained that he had not heard anything about this issue despite reading the newspaper and listening to the news regularly. He said none of the people he spoke to in his neighborhood was aware of this process.

He said that the new site will be troubled by flooding and will offer more difficulties than Radio Towers.

Donna Babbitt: Ms. Babbitt told the County to start over. She feels the site is illegal. She wants a siting committee composed of people who live here. She said there has

been no notification to key neighborhoods. She said the last mailing was sent out more than a year and a half ago. Other comments were:

- Portsmouth community was not communicated with.
- Schools will be impacted.
- A scientist who works with the lakes is very concerned about the impact and has sent a letter.
- Staff of Open Meadows are not aware of the siting process.
- She is concerned about migrating birds.
- The site was flooded two years ago and is in a flood plain.
- The Jones case is a problem.
- She believes that the Port does not want to sell to the County.
- Three trains daily interfere with access to the site, and the railroads indicate they will increase this number to 12 a day in the coming years.
- As an EMT, she foresees serious problems with emergency access to people on the peninsula during a flood or seismic activity – access will only be by helicopter
- She mentioned serious traffic safety issues on Lombard.

Troy Clark: Mr. Clark, who is vice president of Friends of Smith and Bybee Lake, spoke on his own behalf. He wanted to give context to the request for 150-foot buffer for the wetlands. He said that for many years, communities ignored the inherent values of wetlands and allowed them to be filled. Some communities, such as San Francisco, have virtually eliminated all their wetlands. Only recently has society begun to appreciate the importance of wetlands for wildlife habitat and water quality. Portland is one of the few cities that still have this rare resource, and this site offers the opportunity to preserve and protect a very important area. He encouraged the County to consider the potential to preserve and maintain this valuable resource.

Sheriff Noelle thanked people for coming. He stated that if the Board decides to consider resolutions siting the jail at the North Rivergate parcel, the Board will welcome public comment at meetings publicized through the media, the newsletter, bulk mail and print media ads.

Attachments – Submitted written testimony

ATTACHMENTS - Written Testimony

Friends of Smith & Bybee Lakes
P.O. Box 83862
Portland, OR 97283-0862

December 8, 1998

Commissioner Bev Stein, Chair
Commissioner Diane Linn, District 1
Commissioner Gary Hansen, District 2
Commissioner Lisa Naito, District 3
Commissioner Sharron Kelley, District 4
Commissioner-elect Serena Cruz, District 2
Sheriff Dan Noelle
Lt. Bobbi Luna

Dear County Commissioners and Officials,

The Friends of Smith & Bybee Lakes conditionally support the siting of a jail adjacent to Bybee Lake in the Rivergate Industrial District. We believe that Multnomah County should be willing to contribute environmental and community amenities for siting a jail, especially such a potentially large one, adjacent to the Smith and Bybee Lakes Wildlife Area. We request the following as conditions:

- **Vegetative and Wildlife Buffers** – Buffers are necessary to protect this regionally significant natural area, provide wildlife habitat and corridors, contain stormwater and provide visual screening. We request vegetative buffers that extend at least 150 feet from the top of the bank to the outer edge of development. The buffers should be comprised of **native** vegetation, consisting of several layers including shrubs and ground cover. Evergreens should be included so that the facility is not visible from the lakes or the trail system during all seasons of the year. The buffers should be designed to provide wildlife habitat. Sufficient soil should be brought in to support root systems for large trees. (The sand fill on the peninsula may be up to 30 feet deep.)
- **Wildlife** – Western Painted turtles have been seen in this area of Bybee Lake. The Western Painted turtle is listed "sensitive - critical" by the Oregon Department of Fish and Wildlife. The turtles may use sand areas, particularly on south facing slopes, for nesting. Turtle and other wildlife use in the area needs to be examined and protected or mitigated.
- **Canoe/kayak Access** – As a community amenity for siting a jail adjacent to the Wildlife Area, we request that Multnomah County fund a boat launch somewhere within the Wildlife Area – not necessarily on the Leadbetter peninsula. The location and design of the launch will be determined by a public process that is currently being developed by Metro and the Smith and Bybee Lakes Management Committee.
- **Lighting** – Lighting at the facility should not cast any direct light into the Wildlife Area so that nocturnal wildlife is not disturbed. Lighting should be controlled by lighting type and direction, distance from the lakes and vegetative screening. The headlights of evening visitors using the access road to the facility should also be screened.
- **Water Quality** – Smith and Bybee Lakes are listed as 303(d) "water quality limited" by the Oregon Department of Environmental Quality. There is a need to maintain and enhance the water quality of

the lakes. We request that no stormwater be discharged into the lakes. This includes stormwater during construction. Stormwater from the building, parking lots and all impervious surfaces needs to be properly treated. Emergency containment capability should be built in.

- **40-Mile Loop Trail** – There are plans to build a portion of the 40-Mile Loop Trail along the Columbia Slough in this area. Design for the site should allow for the trail, including vegetative buffers.

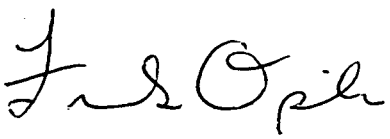
The Preliminary Site Assessment presentation to the community on December 3 showed a 40-foot buffer from top of the fill bank to the outer edge of the development. The Friends of Smith & Bybee Lakes consider this to be unacceptable; we have requested a 150-foot buffer as an environmental amenity. The Friends of Smith & Bybee Lakes urge Multnomah County to consider the following alternatives:

1. Purchase more land from the Port of Portland. On October 27, the Port's manager of Property and Development Services told the Smith and Bybee Lakes Management Committee that the Port will not sell the County any additional land for buffers. We urge the Board of County Commissioners to take this up with the Port of Portland Commission, if necessary.
2. Limit the scope of the potential expansion for this site. In May 1996 the voters of Multnomah County approved the $80 million bond measure, reportedly allowing for 450 new jail beds (with 225 at the proposed new jail). Providing for expansion to 2000 beds may not be necessary.
3. Modify the design of the site to allow for a larger buffer. One alternative is to reduce the amount of parking or provide for underground parking.

The Friends of Smith & Bybee Lakes acknowledge that there are community concerns about the public process for selecting this site. If this site is chosen, the Friends are willing to work with the County to ensure a solution that is environmentally sound and acceptable to the community. We would like to participate in any working or advisory group to help address our concerns and any other issues that may arise.

Thank you for your consideration.

Sincerely,



Frank Opila
President, Friends of Smith & Bybee Lakes
503-283-1145

coordinated by:

Smith & Bybee Lakes Wildlife Area Management Committee
Nancy Hendrickson, Chair
Troy Clark, Vice Chair

Metro

600 NE Grand Ave.
Portland, OR 97232
(503) 797-1870

December 7, 1998

Sheriff Dan Noelle
Multnomah County Sheriff
12240 NE Glisan St.
Portland, OR 97230

RE: North Rivergate Site Location for the New County Jail Facility

Dear Sheriff Noelle,

Thank you for the opportunity to submit these comments regarding the North Rivergate site location for the new county jail facility. This testimony is provided on behalf of the Smith and Bybee Lakes Management Committee (except for the Port of Portland). We would like to thank you for your willingness to talk to the committee and for answering many of our questions. The committee's general and specific comments are detailed below.

Background
Smith and Bybee Lakes Wildlife Area is recognized throughout our region as a significant natural area, protected primarily for wildlife values. The wildlife area is the largest, protected, urban wetland in the United States. It is home to or visited by over a hundred bird species, river otter, beaver, western painted turtles, Columbia slough sedge and numerous other native species. The wildlife area is the remaining remnant of the wetland, slough, riparian complex that used to exist at the confluence of the Columbia and Willamette Rivers.

The Multnomah County Framework Plan, Policy 15 Willamette River Greenway, identifies Smith and Bybee Lakes Wildlife Area as an Area of Significant Environmental Concern. The factors of significant environmental concern include shoreline vegetation, rare ecosystems, unique wildlife habitat, views and vistas, recreational needs and water quality. The City of Portland also recognized the complexity and uniqueness of the area in their "Inventory and Analysis of Wetlands, Water Bodies and Wildlife Habitat Areas for the Columbia Corridor" (City Ordinance #161896, April 20 1989). In the report, the wildlife habitat inventory score for the lakes was the highest of all areas evaluated. The narrative for the report states, "Smith and Bybee Lakes is the most complex and unique natural area within Portland's Urban Growth Boundary. (T)he Smith and Bybee Lakes area is the largest, most significant wetland area in the City of Portland, and the largest natural resource inventory area in the Columbia Corridor. It has tremendous habitat value and diversity, and should be protected."

Recognizing the unique habitats and importance of Smith and Bybee Lakes to the region, The City of Portland, Metro and the Port of Portland developed and adopted the *Natural Resources Management Plan for Smith and Bybee Lakes* in 1990. The plan set forth the goal, objectives and policies for the wildlife area. The goal of the Management Plan "is to protect and manage the Smith and Bybee Lakes area as an environmental and recreational resource for the Portland region. (I)ts primary use will be as an environmental preserve." Included in the plan was the formation of the Smith and Bybee Lakes Management Committee (SBLMC)[1]. The management committee is responsible for overseeing the

[1] Committee Representatives include Metro Executive Office, Oregon Department of Fish and Wildlife, Audubon Society of Portland, Friends of Smith and Bybee Lakes, Port of Portland, City of Portland Bureau of Environmental Services, City of Portland Parks and Recreation and Private Landowners.

implementation of the plan and provides ongoing policy guidance. One of the ongoing responsibilities is to review and comment on any development activities adjacent to the wildlife area boundaries.

Concerns and Recommendations

At the SBLMC meeting held October 27,1998, Sheriff Dan Noelle and Lt. Bobbi Luna presented a concept for the proposed jail that may be built in the Rivergate Industrial Area, adjacent to Bybee Lake on the Leadbetter Peninsula. This area is surrounded on three sides by the wildlife area. The SBLMC met on November 24,1998, to discuss the potential siting and construction of the new jail facility. The committee voted 6 to 1 (the Port of Portland opposed and the representative for the private landowners was not in attendance) to submit the following concerns and recommendations about the jail siting. The concerns and recommendations are made under the assumption that Multnomah County allows for a thorough and complete public process for siting the new jail facility.

1. Wildlife and Habitat Protection – the lakes provide unique habitat for many species. The largest known western painted turtle population in the lower Columbia River ecosystem uses them. The turtles are listed as "critically sensitive" by the Oregon Department of Fish and Wildlife. They bask on the logs within Bybee Lake, next to the Leadbetter Peninsula. The turtles may use the sand area for nesting. The peninsula also provides a valuable upland wildlife corridor along the Columbia Slough, connecting the Willamette River to the wildlife area.

   To protect the lakes' ecosystems and preserve the wildlife corridor:
   - The facility should be placed a minimum of 150 feet back from the top of the bank to provide a buffer from the development. For wildlife habitat a 1992 Washington State Department of Wildlife report entitled "Buffer Needs of Wetland Wildlife" states that, "To retain wetland-dependent wildlife in important wildlife areas, buffers need to retain plant structure for a minimum of 200 to 300 feet beyond the wetland. This is especially the case where open water is a component of the wetland or where the wetland has heavy use by migratory birds or provided feeding for heron. The size needed would depend upon disturbance from adjacent land use and resources involved."
   - The buffer should be planted with native vegetation, including conifers (evergreen) and have ground, shrub and canopy layers. Some areas should be left unplanted to provide turtle habitat.
   - Construction should be limited to daylight hours to prevent additional interference with wildlife movement. Dusk and dawn are active wildlife periods.
   - Construction of the perimeter road and fence should be limited to enclose the first phase of the facility only. The road and fence can be moved in the future if the facility is expanded. This will limit disturbance and leave more area for wildlife use. The vegetative buffer should be planted to the edge of the fence.
   - Ensure that there is no direct light from the jail, perimeter road and the road to the facility into the wildlife area that would disturb wildlife. Lighting should be controlled by lighting type, direction, distance from the lakes and vegetative screening.

2. Recreation and Public Access - a variety of passive recreation users enjoy bird watching, paddling canoes or kayaks, walking and wildlife watching at the wildlife area. The area is also used by schools and other educational programs throughout the region as an outdoor classroom to learn about wetlands, wildlife and water quality. Numerous North Portland schools participate in restoration and monitoring projects there.

   To maintain or enhance the high quality of passive recreation opportunities:
   - The jail facility needs to be visually screened from the lakes.
   - Avoid eliminating opportunities for future public access. The SBLMC is developing a facility plan for the wildlife area including a possible option to site a small boat launch facility at Bybee Lake. The planning process will examine each potential site for habitat sensitivity and numerous other factors.
   - As a community amenity for siting a jail adjacent to the wildlife area, Multnomah County should fund the construction of a boat launch and parking area. For having the jail sited next to a regionally significant natural area, used by residents from the entire Metro region, the county should compensate users by providing this amenity.

3. Water Quality – the Oregon Department of Environmental Quality lists Smith and Bybee Lakes as water quality limited. The SBLMC is concerned that surrounding development would cause further degradation of the water quality in the lakes; it is looking for opportunities to improve water quality. As more area adjacent to the lakes is paved, the quality and quantity of stormwater entering the lakes and slough needs to be controlled and monitored.

   To prevent further degradation:
   - No stormwater should be directly discharged into Bybee Lake.
   - Treat all stormwater on site with controlled release into the slough or retain the water on site to use for summer watering.
   - Treat all stormwater runoff during construction.
   - Use best management practices to treat stormwater, above and beyond the City of Portland's requirements, because of the area's sensitivity.

4. Creative Alternatives – consider alternatives that would allow the jail to be sited on the Leadbetter Peninsula and be compatible with the wildlife area.

   The following are just a few design changes and suggestions:
   - Redesign the building to reflect the uniqueness of the site. Instead of trying to "fit" the building designed for the radio tower site at Leadbetter Peninsula, look at design changes that would allow the concerns and recommendations in this letter to be met.
   - Limit the scope of the project, keeping it a smaller facility.
   - Lay out a traffic pattern that has the least impact of lights on the wildlife area.
   - Have an eco-roof to treat and retain stormwater. Capture the rainwater in cistern to store and use for irrigation in the summer.
   - Reduce the amount of parking, build a two-story garage or place the parking under the building to allow for a larger buffer area.
   - Provide a lighting design that does not encroach into the wildlife area.

If this site is selected, the SBLMC would like to work with the Sheriff's Office and Multnomah County to ensure that site preparation and building design protects the wildlife area and is acceptable to the community. A member of the committee would be available to participate in any working group to address the concerns and recommendations in this letter. The full committee would appreciate a chance to review the site preparation and building design before any activity begins.

Thank you for your consideration.

Sincerely,

Nancy Hendrickson

Nancy Hendrickson, Chair
Smith and Bybee Lakes Management Committee

C: Charles Ciecko, Director, Metro Regional Parks and Greenspaces
Mike Burton, Metro Executive Officer
Lt. Bobbi Luna, Multnomah County Sheriff's Department
Multnomah County Commissioners

600 NORTHEAST GRAND AVENUE | PORTLAND, OREGON 97232 2736
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METRO

December 7, 1998

Sheriff Dan Noelle
Multnomah County Sheriff
12240 NE Glisan St.
Portland, OR 97230

RE: North Rivergate Site Location for the New County Jail Facility

Dear Sheriff Noelle,

Thank you for the opportunity to submit these comments regarding the North Rivergate site location for the new county jail facility. This testimony is provided on behalf of Metro.

Smith and Bybee Lakes Wildlife Area is recognized throughout our region as a significant natural area, protected primarily for wildlife values. The wildlife area is the largest, protected, urban wetland in the United States. It is home to or visited by over a hundred bird species, river otter, beaver, western painted turtles, Columbia slough sedge and numerous other native species. The wildlife area is the remaining remnant of the wetland, slough, riparian complex that used to exist at the confluence of the Columbia and Willamette Rivers.

As the managing agency of the wildlife area, Metro looks forward to working with Multnomah County to ensure that site preparation and building design protects the lakes and allows the county to build the facility in a cost and time efficient manner. I have reviewed the letter submitted by the Smith and Bybee Management Committee. The concerns raised by the management committee would be significant regardless of what uses may be proposed for that area.

Thank you for your consideration.

Sincerely,

Mike Burton
Executive Officer

Charles Ciecko, Director
Regional Parks and Greenspaces Department

C: Smith and Bybee Lakes Management Committee
Multnomah County Commissioners

December 8, 1998

FROM: Kevin O'Sullivan, St. Johns Neighborhood Association
7624 N. Kellogg Street, Portland, OR 97203

TO: Multnomah County Sheriff and County Commissioners

SUBJECT: Testimony on the Smith & Bybee Lakes Jail Site

I. THE PUBLIC PROCESS IS SERIOUSLY FLAWED

A. No Justification for Choosing the New Site: The County Commission and the SAC

1) The SAC (Siting Advisory Committee) never studied the Smith & Bybee Lakes site. The site was never on the list of candidate sites studied by the SAC.
2) By choosing this new site, the County has *de facto* started over, but because no other site is being considered, there is every indication that this site is a done deal.
3) The County's "justification" for choosing this new site was that the original 35-acre Rivergate site (chosen by the SAC, but no longer available) extends to the entire Rivergate District.
4) This is a leap of reasoning that is entirely without basis. To quote author Flann O'Brien, "the conclusion of your syllogism is fallacious, based on licensed premises."
5) According to this logic, "any place in Rivergate is basically approved through the [SAC] process." Conversations with some SAC members supposedly "affirmed that that was the intent of that group." (Quotes from Chair Beverly Stein at the September 24, 1998 Board meeting).
6) By this same flawed rationale, however, one can argue that any industrial site in Northeast Portland "is basically approved through the process" by virtue of the SAC having studied specific sites in that area.
7) Such blanket statements about the SAC are wrong. According to SAC members I've spoken with, the SAC never indicated that the original Rivergate site extended to any other place in Rivergate. I can provide written testimony from SAC members who refute the County's argument. (See Attachment A).
8) The County's selection of the Smith & Bybee Lake site circumvents and subverts the SAC and the public process. This adds insult to injury to the SAC members who, in good faith, put in long hours of hard work, only to see it all tossed aside.
9) The only way to remedy this problem is to open up for consideration other 22-acre sites.

B. The Lack of Public Process

1) Public notification about this new site was entirely inadequate.
2) The public was not involved in the critical decision of choosing this new site.
3) The Sheriff is relying on a two-year-old mailing list that has shrunk significantly.
4) At a minimum, bulk mail should have been used in September to inform the public that an entirely new site was being considered.
5) The majority of the public does not know about this new jail site. That's a lot of ignorance directly caused by the County. For example, most educators are unaware of

this threat to Smith & Bybee Lakes, even though they conduct outdoor education programs at these lakes.

6) Those people who are aware have had to scramble frantically to learn more about the site and the process.
7) Two months is not adequate time to inform and involve the public.
8) The Sheriff cites attending several meetings to get the word out. But only a total of 200 people attended all those meetings, and many people probably attended more than one, lowering the effective head count.
9) The technical report has only been available since December 3, leaving only one week for the public to study and respond.
10) Contrary to a statement issued by the County Sheriff and the Commissioners, the "public involvement" since September 24 cannot be described as "an exhaustive program of community outreach."

C. The Jail Bond

1) The rush to build is driven primarily by the need to spend the Jail Bond money within 5 years starting in 1996.
2) There are many extenuating circumstances that would allow for an extension of the 5-year deadline to spend the Bond money.
3) The time pressure to build the jail can therefore be alleviated.
4) The County needs to confer with Dave Boyer of the Finance Division, and make this information publicly available.
5) Using the Jail Bond to finance the costs of infrastructure is inappropriate and perhaps illegal because the infrastructure will be for the benefit other potential industries.

D. Proposal for Selecting a Site

1) It is absolutely essential that the County compile a list of all available 22-acre sites within Multnomah County that meet all the initial screening criteria.
2) You will very likely find a feasible site where the jail can be built more quickly and easily.
3) The Rivergate site is unique in that no other site of this size was ever considered during the past two years.
4) The Initial Screening Criteria called for a minimum site size of 35 acres. This automatically ruled out many smaller, available sites. For example, ten potential sites were eliminated solely because they were smaller than 35 acres, even though they met all other Initial Screening Criteria.
5) The Initial Screening Criteria also required that utility services and infrastructure be available.
6) The County can save over $6 million by abiding by the Initial Screening Criteria and selecting a site with infrastructure in place.
7) Consider other, available Rivergate sites held privately, not by the Port. They need to be seriously scrutinized.

II. THE BYBEE LAKE SITE HAS TOO MANY SERIOUS FLAWS

The Smith & Bybee Lake site is encumbered by a host of technical problems, despite all the reassurances given by the Sheriff and his aides. The site's numerous flaws and uncertainties add up to a substantial overall risk. Should this site plan fail, the County will have no other site to fall back upon. The County needs to step back and assess this site up from the broad perspective of getting maximum use out of the bond funds while minimizing the amount of risk. The County must proceed cautiously and wisely in order to succeed in getting this jail built on time and within the budget.

1) The Sheriff and his consultants have raised more questions about this site than they've answered. There are many questions that they have failed to address. The questions about the jail bond extension are just one example.
2) The Sheriff has failed to volunteer all information that might potentially interest the public. For example, why hasn't the public been told that the Troutdale Jail may likely be closed, and all the inmates will be moved to the new and expanded jail?
3) Recovery of $6 million of infrastructure costs is highly uncertain. All the surrounding land lies in the flood plain and was underwater in 1996. No industry will build where flooding is likely, especially with much better land available in Rivergate. Without industries, there will be no cost recovery.
4) Infrastructure costs are for the benefit of other potential industries. This constitutes an inappropriate use of the Jail Bond fund.
5) The public was never involved in the selection of this site.
6) Two months is too little time for the Sheriff to fully analyze the site, its flaws, risks, and cost uncertainties.
7) The site violates the Initial Screening Criteria (see attachment)
   - The site is less than the required minimum of 35 acres.
   - There are no utility services or infrastructure.
6) The site was never compared with any other site.
7) The site violates twelve of the sixteen Selection Criteria (see attachment). These violations are fatal, as far as the public is concerned.
8) The County must justify to the public these violations of the Selection Criteria.
9) The proposed access road will run too close to the planned 40-Mile Loop Trail. Traffic on this road will adversely affect recreational use of that trail.
10) The site is too close to planned and existing parks and wildlife areas. The St. Johns Landfill is another area that might ultimately be made into a park. That totals 3 distinct parks.
11) The access road will likely
12) A colony of western painted turtles resides in the immediate vicinity of the site. These turtles are listed by ODFW as "critical sensitive", which means that listing as threatened or endangered is pending.
13) The site will drain stormwater into the Columbia Slough, a TMDL body of water.
14) The site is too close to Bybee Lake, which is water quality "limited."
15) The site will adversely impact Smith & Bybee Lakes wildlife area. Noise, traffic, lights, and erosion must be minimized, if not eliminated.
16) The access road will adversely impact the Columbia Slough and 40-Mile Loop Trail (noise, traffic, lights, illegal dumping).

17) A minimum setback buffer of 150 feet from the top of the bank is absolutely essential. If the County can't do this, then build the jail elsewhere.
18) The height restriction at this site is 60 feet, yet the jail only 45 feet high. The County should at least determine whether or not the public's buffer requirement could be met by building the jail up. The parking lot could also be built up, rather than out.
19) The 150-foot buffer could also be met by not expanding the jail. This might require keeping the Troutdale Jail open and locating the Residential Drug and Alcohol Treatment Center elsewhere.
20) The site has no public transportation. Workers and visitors will need to walk almost two miles from North Marine Drive to the Jail site. This is unacceptable.
21) Not enough soil tests have been performed. PCB contamination is likely to be more widespread, which will cost more money and time.
22) Archeological artifacts pose a significant hurdle, and may result in legal difficulties that cost time and money.
23) This site is likely to encounter many legal challenges. So far, one has already been raised (Mike Jones). Two others are in the works (private citizens). More legal challenges will focus on environmental impacts, wildlife impacts (for state and federal listed species), native American artifacts, soil cleanup, railroad crossing, just to name a few.
24) Emergency access to the site will be frequently restricted. The Port of Portland's transportation plan calls for an increase of at least 12 unit trains per day within the next few years. This will create significant problems of access to the site. The Sheriff's technical report mentions only 3 unit trains per day.
25) Seasonal floods will periodically restrict emergency access to the site.
26) A Master Plan will likely be needed for the full buildup of 2,000 beds. This will cause significant delays. This has been glossed over by the technical review.
27) An unmentioned Conditional Use Permit issue will likely be buffering from the 40-Mile Loop Trail.

Initial Site Screening Factors:

New Multnomah County Corrections Facility

Threshold:

1. **Size**
   35 acres minimum, 60 acres maximum, with configuration suitable to accommodate present and anticipated future requirements.

2. **In Multnomah County**

3. **Zoning**
   Industrial (not allowed in residential or commercial areas).

4. **Transportation**
   Access to major arterial streets and freeways.

5. **Services Available**
   Utilities, water & sewer, infrastructure.

6. **Early Availability of Site**
   Short time frame for purchase and construction.

Additional Considerations:

- **Topography**
  Preferred site should have a level area, foundation grade soils, no other construction constraints.

- **No or Few Relocations**
  Of existing businesses or residents

- **Acceptable Capital and Operating Costs**
  A levy approved by Multnomah County voters in May 1996 provides funding for the facility

- **Community Impact**
  A prime consideration of the Siting Advisory Committee will be to design facility for best fit into surrounding land uses.

SAC Selection Criteria

The following 16 criteria were agreed upon by the Siting Advisory Committee at their November 14, 1996 meeting. These criteria are based upon public testimony given at SAC meetings, the results of public workshops and a survey.
The SAC never examined the Smith & Bybee Lakes site.

➢ **-- indicates Criteria that are violated by the Smith & Bybee Lakes Jail Site**

- The site should be as far as possible from current and planned residential zoned property.
- The site should be as far as possible from current and planned schools/daycare facilities.

➢ **The site should be in accordance with:**
- Economic development plans
- Metro 2040 plan
- Applicable state planning goals (LCDC)
- Community plans

➢ **The site should not be in an area susceptible to natural disasters (e.g., in a 100-year flood plain, near seismic fault. Dikes – if applicable – must be strong enough to withstand projected earthquakes and flood level at the same time).**

➢ **The site should be one with the least amount of community opposition.**

➢ **The sites should not over-saturate an area with corrections and social services facilities.**

➢ **The site should be as far as possible from current and planned parks.**

- The site should allow for reasonable transport of inmates.

➢ **The jail site should cause minimal financial hardship to neighboring property owners.**

➢ **The site should be one with the lowest opportunity cost of foregone development, including impact on tax base. (Avoid prime industrial land offering services the jail doesn't need.)**

➢ **The site should offer the possibility of adequate buffering.**

➢ **The site should have soil of foundation quality.**

➢ **The site should have no negative impact on the watershed.**

➢ **The site should have access to public transportation.**

- The site should be as far as possible from current and planned commercial development.

➢ **Consider the relative costs of each site when making the siting decision.**

New Multnomah County
Corrections Facility

New Jail Newsletter

Vol. 3, No. 5 December 1998

A newsletter in the public interest keeping citizens informed on the planning and design of the new corrections facility in Multnomah County.

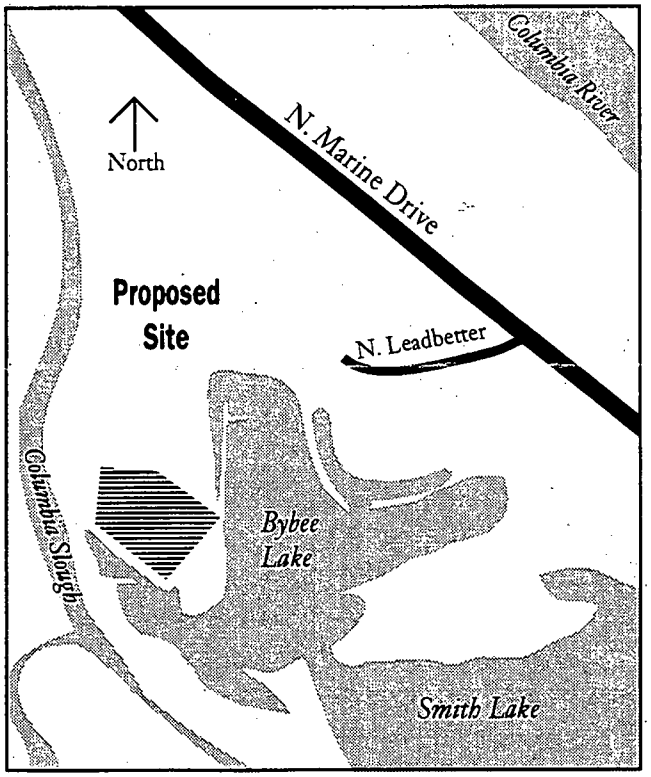
North Rivergate Site Assessment Finds No Technical Fatal Flaws

The County has completed its technical study of the engineering, environmental and legal/ land-use challenges that developing the new jail on the south end of the Leadbetter Peninsula in North Rivergate would pose. The study found no technical issues unresolvable within the County's budget and schedule for the 225-bed initial new jail project. Nor are there site characteristics that would prevent expansions of the jail at some future point up to the maximum capacity of 2,000-beds.

Sheriff Dan Noelle delivered the site assessment report to the Board of County Commissioners in early-December. In addition, the Sheriff held community meetings to review the technical study. These meetings, publicized in the last edition of the *New Jail Newsletter*, were opportunities for citizens to delve into the specifics of the engineering, environmental, legal and land-use issues.

As reported in the previous *New Jail Newsletter*, the Sheriff is hosting a public hearing the evening of Tuesday, December 8, 1998 at the Expo Center to take time-limited public testimony on the suitability of the North Rivergate site. On Thursday, December 10, 1998, the Sheriff will review the site assessment with the Board of County Commissioners at a roundtable Board briefing.

The Board of County Commissioners is the body selecting the jail site. If the Board decides to consider resolutions regarding building the jail at the North Rivergate site, that will probably not occur until early next year. Look to future editions of the *New Jail Newsletter* for notice of these Board meetings.



Proposed North Rivergate Jail Site

Inside is a summary of the site assessment report. Persons wishing to receive a copy of the full executive summary of the site assessment should contact Lt. Bobbi Luna at 248-3282. Lt. Luna can be reached by mail at:

Lt. Bobbi Luna
Multnomah County Sheriff's Department
1120 SW Third Avenue, Room 322
Portland, OR 97204

You can also fax her a request at: 736-6829 or e-mail her at: bobbi.l.luna@co.multnomah.or.us.

Summary of the Site Assessment

Following is a list of potential fatal flaws divided into the three technical fields the County investigated: legal/land use, environmental, and engineering. Following each issue is a very brief description of the County's findings of the impacts of the challenge on the project's budget and schedule.

Legal and Land-Use

1. Pending Jones v. Thorne lawsuit would prevent obtaining clean title.

The Port of Portland is a willing seller. Clean title is needed to subdivide the peninsula. Legal counsel investigated the lawsuit with attorneys for both parties. A settlement is currently being negotiated that requires mitigation rather than fill removal. The Port of Portland is responsible for the subdivision process. That process is lengthy, but can occur during the project design phase for the County, minimizing schedule impacts. For protection, the County may seek a warranty in the property acquisition agreement with the Port of Portland in case the lawsuit renders the parcel unfit for development.

Result: County can resolve the issue within project budget and schedule. It is not a fatal flaw.

2. Jail traffic would trigger required expensive capacity improvements to existing roads.

Travel time analysis indicates most jail traffic will use I-5/Marine Drive. Initial review with City of Portland indicates current road infrastructure sufficient for the initial facility's projected traffic counts. The County may be required to contribute a signal for the existing railroad crossing of North Leadbetter, and future expansions may trigger a traffic signal at the intersection of North Leadbetter and North Marine Drive. The City is likely to apply trip reduction measures to the jail, as it does with similar development. The jail at complete expansion will generate fewer trips than typical like-sized industrial uses targeted for the industrially zoned parcel.

Result: County can resolve the issue within project budget and schedule. It is not a fatal flaw.

3. Port proposed road access to site would dictate a new at-grade rail crossing.

The originally proposed road configuration for the site would require a new at-grade railroad crossing south of North Marine Drive at the T-6 interchange. The process for obtaining permits for a new at-grade rail crossing is long and uncertain. From discussions with the City of Portland, however, it appears this portion of road providing a second access point to the peninsula off Marine Drive need not be completed to satisfy the City's emergency vehicle access requirements.

Result: County can resolve the issue within project budget and schedule. It is not a fatal flaw.

4. Rail traffic would prohibit adequate access for emergency vehicles.

Trains several times per day block North Leadbetter, preventing vehicle access to and from the peninsula. In studying the length and frequency of current and projected future delays, the Sheriff's Office does not see them as intolerable. The railroad and the Sheriff's Office have discussed communications links in case of emergencies. These links, along with other fire and emergency protection features already planned for the facility, address the concerns of the Fire Marshall.

Result: County can resolve the issue within project budget and schedule. It is not a fatal flaw.

Environmental

5. Construction would disturb cultural resources.

A good share of industrially-zone property in the area is along bodies of water. Such property carries a high likelihood that native soils beneath the fill contain prehistoric artifacts. Given likely construction techniques, regulations may require artifact documentation and relocation. The cost and schedule impacts of this work are similar to projections for the same at the Radio Towers site.

Result: County can resolve the issue within project budget and schedule. It is not a fatal flaw.

6. Fill at site would contain hazardous materials that would prevent development.

The County took several samples of the Columbia River fill material at the site. All borings were clean, except for a finding of PCBs in one location. Further testing in that vicinity indicated the area of contamination is small and the PCB level is at the regulatory required level for remediation. If the Oregon Department of Environmental Quality requires soil removal, the soils could be removed for less than $15,000.

Result: County can resolve the issue within project budget and schedule. It is not a fatal flaw.

7. The County would not be able to meet required regulatory protections afforded adjacent environmental resources.

The industrially zoned parcel is adjacent to the Columbia Slough and Bybee Lakes, both valued natural resources. Nonetheless, the regulatory setback requirements for industrial development are minimal. Discussions with key interest groups raise concerns about setbacks and lighting, and some have requested the County allow

recreational access to Bybee Lake from the site. The County's plans for the project include acquiring property to allow setbacks far exceeding City code requirements. The Sheriff is working with environmental stakeholders to develop a buffer to their satisfaction that blocks views of the facility from the slough and the lake as well as enhances and expands wildlife corridors. The County's buffering will complement required mitigation that may spring from settlement of the Jones v. Thorne lawsuit. Lighting will be focused to minimize seepage into wildlife areas. The County will plan to allow 40 Mile Loop Trail construction and access to Bybee Lake if key Smith & Bybee Lakes interest groups decide one is desirable.

Result: County can resolve the issue within project budget and schedule. It is not a fatal flaw.

8. **E-Zone protections would prevent stormwater outfall.**

Development on the peninsula, for the jail or any other user, will require a discharge pipe for treated stormwater into the Columbia Slough. That pipe will go through e-zone protected property. The Natural Resources Management Plan for Smith & Bybee Lakes anticipated such a new outfall in this area. The project will pre-treat stormwater before discharging to meet city and state standards.

Result: County can resolve the issue within project budget and schedule. It is not a fatal flaw.

Engineering

9. **Soil conditions would prohibit foundation supports to protect structure from seismic damage.**

As with much industrial property in the region, the parcel is susceptible to liquefaction during a significant earthquake. To reduce the risks of structural damage in this event, the project will require soil compaction techniques and a pile foundation system to overcome possible vertical settlement and horizontal displacement. The Radio Towers site also posed seismic challenges, so the County has sufficient budgetary resources. A seismic event is likely in these industrial areas to damage roads and utilities.

Result: County can resolve the issue within project budget and schedule. It is not a fatal flaw.

10. **Utility service in area would not support jail.**

Research indicates that the existing water, sewer, gas and power service available in North Marine Drive is sufficient to support the initial and expanded facility.

Result: County can resolve the issue within project budget and schedule. It is not a fatal flaw.

11. **The County would not be able to afford new infrastructure connections to site.**

The cost for road and utility connections to the jail, running south the approximately 3/4ths of a mile from North Marine Drive, is in the $4.5 million to $6 million range. The County has sufficient funds in the project budget for this. In addition, the County is discussing with the Port of Portland a method for the County to recover a portion of these costs as other properties on the Leadbetter Peninsula, north of the jail, are developed.

Result: County can resolve the issue within project budget and schedule. It is not a fatal flaw.

12. **The parcel would frequently be flooded.**

The Federal Emergency Management Agency established 100-year flood plain elevation for the parcel is 27 feet. The parcel is above this level. The proposed elevation of the jail floor slab is 32 feet, exceeding the City of Portland code requirements. Aerial photos from the February 1996 flood indicate that at its worst stage the parcel remained dry, but that access routes were covered by water.

Result: County can resolve the issue within project budget and schedule. It is not a fatal flaw.

Finally, the Sheriff included all comments from respondents in the complete site assessment report sent to the Board of County Commissioners.

RESULTS OF MAIL-IN SURVEY

Fifty-eight citizens responded by mail, fax or e-mail to the survey included in early-November's *New Jail Newsletter*. The questions in the survey sprung directly from comments and concerns the Sheriff and Lt. Bobbi Luna heard as they met with several neighborhood, business and environmental groups in the last two months. The County mailed and distributed 1,500 surveys.

Although by no means scientific, the survey did offer findings of interest. The overwhelming concerns about the site revolve around the ability of the facility to not negatively impact adjacent natural areas. Most of the optimism about the site surrounded steps the County could take to make the site improve and enhance the environmental resources in the area.

When asked if the site could work for the jail, 50% of those who responded stated it could, while 31% said "no." The balance were undecided.

ATTENTION: Public Meetings

Public Hearing with Sheriff Dan Noelle

Tuesday, December 8, 1998
6:30 p.m.
Lobby of Exhibit Hall E
Portland Metropolitan
Exposition Center
2060 N. Marine Dr., Portland

Tri-Met Bus # 6 — MLK

Briefing of Board of County Commissioners

Thursday, December 10, 1998
9:45 a.m.
County Courthouse, Room 602
1021 SW Fourth Ave., Portland
On the bus mall

Catch it on Cable Channel 30:
Live, or on Friday, 12/11 at 10:00 p.m.,
or Sunday, 12/13 at 1:00 p.m.

Note: No public comment is accepted at Board briefings. The Board will welcome public comment at subsequent meetings of the Board.

Multnomah County Sheriff's Department
12240 NE Glisan St.
Portland, OR 97230

Friends of Smith & Bybee Lakes
P.O. Box 83862
Portland, OR 97283-0862

December 8, 1998

Commissioner Bev Stein, Chair
Commissioner Diane Linn, District 1
Commissioner Gary Hansen, District 2
Commissioner Lisa Naito, District 3
Commissioner Sharron Kelley, District 4
Commissioner-elect Serena Cruz, District 2
Sheriff Dan Noelle
Lt. Bobbi Luna

Dear County Commissioners and Officials,

The Friends of Smith & Bybee Lakes conditionally support the siting of a jail adjacent to Bybee Lake in the Rivergate Industrial District. We believe that Multnomah County should be willing to contribute environmental and community amenities for siting a jail, especially such a potentially large one, adjacent to the Smith and Bybee Lakes Wildlife Area. We request the following as conditions:

- **Vegetative and Wildlife Buffers** – Buffers are necessary to protect this regionally significant natural area, provide wildlife habitat and corridors, contain stormwater and provide visual screening. We request vegetative buffers that extend at least 150 feet from the top of the bank to the outer edge of development. The buffers should be comprised of **native** vegetation, consisting of several layers including shrubs and ground cover. Evergreens should be included so that the facility is not visible from the lakes or the trail system during all seasons of the year. The buffers should be designed to provide wildlife habitat. Sufficient soil should be brought in to support root systems for large trees. (The sand fill on the peninsula may be up to 30 feet deep.)
- **Wildlife** – Western Painted turtles have been seen in this area of Bybee Lake. The Western Painted turtle is listed "sensitive - critical" by the Oregon Department of Fish and Wildlife. The turtles may use sand areas, particularly on south facing slopes, for nesting. Turtle and other wildlife use in the area needs to be examined and protected or mitigated.
- **Canoe/kayak Access** – As a community amenity for siting a jail adjacent to the Wildlife Area, we request that Multnomah County fund a boat launch somewhere within the Wildlife Area – not necessarily on the Leadbetter peninsula. The location and design of the launch will be determined by a public process that is currently being developed by Metro and the Smith and Bybee Lakes Management Committee.
- **Lighting** – Lighting at the facility should not cast any direct light into the Wildlife Area so that nocturnal wildlife is not disturbed. Lighting should be controlled by lighting type and direction, distance from the lakes and vegetative screening. The headlights of evening visitors using the access road to the facility should also be screened.
- **Water Quality** – Smith and Bybee Lakes are listed as 303(d) "water quality limited" by the Oregon Department of Environmental Quality. There is a need to maintain and enhance the water quality of

the lakes. We request that no stormwater be discharged into the lakes. This includes stormwater during construction. Stormwater from the building, parking lots and all impervious surfaces needs to be properly treated. Emergency containment capability should be built in.

- **40-Mile Loop Trail** – There are plans to build a portion of the 40-Mile Loop Trail along the Columbia Slough in this area. Design for the site should allow for the trail, including vegetative buffers.

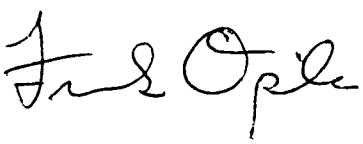
The Preliminary Site Assessment presentation to the community on December 3 showed a 40-foot buffer from top of the fill bank to the outer edge of the development. The Friends of Smith & Bybee Lakes consider this to be unacceptable; we have requested a 150-foot buffer as an environmental amenity. The Friends of Smith & Bybee Lakes urge Multnomah County to consider the following alternatives:

1. Purchase more land from the Port of Portland. On October 27, the Port's manager of Property and Development Services told the Smith and Bybee Lakes Management Committee that the Port will not sell the County any additional land for buffers. We urge the Board of County Commissioners to take this up with the Port of Portland Commission, if necessary.
2. Limit the scope of the potential expansion for this site. In May 1996 the voters of Multnomah County approved the $80 million bond measure, reportedly allowing for 450 new jail beds (with 225 at the proposed new jail). Providing for expansion to 2000 beds may not be necessary.
3. Modify the design of the site to allow for a larger buffer. One alternative is to reduce the amount of parking or provide for underground parking.

The Friends of Smith & Bybee Lakes acknowledge that there are community concerns about the public process for selecting this site. If this site is chosen, the Friends are willing to work with the County to ensure a solution that is environmentally sound and acceptable to the community. We would like to participate in any working or advisory group to help address our concerns and any other issues that may arise.

Thank you for your consideration.

Sincerely,



Frank Opila
President, Friends of Smith & Bybee Lakes
503-283-1145

coordinated by:

Smith & Bybee Lakes Wildlife Area Management Committee
Nancy Hendrickson, Chair
Troy Clark, Vice Chair

Metro

600 NE Grand Ave.
Portland, OR 97232
(503) 797-1870

December 7, 1998

Sheriff Dan Noelle
Multnomah County Sheriff
12240 NE Glisan St.
Portland, OR 97230

RE: North Rivergate Site Location for the New County Jail Facility

Dear Sheriff Noelle,

Thank you for the opportunity to submit these comments regarding the North Rivergate site location for the new county jail facility. This testimony is provided on behalf of the Smith and Bybee Lakes Management Committee (except for the Port of Portland). We would like to thank you for your willingness to talk to the committee and for answering many of our questions. The committee's general and specific comments are detailed below.

Background
Smith and Bybee Lakes Wildlife Area is recognized throughout our region as a significant natural area, protected primarily for wildlife values. The wildlife area is the largest, protected, urban wetland in the United States. It is home to or visited by over a hundred bird species, river otter, beaver, western painted turtles, Columbia slough sedge and numerous other native species. The wildlife area is the remaining remnant of the wetland, slough, riparian complex that used to exist at the confluence of the Columbia and Willamette Rivers.

The Multnomah County Framework Plan, Policy 15 Willamette River Greenway, identifies Smith and Bybee Lakes Wildlife Area as an Area of Significant Environmental Concern. The factors of significant environmental concern include shoreline vegetation, rare ecosystems, unique wildlife habitat, views and vistas, recreational needs and water quality. The City of Portland also recognized the complexity and uniqueness of the area in their "Inventory and Analysis of Wetlands, Water Bodies and Wildlife Habitat Areas for the Columbia Corridor" (City Ordinance #161896, April 20 1989). In the report, the wildlife habitat inventory score for the lakes was the highest of all areas evaluated. The narrative for the report states, "Smith and Bybee Lakes is the most complex and unique natural area within Portland's Urban Growth Boundary. (T)he Smith and Bybee Lakes area is the largest, most significant wetland area in the City of Portland, and the largest natural resource inventory area in the Columbia Corridor. It has tremendous habitat value and diversity, and should be protected."

Recognizing the unique habitats and importance of Smith and Bybee Lakes to the region, The City of Portland, Metro and the Port of Portland developed and adopted the *Natural Resources Management Plan for Smith and Bybee Lakes* in 1990. The plan set forth the goal, objectives and policies for the wildlife area. The goal of the Management Plan "is to protect and manage the Smith and Bybee Lakes area as an environmental and recreational resource for the Portland region. (I)ts primary use will be as an environmental preserve." Included in the plan was the formation of the Smith and Bybee Lakes Management Committee (SBLMC)[1]. The management committee is responsible for overseeing the

[1] Committee Representatives include Metro Executive Office, Oregon Department of Fish and Wildlife, Audubon Society of Portland, Friends of Smith and Bybee Lakes, Port of Portland, City of Portland Bureau of Environmental Services, City of Portland Parks and Recreation and Private Landowners.

implementation of the plan and provides ongoing policy guidance. One of the ongoing responsibilities is to review and comment on any development activities adjacent to the wildlife area boundaries.

Concerns and Recommendations

At the SBLMC meeting held October 27,1998, Sheriff Dan Noelle and Lt. Bobbi Luna presented a concept for the proposed jail that may be built in the Rivergate Industrial Area, adjacent to Bybee Lake on the Leadbetter Peninsula. This area is surrounded on three sides by the wildlife area. The SBLMC met on November 24,1998, to discuss the potential siting and construction of the new jail facility. The committee voted 6 to 1 (the Port of Portland opposed and the representative for the private landowners was not in attendance) to submit the following concerns and recommendations about the jail siting. The concerns and recommendations are made under the assumption that Multnomah County allows for a thorough and complete public process for siting the new jail facility.

1. Wildlife and Habitat Protection – the lakes provide unique habitat for many species. The largest known western painted turtle population in the lower Columbia River ecosystem uses them. The turtles are listed as "critically sensitive" by the Oregon Department of Fish and Wildlife. They bask on the logs within Bybee Lake, next to the Leadbetter Peninsula. The turtles may use the sand area for nesting. The peninsula also provides a valuable upland wildlife corridor along the Columbia Slough, connecting the Willamette River to the wildlife area.

   To protect the lakes' ecosystems and preserve the wildlife corridor:
   - The facility should be placed a minimum of 150 feet back from the top of the bank to provide a buffer from the development. For wildlife habitat a 1992 Washington State Department of Wildlife report entitled "Buffer Needs of Wetland Wildlife" states that, "To retain wetland-dependent wildlife in important wildlife areas, buffers need to retain plant structure for a minimum of 200 to 300 feet beyond the wetland. This is especially the case where open water is a component of the wetland or where the wetland has heavy use by migratory birds or provided feeding for heron. The size needed would depend upon disturbance from adjacent land use and resources involved."
   - The buffer should be planted with native vegetation, including conifers (evergreen) and have ground, shrub and canopy layers. Some areas should be left unplanted to provide turtle habitat.
   - Construction should be limited to daylight hours to prevent additional interference with wildlife movement. Dusk and dawn are active wildlife periods.
   - Construction of the perimeter road and fence should be limited to enclose the first phase of the facility only. The road and fence can be moved in the future if the facility is expanded. This will limit disturbance and leave more area for wildlife use. The vegetative buffer should be planted to the edge of the fence.
   - Ensure that there is no direct light from the jail, perimeter road and the road to the facility into the wildlife area that would disturb wildlife. Lighting should be controlled by lighting type, direction, distance from the lakes and vegetative screening.

2. Recreation and Public Access - a variety of passive recreation users enjoy bird watching, paddling canoes or kayaks, walking and wildlife watching at the wildlife area. The area is also used by schools and other educational programs throughout the region as an outdoor classroom to learn about wetlands, wildlife and water quality. Numerous North Portland schools participate in restoration and monitoring projects there.

   To maintain or enhance the high quality of passive recreation opportunities:
   - The jail facility needs to be visually screened from the lakes.
   - Avoid eliminating opportunities for future public access. The SBLMC is developing a facility plan for the wildlife area including a possible option to site a small boat launch facility at Bybee Lake. The planning process will examine each potential site for habitat sensitivity and numerous other factors.
   - As a community amenity for siting a jail adjacent to the wildlife area, Multnomah County should fund the construction of a boat launch and parking area. For having the jail sited next to a regionally significant natural area, used by residents from the entire Metro region, the county should compensate users by providing this amenity.

3. Water Quality – the Oregon Department of Environmental Quality lists Smith and Bybee Lakes as water quality limited. The SBLMC is concerned that surrounding development would cause further degradation of the water quality in the lakes; it is looking for opportunities to improve water quality. As more area adjacent to the lakes is paved, the quality and quantity of stormwater entering the lakes and slough needs to be controlled and monitored.

   To prevent further degradation:
   - No stormwater should be directly discharged into Bybee Lake.
   - Treat all stormwater on site with controlled release into the slough or retain the water on site to use for summer watering.
   - Treat all stormwater runoff during construction.
   - Use best management practices to treat stormwater, above and beyond the City of Portland's requirements, because of the area's sensitivity.

4. Creative Alternatives – consider alternatives that would allow the jail to be sited on the Leadbetter Peninsula and be compatible with the wildlife area.

   The following are just a few design changes and suggestions:
   - Redesign the building to reflect the uniqueness of the site. Instead of trying to "fit" the building designed for the radio tower site at Leadbetter Peninsula, look at design changes that would allow the concerns and recommendations in this letter to be met.
   - Limit the scope of the project, keeping it a smaller facility.
   - Lay out a traffic pattern that has the least impact of lights on the wildlife area.
   - Have an eco-roof to treat and retain stormwater. Capture the rainwater in cistern to store and use for irrigation in the summer.
   - Reduce the amount of parking, build a two-story garage or place the parking under the building to allow for a larger buffer area.
   - Provide a lighting design that does not encroach into the wildlife area.

If this site is selected, the SBLMC would like to work with the Sheriff's Office and Multnomah County to ensure that site preparation and building design protects the wildlife area and is acceptable to the community. A member of the committee would be available to participate in any working group to address the concerns and recommendations in this letter. The full committee would appreciate a chance to review the site preparation and building design before any activity begins.

Thank you for your consideration.

Sincerely,

Nancy Hendrickson

Nancy Hendrickson, Chair
Smith and Bybee Lakes Management Committee

C: Charles Ciecko, Director, Metro Regional Parks and Greenspaces
Mike Burton, Metro Executive Officer
Lt. Bobbi Luna, Multnomah County Sheriff's Department
Multnomah County Commissioners

The Columbia Slough Watershed Council
Portland, Oregon

December 10, 1998

Commissioner Bev Stein, Chair
Commissioner Diane Linn, District 1
Commissioner Gary Hansen, District 2
Commissioner Lisa Naito, District 3
Commissioner Sharron Kelley, District 4
Commissioner-elect Serena Cruz, District 2
Sheriff Dan Noelle
Lt. Bobbi Luna

Re: Proposed Rivergate Jail Site at Bybee Lake

Dear County Commissioners and Officials:

Thank you for the opportunity to comment. The Council appreciates Multnomah County's willingness to work with the community. Several Council members have participated on the Siting Advisory Committee and the Working Group. Recently Sheriff Noelle met with the Council at our October meeting where we discussed the proposed Rivergate site. In November a number of Council members toured the site on foot and by canoe. Recommendations from the site visit group were forward to and discussed by the entire Council on 30 November. The Council supports the following recommendations:

- **Vegetative and Wildlife Buffers**. Buffers are necessary to protect natural areas, provide wildlife habitat and corridors, contain stormwater and provide visual screening. The Council considers the proposed 40-foot buffer to be insufficient. The Council urges that buffers around this development be increased beyond the currently required amounts so they are more in line with the recommendations contained in two reports from the State of Washington, namely: *Wetland Buffers: Use and Effectiveness,* and *Management Recommendations for Washington's Priority Habitats* (copies attached). This could be accomplished by shifting the building back, away from the tip of the peninsula. The buffers should be comprised of native vegetation, consisting of several layers including shrubs and ground cover. Evergreens should be included so that the facility is not visible from the lakes or the trail system during all seasons of the year. Sufficient soil should be brought in to support root systems for large trees (sand fill on the peninsula is about 30 feet deep). New soil could be shaped into a perimeter berm which would create even more visual screening from the lake. The screening will be at least 6 feet high and 75% opaque within three years. Also, plantings near the jail building(s) should also contain evergreens to ensure year round screening. Buffers should be designed to provide wildlife habitat, including turtle habitat. The County should consider removing fill to reshape the banks and create a more natural edge.

- **Turtles**. Western Painted turtles have been seen in this area of Bybee Lake. The Western Painted turtle is listed "critically sensitive" by the Oregon Department of Fish

7040 NE 47th Avenue
Portland, OR 97218-1212
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and Wildlife. Turtle use of upland habitat in this area is not fully known. Turtle and other wildlife use in the area needs to be examined and protected or mitigated.

- **Canoe/kayak Access**. As a community amenity for siting a jail adjacent to the Wildlife Area, we request that Multnomah County fund a boat launch somewhere within the Wildlife Area – not necessarily on the Leadbetter peninsula. The location and design of the launch will be determined by a public process that is currently being developed by Metro and the Smith and Bybee Lakes Management Committee.

- **Lighting**. The CSWC agrees with the Sheriff that lighting at the facility should not cast any direct light into the Wildlife Area so that nocturnal wildlife is not disturbed. Lighting should be controlled by lighting type and direction, distance from the lakes and vegetative screening. The headlights of evening visitors using the access road to the facility should also be screened.

- **Water Quality**. Columbia Slough and Smith and Bybee Lakes are listed as 303(d) water quality limited by the Oregon Department of Environmental Quality. As much stormwater as possible should be retained on site. Any remaining stormwater should be treated using appropriate Best Management Practices prior to discharge. New outfalls into the Management Area should be designed to minimize impact on water quality consistent with the NPDES permit process. Particular care must be given to stormwater during the construction phase.

- **40-Mile Loop Trail**. There are plans to build a portion of the 40-Mile Loop Trail along the Columbia Slough in this area. Design for the site should allow for the trail, including vegetative buffers.

- **Reimburse County for Infrastructure Costs**. The Council supports Sheriff Noelle's point of view that the Port of Portland should reimburse the County for infrastructure costs as other nearby property is developed.

The Columbia Slough Watershed Council wants to work with the County to ensure a development that is environmentally sound and acceptable to the community. We would like to participate in any working or advisory group to help address these and any other issues that may arise.

On behalf of the entire Watershed Council, thank you for your consideration.

Sincerely,

Jay Mower

COLUMBIA SLOUGH WATERSHED COUNCIL
Jay Mower, Coordinator

cc: Emily Roth, Metro Wildlife Area Manager
Charles Ciecko, Metro Regional Parks and Greenspaces
Smith & Bybee Lakes Management Committee

Attachments

7040 NE 47th Avenue
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WETLAND BUFFERS: Use and Effectiveness

Andrew J. Castelle[1], Catherine Conolly[1], Michael Emers[1], Eric D. Metz[2], Susan Meyer[2], Michael Witter[2], Susan Mauermann[3], Terrell Erickson[3], Sarah S. Cooke[4]

[1]Adolfson Associates, Inc., Edmonds, WA
[2]W&H Pacific, Inc., Bellevue, WA
[3]Washington State Department of Ecology, WA
[4]Pentec Environmental, Edmonds, WA

for

Washington State Department of Ecology
Shorelands and Coastal Zone Management Program
Olympia, Washington

February 1992

populations, WDW management guidelines recommend no harvest within 200 feet of riparian corridors.

McMahon (1983) found that vegetated buffers were important for survival of juvenile coho salmon, both for temperature moderation, cover and increased food supply. Brook trout are also extremely susceptible to elevated temperatures, and Raleigh (1982) recommended a 30-meter (98-foot) buffer width with 50 to 75% midday shade as optimal. Eighty percent of this buffer should be vegetated, for erosion control, for maintaining the undercut bank areas, and for providing essential cover for the trout along the bank. Raleigh et al. (1984) described similar habitat requirements for rainbow trout, and recommended the same size and make-up for buffer areas.

Some researchers have assessed the value of buffers for several species concurrently, and offer general buffer recommendations. Mudd (1975) studied the Touchet River, analyzing current conditions along the river, and the amount of riparian and wetland wildlife habitat that existed. Bird, mammal, and plant species were surveyed, although game species were studied most. Mudd found that a minimum of 75 feet of natural riparian, primarily mature, vegetated buffer promoted optimum wildlife populations for pheasant, quail, mourning dove, and deer.

The WDW (Appendix C, this report) summarizes that:

> "To retain wetland-dependent wildlife in important wildlife areas, buffers need to retain plant structure for a minimum of 200 to 300 feet beyond the wetland. This is especially the case where open water is a component of the wetland or where the wetland has heavy use by migratory birds or provided feeding for heron. The size needed would depend upon disturbance from adjacent land use and resources involved.

Note

> Influence of the water table on the landscape and vegetation is often reduced on the eastside of the state with more abrupt wetland-upland edges. Wildlife use tends to be concentrated closer to water in drier climates. Hall (1970) showed more narrow beaver use on streams in eastern California than had been reported in the literature (100 feet vs. 328 feet). Mudd (1975) showed minimum riparian area for maximum pheasant and deer use to be 75 feet in one eastern Washington study.
>
> In western Washington, wetlands with important wildlife functions should have 300-foot upland buffers for intense land uses and 200-foot upland buffers for low intensity land uses. In Eastern Washington, wetlands with important wildlife functions should have 200-foot upland buffers for intense land use and 100-foot buffers for low intensity land uses.
>
> Priority species or especially sensitive animals or wetland systems such as bogs/fens or heritage sites may need even larger buffers around wetlands to prevent their loss to disturbance or isolation of subpopulations or other loss of wetland function or value."

Wetland Buffer Determination Models and Recommendations

Washington State agencies and local governments are not the first to consider the question of wetland buffer protection and buffer sizes. Others, most notably in the eastern United States,

Management Recommendations for Washington's Priority Habitats

Riparian

K. Lea Knutson
and Virginia L. Naef

December 1997

Washington Department of FISH and WILDLIFE

Modifications to Recommended RHAs. Site-specific modifications to recommended RHAs can be made using *Habitat Characteristics Important to Fish and Wildlife* (p. 79) as a guide. Important characteristics should be retained or restored in all riparian areas in order to provide suitable habitat for fish and wildlife.

Rationale. The recommended RHA widths were developed by synthesizing studies that examined riparian habitat functions and the widths necessary to maintain these functions (Appendix B). This information was then grouped by riparian habitat function, and averages and ranges of reported distances were calculated (Appendix C and Table 4). Literature containing recommended riparian habitat buffer schemes was compared to the information in Appendix C. The WDFW recommended RHA widths are based in large part on this synthesis and evaluation, with a provision for variable RHA widths to accommodate the specific needs of priority species.

Table 4. Range and average widths to retain riparian function as reported in the literature (summarized in Appendix C).

Riparian habitat function	Range of reported widths in meters (feet)	Average of reported widths in meters (feet)
Temperature control	11-46 (35-151)	27 (90)
Large woody debris	30-61 (100-200)	45 (147)
Sediment filtration	8-91 (26-300)	42 (138)
Pollution filtration	4-183 (13-600)	24 (78)
Erosion control	30-38 (100-125)	34 (112)
Microclimate maintenance	61-160 (200-525)	126 (412)
Wildlife habitat	8-300 (25-984)	88 (287)

Recommended RHA widths will generally encompass the extent of riparian habitat and provide sufficient distances to retain riparian habitat functions. Recommended RHA widths are wider for larger rivers and streams to encompass the wider riparian habitat. It is recommended that RHAs be protected across the entire landscape because maintaining the connectivity of all parts of the aquatic and riparian ecosystem is necessary for healthy watersheds and fish and wildlife habitat (Naiman et al. 1992). In addition, within a watershed all flowing water is connected; impacts in a localized area can have far-reaching consequences.

Appendix C. Riparian habitat buffer widths needed to retain various riparian habitat functions as reported in the literature, organized by riparian habitat function.

Riparian habitat function	Perpendicular distance from stream in meters (feet)	Source
WATER TEMPERATURE CONTROL		
60-80% shading	11-38 (35-125)	Brazier et al. 1973
	11-37 (35-120)	Johnson and Ryba 1992
	12 (39)	Corbett and Lynch 1985
	15-30 (49-100)	Hewlett and Fortson 1982
	18 (59)	Moring 1975
50-100% shading	18-38 (60-125)	U.S. Forest Service et al. 1993
	30 (100)	Lynch et al. 1985
	30 (100)	Beschta et al. 1987
	30 (100)	Johnson and Ryba 1992
	30-43 (100-141)	Jones et al. 1988
80% shading	46 (151)	Steinblums et al. 1984
LARGE WOODY DEBRIS		
	30 (100)	Murphy and Koski 1989
	31 (103)	Bottom et al. 1983
	45 (148)	Harmon et al. 1986
	46 (150)	McDade et al. 1990
	46 (150)	Robison and Beschta 1990
	50 (165)	Van Sickle and Gregory 1990
	55 (180)	Thomas et al. 1993
FILTER SEDIMENTS		
75% sediment removal	30-38 (100-125)	Karr and Schlosser 1977
90% of sediment removal at 2% grade	30 (100)	Johnson and Ryba 1992
Sediment removal	30 (100)	Erman et al. 1977, Moring et al 1982, Lynch et al 1985
	61 (200)	Terrell and Perfetti 1989
50% deposition	88 (289)	Gilliam and Skaggs 1988
Effective control of non-channelized sediment flow	60-91 (200-300)	Belt et al. 1992
FILTER POLLUTANTS		
Nutrient reduction	4 (13)	Doyle et al. 1977
Minimum	10 (33)	Petersen et al. 1992
	15 (49)	Castelle et al. 1992
	16 (52)	Jacobs and Gilliam 1985

Riparian habitat function	Perpendicular distance from stream in meters (feet)	Source
Nutrient removal using the multi-species riparian buffer strip system described by the authors	20 (66)	Schultz et al. 1995
Remove fecal coliforms	30-43 (100-141)	Jones et al. 1988
	30 (100)	Grismer 1981
	30 (100)	Lynch et al. 1985
Nitrates removed to meet drinking water standards	30 (100)	Johnson and Ryba 1992
Nutrient pollution in forested riparian areas	30 (100)	Terrell and Perfetti 1989
Nutrient removal	36 (118)	Young et al. 1980
Pesticides and animal waste	61 (200)	Terrell and Perfetti 1989
Nutrient pollution in herbaceous or cropland riparian areas	183 (600)	Terrell and Perfetti 1989
EROSION CONTROL		
Bank erosion control	30 (100)	Raleigh et al. 1986
High mass wasting area	38 (125)	Cederholm 1994
MICROCLIMATE INFLUENCE		
In forested ecosystem	61-122 (200-399)	Chen et al. 1990
	160 (525)	Harris 1984, Franklin and Forman 1987
WILDLIFE HABITAT		
General wildlife habitat	23 (75)	Mudd 1975
	9-201 (30-660)	Johnson and Ryba 1992
	61 (200)	Zeigler 1992
Species sensitive to disturbance	25 (82)	Croonquist and Brooks 1993
Aquatic insects	30 (100)	Erman et al. 1977
Benthic invertebrates - food supply	30 (100)	Erman et al. 1977
Macroinvertebrate density	30 (100)	Newbold et al. 1980
Macroinvertebrate diversity	30 (100)	Gregory et al. 1987
Riparian invertebrates	30 (100)	Erman et al. 1977, Roby et al. 1977, Newbold et al. 1980
Brook trout	30 (100)	Raleigh 1982
Chinook salmon	30 (100)	Raleigh et al. 1986
Cutthroat trout	30 (100)	Hickman and Raleigh 1982
Rainbow trout	30 (100)	Raleigh et al. 1984
Reptiles and amphibians	30-95 (100-312)	Rudolph and Dickson 1990

Riparian habitat function	Perpendicular distance from stream in meters (feet)	Source
Reptiles and amphibians	30 (100)	Rudolph and Dickson 1990
Birds	75-200 (246-656)	Jones et al. 1988
Full complement of birds	127 (417)	Sedgewick and Knopf 1986
	125 (410)	Croonquist and Brooks 1993
Nest predation reduced	100 (328)	Temple 1986
Forest interior birds only occur in corridors wider than 50 m	50 (164)	Tassone 1981
Minimum riparian width to sustain forest dwelling birds	60 (200)	Darveau et al. 1995
Minimum distance needed to support area-sensitive neotropical migrant birds	100 (328)	Keller et al. 1993
Distance needed to maintain functional assemblages of common neotropical migratory birds	100 (328)	Hodges and Krementz 1996
Great blue heron feeding	100 (328)	Short and Cooper 1985
Great blue heron nesting	250 (820)	Short and Cooper 1985
	250-300 (820-984)	Parker 1980, Short and Cooper 1985, Vos et al. 1985
Wood duck nesting	80 (262)	Gilmer et al. 1978
	183 (600)	Grice and Rogers 1965, Sousa and Farmer 1983
	200 (656)	Lowney and Hill 1989
Harlequin nesting	50 (164)	Cassirer and Groves 1990
Bald eagle buffer from human disturbance	121 (396)	Grubb 1980
Bald eagle disturbance during feeding	200 (656)	Skagen 1980
Bald eagle feeding areas	75-100 (246-328)	Stalmaster 1980
Bald eagle nesting	100 (328)	Small 1982
Bald eagle perching	50 (164)	Stalmaster 1980
Osprey nesting - no cut zone	61 (200)	Zarn 1974, Westall 1986
Pheasant and quail, eastern Washington	23 (75)	Mudd 1975
Mourning dove	15 (50)	Mudd 1975
Belted kingfisher roosts	30-61 (100-200)	Prose 1985
Downy woodpecker	15 (50)	Cross 1985
Hairy woodpecker	40 (133)	Stauffer and Best 1980
Pileated woodpecker and some neotropical migrants	15-23 (50-75)	Triquet et al. 1990
Pileated woodpecker nesting	150-183 (492-600)	Conner et al. 1975, Schroeder 1983

Riparian habitat function	Perpendicular distance from stream in meters (feet)	Source
Pileated woodpecker nesting	100 (328)	Small 1982
Black-capped chickadee	15 (50)	Cross 1985
White-breasted nuthatch	17 (57)	Stauffer and Best 1980
Red-eyed vireo	40 (133)	Stauffer and Best 1980
Warbling vireo nesting	90 (295)	Gilmer et al. 1978
Spotted towhee breeding populations	200 (656)	Stauffer and Best 1980
Brown-headed cowbird penetration from edge	240 (787)	Gates and Giffin 1991
Large mammals	100 (328)	Jones et al. 1988
Small mammals	67-93 (220-305)	Jones et al. 1988
	12-70 (39-230)	Cross 1985
	67 (220)	Cross 1985
Dusky shrew food and cover	183 (600)	Clothier 1955
Beaver	30-100 (100-328)	Allen 1983
Beaver foraging	100 (328)	Allen 1983
Fisher travel corridor	183 (600)	Freel 1991
Marten food and cover	61 (200)	Spencer 1981
Marten travel corridor	92 (300)	Freel 1991
Mink	100 (328)	Melquist et al. 1981, Allen 1986
	200 (656)	Melquist et al. 1981
Red fox, fisher, marten	100 (328)	Small 1982
Deer, Eastern Washington	23 (75)	Mudd 1975
Deer and elk cover	61 (200)	Mudd 1975
INSTREAM HABITAT		
Minimal maintenance of most functions	15-30 (50-100)	Johnson and Ryba 1992

Mean buffers:*

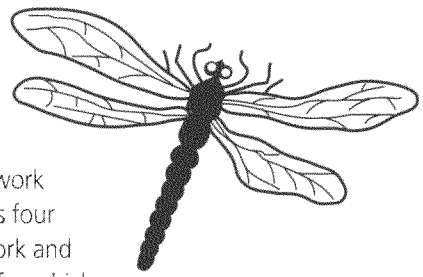
Temperature Control	27 m (90 ft)	Windthrow Protection	15 m (50 ft)
Large Woody Debris	45 m (147 ft)	Microclimate Influence	126 m (412 ft)
Filter Sediments	42 m (138 ft)	Wildlife Habitat	88 m (287 ft)
Filter Pollutants	24 m (78 ft)	Instream Habitat	15-30 m (50-100 ft)
Erosion Control	34 m (112 ft)		

* If a range of values was reported in the literature, the median of that range was used to calculate the means.

CRUE is an educational program of Open Meadow Learning Center and The Wetlands Conservancy. It is open to all students age 16-21 in the Portland School District. CRUE's goal is to cultivate self-directed learners who are responsible for themselves and their environment.

Through a natural resources program we emphasize and explore issues important to developing a positive work ethic, career opportunities and marketable job skills. We emphasize a healthy life-style and respect for others and our environment. Our approach to education is an alternative to the traditional high school format. CRUE offers full, standard credits for completion of the program. We emphasize hands-on learning, using the work site as our classroom. The program provides a link between school and the working world.

CRUE meets five days each week and follows the school calendar. Students attend classes each morning and three days each week on Project Days work on a work site until 5 pm. The two classroom days end at 2 pm. Students earn a stipend for their participation in CRUE. During the year, students work in the field and the classroom to earn a complete year of standard high school credit. Classroom days emphasize field trips and career development. Students completing the year-long program receive a $1500 tuition voucher to be used at any in-state educational institution including community colleges and trade schools. Summer work experience includes four full days of paid work and one academic day for which students earn school credits.



C.R.U.E. is for you if:

- **You want to finish high school but are having trouble in the classroom**
- **You care about what happens to you after high school**
- **You enjoy working outside**
- **You learn best by doing**
- **You are a team player**
- **You enjoy hard work**

C.R.U.E is committed to the following:

Natural resources education:

Through education and restoration projects CRUE improves the quality of our environment and emphasizes its value to each of us.

Positive work ethic:

What's the point in going to work if you don't do it right? We demand hard work of the highest quality.

A healthy life-style:

Our body, mind, and spirit are crucial resources. We need to make informed and healthy choices about our future.

Respect for oneself and the environment:

Our work to restore community landscape and degraded urban streams develops a connection between the people doing the work and their community. We also examine issues relating to self-esteem, bio-diversity, and multi-culturalism.

Marketable skills and experience:

We want students to complete their high school education with something to offer potential employers and higher educators alike. By learning to work on a team and by gaining experience in the working world, students bring a real life perspective to whatever their pursuits after high school.

Attendance:

We believe that you need to be there to make it happen. Poor attendance is not tolerated from CRUE.

The mission of The Wetlands Conservancy is to preserve, protect and restore the physical and ecological values of wetlands, other aquatic systems and related uplands through education, research, acquisition and promotion of public and private stewardship.

The heart of the Open Meadow program lies in developing respectful relationships with others and a positive self-concept. By emphasizing personal responsibility, accountability and decision-making skills, students experience success and develop a sense of purpose and affiliation.

For Further Information:

Open Meadow Learning Center
7654 N. Crawford
Portland, OR 97203
503-285-0508

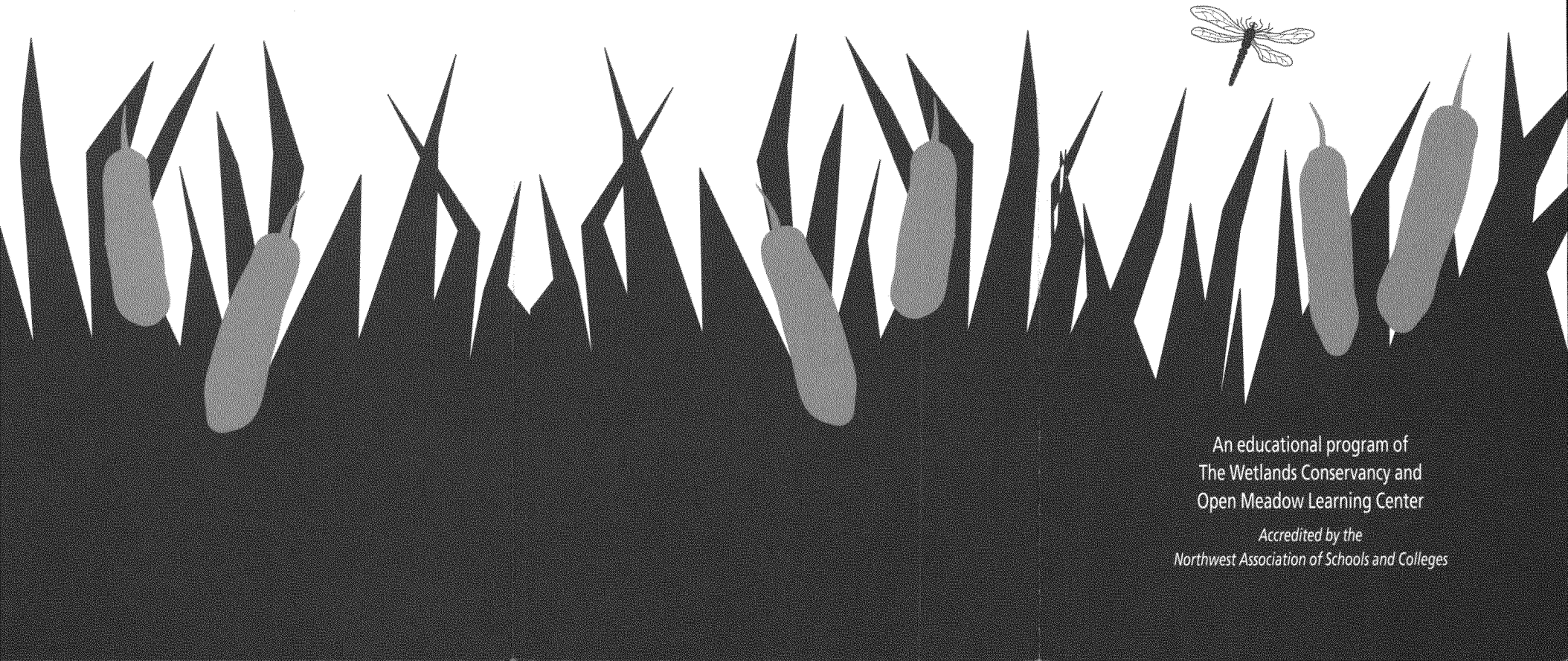
OPEN MEADOW LEARNING CENTER

C.R.U.E. CORPS RESTORING THE URBAN ENVIRONMENT

Open Meadow encourages diversity and will not discriminate on the basis of race, color, sex, sexual orientation, religion, creed, marital status, or national origin.

C.R.U.E.

CORPS RESTORING THE URBAN ENVIRONMENT



An educational program of
The Wetlands Conservancy and
Open Meadow Learning Center

Accredited by the
Northwest Association of Schools and Colleges

December 10, 1998

FROM: Kevin O'Sullivan, St. Johns Neighborhood Association
7624 N. Kellogg Street, Portland, OR 97203

TO: Multnomah County Commissioners

CC: Sheriff Dan Noelle

SUBJECT: Testimony on the Smith & Bybee Lakes Jail Site

Executive Summary

First off, in all fairness, the Sheriff did a commendable job of involving the public in all phases of the site selection process during the two years leading up to last September (1998). This was an excellent example of how to involve the community in the siting of public facilities. The County also deserves praise for developing and adopting the Facilities Siting Public Involvement Manual.

In September, however, the jail siting process took an unexpected turn for the worse, when the County effectively chose a new jail site without any public involvement. This violated the very principles of public involvement that the County has worked so hard to develop and uphold. So, I'd like to offer constructive criticism to help not only salvage the process, but also to help the County and the Sheriff to successfully build the jail on time, within budget, and at a location that satisfies all concerned parties. I therefore offer the following proposed solutions.

Proposed Solutions

1. **Immediately compile a list of all available 22-acre sites, and show how each site fits the well-established Screening and Selection Criteria.** (See Attached Criteria)
   Expected time: 2-3 weeks.
   Comments:
   (a) Bob Oberst (County Property Manager) can readily compile a list of all available 22-acre sites within Multnomah County that meet all the Screening Criteria.
   (b) Mr. Oberst will very likely find a feasible site where the jail can be built more quickly and easily than at Smith & Bybee Lakes.
   (c) 22-acre sites were never before considered during the past two years because the Initial Screening Criteria required a minimum site size of 35 acres. This automatically ruled out many smaller, available sites. For example, two years ago, ten potential sites were eliminated solely because they were smaller than 35 acres, even though they met all other Initial Screening Criteria.
   (d) There are likely to be sites within Rivergate that are privately held, and which could be acquired without involving the Port.

2. **Create and convene a Siting Advisory Committee to review this new list of candidate sites.** The members should be chosen on the basis of where the candidate sites are located. Expected time: 4-6 weeks.

3. **Use bulk mail to inform the public about the candidate sites, and to publicize all public meetings, including the SAC meetings.** The list of addressees must also include schools, PTA's, environmental groups, business groups, and government agencies.

4. **Hold several public hearings for the SAC members and the public to assess each site's strengths and weaknesses.** Expected time: 3 weeks.

5. **Inform the public of the SAC's final recommendations. Form a Citizens Working Group for the selected site. This Group should be comprised of the selected site's neighbors.**

Total Expected Time to accomplish all this: 3-4 months.

Concluding Remarks

The Smith & Bybee Lakes site is entirely new, significantly smaller, and substantially more complex than the original Rivergate site. The County's selection of this site was a decision made without due process of citizen participation. It is absolutely essential to examine more than one new site, and to involve the public at all stages of the process. You might roll your eyes at this prospect, but this won't necessarily require a lot of time because the County and the public have already established the necessary Screening and Selection Criteria. Furthermore, this approach would minimize the high risk of betting everything on Smith & Bybee Lakes. That site is riddled with problems and issues that will require an even greater amount of time and resources to resolve, with no success guaranteed,

In the Sheriff's technical presentation today, you will hear many reassurances that there are no fatal flaws. It will appear that everything has been studied, but it hasn't. I encourage you to hear the unspoken, to see the unexamined, to read between the lines, and see the big picture. Flaws and uncertainties abound, and they add up to many substantial risks. I urge you to please exercise your good sense and better judgment as you consider the wisdom (or folly) of building on this site. I implore you to hedge your bets by considering more than just one 22-acre site. A diversified, "portfolio" approach would consist of multiple sites, and would minimize risk and increase the likelihood that the jail money will be wisely spent.

Today, you can do the County, the Sheriff, and the public a lot of service by adopting these proposals as the most sensible and correct course of action. Beyond that, I suggest you peruse the attachments submitted with this testimony. Thank you.

Attachments:

CRITIQUE

I. THE PUBLIC PROCESS IS SERIOUSLY FLAWED

A. There is No Valid Justification for Choosing this New Site

1) The SAC (Siting Advisory Committee) never studied the Smith & Bybee Lakes site. The site was never on the list of candidate sites studied by the SAC.
2) By choosing this new site, the County has *de facto* started over, but because no other site is being considered, there is every indication that this site is a done deal.
3) The County has "justified" its choice of this new site by declaring that the original 35-acre Rivergate site (chosen by the SAC, but no longer available) *extends to the entire Rivergate District.*
4) This leap of reasoning is entirely without basis. To quote author Flann O'Brien, "the conclusion of your syllogism is fallacious, based on licensed premises."
5) The County now claims that "any place in Rivergate is basically approved through the [SAC] process." Conversations with some SAC members supposedly "affirmed that that was the intent of that group." (Quotes from Chair Beverly Stein at the September 24, 1998 Board meeting).
6) By this same flawed rationale, however, one can argue that any industrial site in Northeast Portland "is basically approved through the process" by virtue of the SAC having studied specific sites in that area.
7) Such blanket statements about the SAC are wrong. According to SAC members I've spoken with, the SAC never indicated that the original Rivergate site extended to any other place in Rivergate. I can provide written testimony from SAC members who refute the County's argument. (See attached statement from Jeff McMahon).
8) The County's selection of the Smith & Bybee Lake site circumvents and subverts the SAC and the public process. This adds insult to injury to the public and especially to the SAC members who worked long and hard, in good faith, only to be arbitrarily ignored and misrepresented.
9) The only remedy to this problem is to look at other 22-acre sites.

B. The Lack of Public Process

1) Public notification about this new site was far too little and too late.
2) The public was not involved in the critical decision of choosing this new site.
3) The Sheriff relies on a two-year-old mailing list that has shrunk significantly.
4) At a minimum, bulk mail should have been used in September to inform the public that an entirely new site was going to be considered.
5) The majority of the public does not know about this new jail site. That's a lot of ignorance attributable to the County. For example, most educators are unaware of this threat to Smith & Bybee Lakes, even though they conduct outdoor education programs at these lakes.
6) Those people who are aware have had to scramble frantically to learn more about the site and the process within a short amount of time (less than two months).

7) The Sheriff cites his attendance at several meetings to get the word out. But only a total of 200 people attended all those meetings, and many people probably attended more than one, lowering the effective head count.
8) The technical report has only been available since December 3, leaving only one week for aware citizens to study and respond to it.
9) Contrary to a statement issued by the County Sheriff and the Commissioners, the "public involvement" since September 24 cannot be described as "an exhaustive program of community outreach."
10) What discussions, understandings or agreements have happened between the County the Port regarding County jails? Has the airport runway expansion and its impact on the Columbia River Corrections Facility been discussed? Who owns that land?

C. The Jail Bond

1) The rush to build the jail seems driven primarily by the need to spend the Jail Bond money within the 5 years, starting from 1996.
2) However, according to Dave Boyer of the County Finance Division, that 5-year deadline can extended when unforeseen events and extenuating circumstances are encountered. Examples would include having two sites rejected; litigation; or delays in the permitting process.
3) <u>With no real time pressure, the County should take time to adequately deliberate the siting decision</u>.
4) If the jail is not built within a reason time, after allowing for unforeseen events, then the only "penalty" would be an <u>audit</u> by the IRS.
5) The use of the Jail Bond to finance the construction of infrastructure could potentially cause problems. For instance, is it legal for the County to make improvements on land that doesn't belong to the County? Also bear in mind that the funds are specifically targeted for a jail, not for infrastructure that will benefit other industries. A cost recovery mechanism will not be failsafe, as no industry will want to build on a flood plain. Great care must be taken to be sure that not only are costs recovered, but also that any recovered costs are used to refinance the jail debt or spent on the jail site.

D. Proposal for Selecting a Site

1) It is absolutely essential that the County compile a list of all available 22-acre sites within Multnomah County that meet all the Initial Screening Criteria.
2) The chances are very good that a feasible site will be found where the jail can be built more quickly, easily, and inexpensively, and with little likelihood of legal challenges.
3) The Bybee Lake site is unique in that no other site of this size was ever before considered.
4) The Initial Screening Criteria called for a minimum site size of 35 acres. This automatically ruled out many smaller, available sites. For example, ten potential sites were eliminated solely because they were smaller than 35 acres, even though they met all other Initial Screening Criteria.
5) The Initial Screening Criteria also required that utility services and infrastructure be available.

6) The County can save over $6 million by abiding by the Initial Screening Criteria requirement that utility services and infrastructure be available.
7) There may be feasible sites in Rivergate that are owned privately, not by the Port. They need to be identified.

II. THE SITE HAS TOO MANY SERIOUS FLAWS

The Smith & Bybee Lake site is encumbered by a host of difficult and costly problems, and despite all the reassurances given by the Sheriff's consultants, these numerous flaws and uncertainties add up to substantial overall risk. Should this site plan fail, the County will have no other site to fall back upon. The County needs to step back and assess this site from the broad perspective of getting maximum use out of the bond funds while minimizing the risk of the project. The County must proceed cautiously and wisely in order to succeed in getting this jail built on time and within budget.

1) The Sheriff and his consultants have raised more questions about this site than they've answered. These questions translate into many unknowns, uncertainties, additional costs, further delays, and an overlay of needless complexity and risk.
2) The Sheriff has failed to volunteer information that could potentially be of interest to the public. For example, why wasn't the public told that the Troutdale Jail and Columbia River Jail will likely be closed, and all the inmates moved to the new and expanded jail?
3) Recovery of $6 million of infrastructure costs is highly uncertain. All the surrounding land lies in the flood plain and was underwater in 1996. No industry will build where flooding is likely, especially with much better land available in Rivergate and elsewhere. Without industries, there will be no cost recovery.
4) The technical report lacks specific figures on costs. Proceeding further without cost studies and the comparable costs of other sites is unwise.
5) The site violates the Initial Screening Criteria (see attachment)
   - The site is less than the required minimum of 35 acres.
   - There are no utility services or infrastructure.
6) Other sites are likely to have fewer flaws and difficulties.
7) The site violates twelve of the sixteen Selection Criteria (see attachment). These violations are fatal, as far as the public is concerned.
8) The County must justify to the public these violations of the Selection Criteria.
9) At full buildout, 800 vehicles per day translates into approximately <u>one vehicle per minute</u> during the busiest 10 hours of the day.
10) The proposed access road will run too close to the Columbia Slough and the planned 40-Mile Loop Trail. Heavy traffic on this road will adversely affect recreational use of that trail. Other impacts will consist of noise, pollution, runoff, roadkill, illegal dumping, and lights. This is unacceptable.
11) The site is too close to planned and existing parks and wildlife areas, consisting of Smith & Bybee Lakes, the 40-Mile Loop Trail, the Columbia Slough, and the St. Johns Landfill (which might ultimately be made into a park). That totals 4 distinct parks.
12) A colony of western painted turtles resides in the immediate vicinity of the site. These turtles are listed by ODFW as "critical sensitive", which means that listing as threatened or endangered is pending.

13) The site will drain stormwater into the Columbia Slough, a TMDL-listed body of water. This requires an environmental review that will likely involve the federal government, due to the federal listings of salmon. Expect a legal quagmire.
14) The site is too close to Bybee Lake, which is listed as water quality "limited."
15) The site will adversely impact the Smith & Bybee Lakes wildlife area. Noise, traffic, lights, and erosion must be minimized, if not eliminated.
16) A minimum setback buffer of 150 feet from the top of the bank is absolutely essential. If the County can't do this, then build the jail elsewhere.
17) The height restriction at this site is 60 feet, yet the jail will be only 45 feet high. The County should determine whether or not the 150-foot buffer requirement could be met by building the jail up. The parking lot could also be built up, rather than out.
18) The 150-foot buffer could also be met by not expanding the jail. This might require keeping the Troutdale Jail open and locating the Residential Drug and Alcohol Treatment Center elsewhere.
19) The site has no public transportation. Workers and visitors will need to walk almost two miles from North Marine Drive to the Jail site. This is unacceptable.
20) Not enough soil tests have been performed. Further exploration could likely reveal widespread PCB contamination, which will cost more money and time to clean up.
21) Archeological artifacts pose a significant hurdle, and may result in legal difficulties that cost time and money.
22) This site will likely to encounter many more legal challenges. So far, one has already been raised (Mike Jones). Two more are known to be in the works (private citizens). Other legal challenges will focus on environmental impacts, wildlife impacts (for state and federal listed species), native American artifacts, soil cleanup, railroad crossing, just to name a few.
23) Emergency access to the site will be too frequently restricted. The Port of Portland's transportation plan calls for an increase of at least 12 more unit trains per day within the next few years. This will significantly restrict access to the site. The Sheriff's technical report mentions only 3 unit trains per day, which is naïve and unrealistic.
24) Seasonal floods will periodically restrict emergency access to and from the site.
25) A Master Plan will likely be needed for the full buildup of 2,000 beds. This will cause significant delays. This has been glossed over by the technical review.
26) An unmentioned Conditional Use Permit issue will be buffering for the 40-Mile Loop Trail.

December 9, 1998

To: Multnomah Co. Commissioners & Commissioners-Elect

From: Jeff McMahon, former member, Siting Advisory Committee

Dear Commissioners:

I served as the St. Johns Neighborhood Association representative on the SAC. I attended every meeting and, to the best of my ability, worked to help select a good jail site. It is, as you well know, not an easy thing to do.

Before you make your decision about siting this new facility, I would like to express a few comments and concerns.

1. The site currently being reviewed (the one on Smith and Bybee Lakes) was never reviewed by the SAC. There was a different site in Rivergate, that was reviewed. I have recently heard the view expressed that the SAC's review of that one site could be extrapolated to mean that the SAC reviewed and considered all of Rivergate on equal terms. To me, this is ludicrous. I never looked at the current site or any other in Rivergate. This is a leap of logic that might be applied to half of the other sites in outer Northeast that we looked into individually.

2. The former site in Rivergate is much preferable to the current one. This is for two reasons. First, the County must lay in all of the infrastructure services to this site (water, power, sewer, etc) at substantial cost. This violates one of the initial screening criteria used to pick sites for consideration by the SAC. Second, The current site sits adjacent to the "crown jewel" of North Portland, Smith and Bybee Lakes. The former site was not on the lake or slough.

3. The reduction of needed acreage to 22 acres (from 35) must mean that many sites were not subjected to review by the SAC. This is a very important point. While I am sure that the idea of reopening the search for site has limited appeal, the process of site selection has been tarnished. I would like to look at all possible sites around the County. As you know most of sites were in North and Northeast Portland; it would have pleased me to look at more sites in other parts the County.

The site selection process started out strongly and the SAC did a great deal of work and listened to hundreds of people. We selected a site. The site that was agreed to by the SAC, the Sheriff and County Commissioners. Then things changed and the site was removed for several reasons. (It is my belief that the site will be developed, even with the environmental concerns, in the next few yours.) This makes me personally very disappointed in the outcome of the process.

In fairness, I have always felt that Sheriff Noelle has done (and continues to do) a commendable job with public outreach and in listening to all stakeholders.

Finally, I wish for you to remember all of the social services the the St. Johns area bears. A large CSD office, a large proposed low income health center, a parole office, the sewage treatment plant for much of the city and let's not forget the St. Johns landfill. That is a lot. And now, probably what will become the largest County jail. It does seen an unfair distribution to me.

Respectfully,

Jeff McMahon

Home: 232-0429
Work: 241-3393, Voicemail: 203-3232

cc: Sheriff Dan Noelle
Concerned Citizens of North Portland

Initial Site Screening Factors:

New Multnomah County Corrections Facility

Threshold:

1. **Size**
   35 acres minimum, 60 acres maximum, with configuration suitable to accommodate present and anticipated future requirements.

2. **In Multnomah County**

3. **Zoning**
   Industrial (not allowed in residential or commercial areas).

4. **Transportation**
   Access to major arterial streets and freeways.

5. **Services Available**
   Utilities, water & sewer, infrastructure.

6. **Early Availability of Site**
   Short time frame for purchase and construction.

Additional Considerations:

- **Topography**
  Preferred site should have a level area, foundation grade soils, no other construction constraints.

- **No or Few Relocations**
  Of existing businesses or residents

- **Acceptable Capital and Operating Costs**
  A levy approved by Multnomah County voters in May 1996 provides funding for the facility

- **Community Impact**
  A prime consideration of the Siting Advisory Committee will be to design facility for best fit into surrounding land uses.

Violations of SAC Selection Criteria

The following 16 criteria were agreed upon by the Siting Advisory Committee at their November 14, 1996 meeting. These criteria are based upon public testimony given at SAC meetings, the results of public workshops and a survey.
The SAC never examined the Smith & Bybee Lakes site.

➢ **-- indicates Criteria that are violated by the Smith & Bybee Lakes Jail Site**

- The site should be as far as possible from current and planned residential zoned property.
- The site should be as far as possible from current and planned schools/daycare facilities.

➢ **The site should be in accordance with:**
- Economic development plans
- Metro 2040 plan
- Applicable state planning goals (LCDC)
- Community plans

➢ **The site should not be in an area susceptible to natural disasters (e.g., in a 100-year flood plain, near seismic fault. Dikes – if applicable – must be strong enough to withstand projected earthquakes and flood level at the same time).**

➢ **The site should be one with the least amount of community opposition.**

➢ **The sites should not over-saturate an area with corrections and social services facilities.**

➢ **The site should be as far as possible from current and planned parks.**

- The site should allow for reasonable transport of inmates.

➢ **The jail site should cause minimal financial hardship to neighboring property owners.**

➢ **The site should be one with the lowest opportunity cost of foregone development, including impact on tax base. (Avoid prime industrial land offering services the jail doesn't need.)**

➢ **The site should offer the possibility of adequate buffering.**

➢ **The site should have soil of foundation quality.**

➢ **The site should have no negative impact on the watershed.**

➢ **The site should have access to public transportation.**

- The site should be as far as possible from current and planned commercial development.

➢ **Consider the relative costs of each site when making the siting decision.**

Preliminary Site Assessment

Multnomah County's New Corrections Facility

North Rivergate Site, Leadbetter Peninsula

Prepared for:

Dan Noelle
Multnomah County Sheriff
12240 NE Glisan Street
Portland, OR 97230

and

Bob Nilsen
Multnomah County Facilities and Property Management
3505 SE 11th Avenue
Portland, OR 97202

Prepared by:

Kitchell and Associated Firms
421 SW 6th Avenue, Suite 1308
Portland, OR 97204
(503) 525-8353

November 23, 1998

KITCHELL

RECOGNITIONS AND ACKNOWLEDGMENTS

The preparation of this site assessment required looking at a wide range of issues and concerns related to the development of Multnomah County's New Corrections Facility at this North Rivergate site. The research and investigation consolidated here required the talents of many professionals and the cooperation of many of the federal, state, regional and local regulatory agencies. The assistance provided by the Port of Portland and the City of Portland deserve special recognition. The input of interested citizens, organizations and associations in the vicinity of the project site has aided the Team of consultants to identify and frame the issues so that they could be investigated and solutions proposed.

Professionals from the following firms provided the information contained in this site assessment:

Adolfson Associates, Inc.
Archaeological Investigations Northwest, Inc.
Barney & Worth, Inc.
Cascade Earth Sciences, Inc.
Fujitani Hilts & Associates, Inc.
KMD Architects and Planners, Inc.
KPFF Consulting Engineers, Inc.
O'Donnell Ramis Crew Corrigan and Bachrach, LLP
Parametrix, Inc.
Walker Macy & Associates, Inc.

MULTNOMAH COUNTY'S NEW CORRECTION FACILITY
RIVERGATE SITE

SUMMARY OF
POTENTIAL "FATAL FLAW" ISSUES

November, 1998

ISSUES	IMPACTS: COST	IMPACTS: SCHEDULE
Ability to obtain clear title to the property: • Site encumbered by Jones v. Thorne lawsuit (Lawyers working the case expect resolution) • Fill potentially placed illegally (Lawyers working the case expect resolution with no fill removal in area of proposed site) • Further development could be prohibited (Lawyers working the case do not expect this to be the outcome) • Above items are not fatal flaws as long as the Port of Portland guarantees clear title as part of the Purchase Agreement • Subdivision of land area required (Proposed site is part of large tract of land which will be part of a "major" land subdivision - Port responsible for subdivision. Subdivision process is lengthy but can proceed concurrent with project design if the county chooses.)		X
Potential damage to cultural resources: • High likelihood native soils beneath fill contain prehistoric artifacts. (Additional investigations required and documentation and/or relocation of artifacts may be required. Costs could range from $45,000 to $150,000. Investigations can be concurrent with design.)	X	

ISSUES	COSTS	SCHEDULE
Site contaminated with hazardous materials:		
• Laboratory analyses of site soil samples indicated the presence of PCBs in one boring (Further investigation suggests very limited and contamination does not exceed minimum clean up level. If DEQ requires removal of soil, removal costs would be approximately $5,000 to $15,000. No remediation may be necessary.)	X	
Compatibility Of Facility With Adjoining Environmentally Sensitive Areas:		
• Concern that a corrections facility will detract or harm the environment. (Facility will be buffered and screened appropriately. The County will seek input from the community concerning this issue. Present plans can be accommodated within the current funds available.)		
• Size of buffer/screening area (The buffer area can be increased but at a cost. Increasing the size of the buffer area will not only increase the cost of landscaping, because of the soil conditions it will also impact the cost of the foundations for the Phase I facility by as much as $600,000)	X	
• Access to Smith and Bybee Lakes (Potential for providing access has been raised. Expected to include parking and canoe launch facility. Coordination with Port required because any access will cross Port property. Expected costs to range from $25,000 to $50,000. This can be accommodated within the funds available for the project.)	X	
Potential for structural damage to the facility:		
• Site soils are loose and have high potential for liquefaction. Additionally, the fill material is unconfined on 3 sides. (Soil compaction techniques and pile foundation systems can overcome the vertical settlement and horizontal displacement problems caused when soils liquify. Its should be noted that access roads and utilities servicing the building may be damaged or destroyed during a seismic event. Cost to overcome this problem for the Phase I building could range from $400,000 to $1,000,000.)	X	

ISSUES	COSTS	SCHEDULE
Possible insufficient capacity of area road ways : • The City has indicated area road system is adequate for additional traffic generated by this facility. (Trips generated: Phase I - 200 trips per day; full build out 800 trips per day. Other allowed uses include warehousing which would generate 1280 trips per day and manufacturing which would generate 855 trips per day for the same area of development.) • Intersection may require signalization and the rail crossing will require signalization. (The at-grade rail crossing at North Leadbetter will require signalization at the cost of approximately $100,000. The intersection of North Leadbetter Road and North Marine Drive may require signalization. If signalization is required the cost will be approximately $100,000.)	X	
Port of Portland proposed road configuration requires an at-grade rail crossing: • Permit needed for proposed at-grade rail crossing. (The B-N/SF opposes the addition of this at-grade crossing until the Lombard Street grade separation project is completed. If this crossing is installed they will loose their ability to stage 5000 foot to 6500 foot unit trains. Opposition could result in appeals all the way to the State Supreme Court. From discussions with the MCSO and the City, it appears this section of the proposed road is not necessary for safe operation of the facility.)		X
Emergency vehicle access to the site may be delayed: • Rail traffic could delay emergency response vehicles. (Fire resistive construction and complete site access, already part of the planning, will mitigate Fire Marshal issues. MCSO is aware of and can tolerate the length of potential delays and will develop operational plans and communication links with the railroad to minimize these delays.)		

ISSUES	COSTS	SCHEDULE
Availability of adequate utilities to service the facility: • Site is undeveloped. (Investigations conclude that adequate utilities are available to meet the needs of the facility.)		
Cost of required infrastructure : • Distance to adequate utilities is about 3/4 of a mile. (Cost for road and utility construction, as proposed by the Port, would be in the range of $4.5 to $6 million dollars. These costs can be accommodated in the current funds available.) • Cost recovery from future, benefitted, developments (The County will be required to develop the infrastructure to accommodate future development in the area serviced by the proposed road system. A method of cost recovery from the "benefitted" future developments must be negotiated with the Port.)	X	
Installation of stormwater outfall through e-zone • Development of the site will require the installation of a stormwater outfall into the Columbia Slough. (The proposed outfall was anticipated in the NRMP for Smith and Bybee Lakes, therefore permitting should be less contentious. Storm water will be treated as required by BES to meet DEQ water quality standards before discharging. Environmental and cultural resources will be protected and mitigation measures will be developed with community input. Environmental restoration costs would be approximately $20,000.)	X	
Site reported to have flooded • Site is not in 100 year flood plain. (The Federal Emergency Management Agency (FEMA) has established the 100 year flood plain elevation for the proposed site at 27 feet. The required finished floor elevation must be at least 2 feet above this elevation or at least elevation 29 feet. The proposed elevation of the finished floor slab is elevation 32 feet. If the finished floor is raised to 32 feet it would cost approximately $100,000 for the additional fill. Aerial photographs of the site from the February of 1996 indicated the site was above the water level but access routes would have been flooded.)	X	

Preliminary Site Assessment
For
Multnomah County's New Corrections Facility
-North Rivergate Site-

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Section 1

EXECUTIVE SUMMARY

Project History

Multnomah County officials began the search for a site for a new corrections facility in May 1996 when voters approved Measure 26-45, authorizing the County to issue $43.9 million in general obligation bonds for the facility.

In August 1996, the Board of County Commissioners adopted Resolution 96-148 creating a 15-member citizens panel, called the Siting Advisory Committee, to select a site for the new jail. Beginning its meetings in September 1996, the committee evaluated eight candidate sites which had been screened from a longer list of alternatives. The County published a *Siting Newsletter* on a monthly basis to keep citizens appraised of the committee's progress. The County held community workshops as the committee approached key decisions, and conducted mail-in surveys through the *Siting Newsletter.* All told, several hundred citizens participated in the committee's deliberations. On January 31, 1997, the committee presented the Multnomah County Sheriff and Board of Commissioners a report containing its recommendations.

The committee recommended the Radio Towers site as its top choice. It also presented two alternatives in ranked order. The first alternative was the Rivergate site owned by the Port of Portland (Reference Attachment 1-1, which indicates the location of the first two Rivergate sites). (Note: This attachment also indicates the relative proximity of the new proposed site to the original two sites.) The second alternative was the Northwest Industrial District site.

The County Board accepted the Siting Advisory Committee's report and recommendation, and in February 1997 asked for additional information regarding each site's "environmental concerns, fill and site preparation, permits and zoning and public involvement."

In April 1997, Multnomah County retained a team of technical experts to conduct preliminary site assessments of the three top-ranked sites for a new Multnomah County Corrections Facility. The Team conducted a systematic analysis of engineering, environmental, land-use and permitting issues at each of the three sites. The team also reviewed cost and schedule implications for the full range of design and construction issues.

In the course of investigating these sites, the consultants identified challenges each site posed to the design, construction and operation of the corrections facility. For most, the consultants were able to identify solutions that could have been enacted within the County's budget and schedule constraints.

The primary mission of the first preliminary site assessment, presented in July 1997, was to determine if a site had any "fatal flaws." *Fatal flaws are conditions that would not allow the corrections facility to be designed, constructed and operated within the financial and time requirements of the County.*

If the site had a "fatal flaw" it would not be a viable site for the corrections facility. In the first preliminary site assessment, Rivergate had one potential "fatal flaw", property acquisition. At that time, the Port of Portland did not wish to sell property in Rivergate to Multnomah County for a corrections facility and the County lacked clear condemnation authority over the Port of Portland.
Based on the initial Preliminary Site Assessment and public input, the Board of County Commissioners in August 1997 unanimously selected the Radio Towers site for the new jail and directed the Sheriff to proceed with development. In December 1997 the County engaged a Team of consultants and a designer to pursue the planning, permitting, design and construction of the new corrections facility on the Radio Towers site.

In January 1998, a 15-member Citizens Working Group was formed by the Sheriff to provide input into the location of the facility on the site, the design of the public areas of the facility and the buffering/screening of the facility. This committee first met in February and met monthly through September. Two community workshops were also held to obtain feedback and comments from the general interested public.

Current Events

On September 24, 1998 the Board of County Commissioners, citing concerns about costs, environmental impacts and permitting, adopted a resolution to discontinue the pursuit of the Radio Towers site. They then directed Sheriff Dan Noelle to investigate and conduct a "fatal flaws" analysis, over a 60-day period, on a portion of the Leadbetter Peninsula in North Rivergate as a site for the new corrections facility.

This study explored the engineering, environmental and land-use challenges a jail will pose on the parcel currently owned by the Port of Portland. (Reference: Attachment 1-2, Vicinity Map; Attachment 1-3, an aerial photograph of the Rivergate area; Attachment 1-4, the current Zoning Map; Attachment 1-5, a map of adjacent businesses; and Attachment 1-6, a map of the Port of Portland's proposed access road system.)

The detailed technical work consisted of conducting a geotechnical analysis of the site to determine the parcel's soil composition and seismic characteristics, a traffic survey, a cultural resources study, a hazardous materials investigation, a review of the site in relationship to the 100 flood plain, a review of the facility in relationship to adjacent environmental zones and a review of land-use issues. Meetings with City of Portland Bureaus to solicit comments and concerns were held immediately following the action by the County Commissioners. Additionally, a Pre-Application Conference was held on November 17, 1998 to ensure every agency and bureau had an opportunity to express their comments and concerns related to the development of a corrections facility on this site.

The conceptual facility design prepared for the Radio Towers site fits the proposed North Rivergate parcel as well. This conceptual facility plan was used as the basis for evaluating the traffic, visual, lighting, storm water and land use impacts. This design also affords substantial opportunities to visually buffer and screen the facility from view from the Columbia Slough and Bybee Lake with trees and vegetation.

Another key component of the study is input from the community. Sheriff Noelle met with a dozen key neighborhood, business and environmental groups during October and November. The purpose of the meetings was to obtain feedback about issues of greatest concern to the surrounding community.

The "fatal flaw" identified as, property acquisition, for the original Rivergate sites no longer exists for this site. The Port of Portland is now willing to sell the subject property to the County for their new corrections facility. While the negotiations for the purchase of the property are not finalized, it appears that a fair price for the property can be negotiated.

A Fair Market Value appraisal of the site was also performed, at the direction of the County, by an independent firm. The results of appraisal will be kept confidential pending the completion of negotiations with the Port of Portland for the sale of the property.

The following summary describes the proposed project site, size and access, presents the findings of the consultant Team and discusses potential "fatal flaws" for this site:

Site Description

The proposed site is located in the North Rivergate Industrial development in a region known as the Leadbetter Peninsula which is owned by the Port of Portland. It consists of approximately 25 acres of gross land area with a net buildable area of 22 acres. It borders environmentally sensitive areas on three sides, Bybee Lake to the west, south and east, the Columbia Slough also on the west. The Rivergate Development borders the site to the north.

Project Description

Phase I

The project is currently planned to house two hundred and twenty-five (225) medium security male offenders. It will also include inmate programs, administration and staff services required to operate the facility. To meet the current architectural program, the conceptual design requires a building with approximately 70,000 square feet. Inmate Housing will consist of three (3) seventy-five (75) bed dormitory style housing units each having a ground floor and a mezzanine. The remainder of the facility will be single story. The housing units will be the tallest part of the structure and will be approximately 25 feet above the finished floor elevation. Management of the jail will be accomplished using the "direct supervision" model.

Build-out

The site is being planned so that the facility can accommodate a maximum capacity, at full build-out, of two thousand (2000) male and female inmates. Expansion of the facility would be both vertical and horizontal on the site. Expansion beyond Phase I would increase the overall building height to approximately forty-five (45) feet above finished floor and the building area would increase to approximately five hundred and forty thousand (540,000) square feet. Housing in future phases will include additional 75 bed dormitory housing units as well as 40 bed administrative segregation units.

Property Acquisition

The Port of Portland owns the unimproved site being investigated in this report. The site is zoned IHh which is appropriate for a jail facility. Issues that will affect the acquisition of the property are as follows:

1. The site is currently part of a lawsuit (Jones v. Thorne) currently pending in the United States District Court for the District of Oregon (No. CV 97-1674 ST). This case was reviewed, as part of this assessment, by D. Dan Chandler of O'Donnell Ramis Crew Corrigan & Bachrach. A summary of the review indicates that the case alleges the Port of Portland illegally filled 200 acres of wetlands, and alleges violations of the Clean Water Act and the National Environmental Policy Act. The complaint contains 38 pages of allegations against the Port of Portland, the U. S. Army Corps of Engineers, the Environmental Protection Agency and the Federal Highway Administration. A copy of the complaint is included as part of this report (Attachment 1-8). The key allegations of the complaint are as follows:
    a. The Port illegally filled areas set aside as buffers in previous agreements, including buffers along the Columbia Slough.
    b. The Port illegally filled areas which had been designated as wetlands in previous

agreements.

A "worst case scenario" presented in the review is that the court could prohibit further development on fill material in Rivergate "until full compliance with the Clean Water Act and NEPA are achieved and filled wetlands along the Columbia Slough, Marine Drive and Smith and Bybee Lakes are restored." This scenario might delay or foreclose the possibility of developing a jail on the subject property.

The Port is in negotiations with the Plaintiff, EPA and the Corps of Engineers. As related to the proposed project site, the negotiations revolve around the slopes and plantings at the perimeter of the fill.

While there is a legal possibility that development of the site might be delayed or foreclosed by the lawsuit, attorneys working the case do not believe that there is any substantial likelihood of this happening. Given the current procedural posture of the case, it is not possible to independently evaluate the potential outcomes of the case in the event settlement discussions break down and the case is ultimately decided by the court.

There are a range of options available at this time to address the issues created by Jones v. Thorne. The first would be to assume the outcome is near, as suggested by the Port's attorney, and proceed to seek permits and approvals. The second option would be to wait and see if the case settles. A third option would be to seek some representations and warranties from the Port regarding the potential effect of the lawsuit or a fourth option to press the Port to seek a partial settlement with respect to the subject property.

2. Initial property acquisition negotiations indicate that the Port will require the County to pay for and construct the roads and utilities necessary for access and operation of the facility as part of their project. These costs are estimated to be between $4.5 and $6.0 million. Recovery of a portion of these costs is anticipated from new businesses who also benefit from these roads and utilities as they develop.

3. It is assumed that a Fair Market Price for the property can be negotiated. An independent appraisal to determine the Fair Market value was completed in early December 1998.

4. In the assumptions for the infrastructure improvements constructed by the County, "dry" type developments have been assumed. If "wet" type developments locate in the area served by these improvements then the developer will be responsible for any upgrades in service.

The Port of Portland will be responsible for platting/subdividing the parcel being offered to the County for the new jail facility. Since it is anticipated that acquisition negotiations will be finalized in January of 1999 and the platting process will not be completed until several months later, the County is requesting a guarantee or warranty from the Port that the site can be developed as planned. If the requested warranties and guarantees are given and the Port can supply the design team with right-of-way and parcel descriptions in mid January then design activities can be concurrent with the property subdivision process expected to take three to six months.

Land Use Issues

A key element of this site assessment is to determine what land use permits may be required, and the outlook for a successful outcome. In Portland, detention facilities must be located in industrial zones and require a conditional use permit. Other land use approvals may also be required.

To determine if other approvals would be required and the likelihood of obtaining a conditional use permit, interviews were conducted in-person and by telephone by Barney and Worth. Some 15 agency personnel and other persons interested in the proposed facility were interviewed. (A list of the persons interview is included in the body of the report.)

A summary of key points offered during the interviews follows:

1. The outlook for land use approvals is favorable. To date, City of Portland staff have not identified any land use permitting issues which can not be adequately addressed during the permitting and design stages of the project. A Pre-application Conference was held on November 17, 1998 to test that conclusion with the full range of interested City bureaus.
2. The Conditional Use Permit is expected to be the main permit review process required. Other permits or approvals which may be required include:
   a. Land division approval by the City of Portland
   b. Oregon Department of Transportation approval of new at-grade rail crossing
3. The major Conditional Use Permit issue is anticipated to be how the facility's visual impact will be buffered from Smith and Bybee Lakes. The Natural Resource Management Plan for Smith and Bybee Lakes calls for protecting and enhancing wildlife habitat, along with passive and active recreation.
4. Many transportation issues remain to be ironed out. While the corrections facility itself won't generate substantial traffic, there are questions about where and how access will be provided to the site. Specific questions center on how the project will impact existing conditions on Marine Drive; how to solve rail/auto conflicts; design of the new access road and what standards will apply; and construction costs and funding sources for the improvements.
5. Agency comments on the proposed Radio Towers facility will offer guidance for Rivergate. Many expect their Conditional Use Permit comments to be very similar despite the change in location.
6. Although the site is outside the E-Zone, environmental issues will be considered in the conditional use permit review of the project.
7. Storm water outfall facilities for the project will discharge into the Columbia Slough. These outfall facilities must be constructed through an environmentally protected zone and will trigger environmental review.
8. The need for a Master Plan remains an open question. While the initial facility is planned for only 225 inmates, agencies appear to be more interested in anticipating the impact for the facility at buildout.
9. Some observers see the new corrections facility as an opportunity to improve public access to the natural area. The 40-Mile Loop Trail is designated to be developed along the Slough next to the site. A few also encourage the County to explore other on-site opportunities to improve public access to the Slough and Smith and Bybee Lakes.
10. Current litigation may cloud development potential for the site. A citizen lawsuit claims the

Port of Portland illegally filled 200 acres in North Rivergate, including the candidate site. Agencies ask whether the legal action could thwart MCNCF development.

11. Issues raised by citizens closely parallel those identified by agencies. Intitial public outreach suggests the top priorities will be visually buffering the facility from Bybee Lake and the Columbia Slough, and developing the site in a manner that's consistent with the NRMP.

Environmental Review

The environmental analysis included investigation of potential constraints due to factors related to natural resources, cultural resources and the presence of hazardous materials. Detailed studies included review of available records, field reconnaissance, laboratory analysis of soils and groundwater and conducting a resource and hazardous materials inventory for the site.

Natural Resources

The entire facility would be located on a layer of recently deposited (1993) dredge sands that is sparsely vegetated and provides poor habitat for wildlife. However, the presence of highly sensitive natural areas adjacent to the site will require efforts on the part of the County to provide adequate screening and buffering to mitigate possible lighting and noise impacts to the offsite areas.

Our investigations of the Leadbetter Peninsula site did not reveal any "fatal flaws" to development due to the presence of natural resources.

Cultural Resources

As presently planned, construction and development of the corrections facility would have no Federal involvement and would therefore not be subject to provisions of the National Historic Preservation Act. Any proposed development would be subject, however, to the provisions of ORS 97.745, 358.920 and 390.235 which prohibit the disturbance of Indian graves and significant archaeological sites on public lands in Oregon. Additionally, the County has agreed to develop the site in a manner that is compatible with the Smith and Bybee Lakes Natural Resources Management Plan (NRMP), although the proposed corrections facility is situated just outside of the NRMP boundaries. Policies 27 and 28 of the NRMP state the importance of the archaeological resources of the management area and require archaeological surveys for proposed projects that "include dredging, excavation, fill, or possible changes in the hydrological regime of the lakes and Columbia Slough."

There is a high likelihood that native soils beneath the layer of fill at the site contain prehistoric archaeological deposits. Within a 3,500 foot radius of the site there are 12 known archaeological sites, situated along the shoreline of Bybee Lake and along the banks of the Columbia and North Sloughs. This frequency suggests an archaeological site density of at least one site per 15-20 acres.

Use of the proposed pile foundation system to support the structure would disturb native soils and would potentially impact archaeological or other cultural resources. Subsurface exploratory excavations, limited to the proposed area where piles will be driven, are required to determine if there are archaeological resources present in the native soils underlying the fill material. These preliminary studies are expected to take a maximum of 60 days and cost approximately $20,000. If deposits of prehistoric artifacts are found, obtaining the required permits, coordination with agencies and

conducting required additional studies is expected to take a maximum of 6 months and result in additional costs ranging form $25,000 to $130,000, depending on the significance of the artifacts.

The subsurface exploratory excavations can be done concurrently with the design of the facility and will not impact the project schedule.

Hazardous Material Investigation

The proposed project site was not identified in any Federal or State databases indicating the presence or release of hazardous materials at the site. Soil samples taken in October of 1998 did not identify any hydrocarbons in the gasoline, diesel or oil ranges but did indicate the presence of polychlorinated biphenyls (PCBs) in one of the borings. The level of PCBs detected was at the clean-up level for residential uses. Additional samples were then commissioned and were conducted in early November. The extended sampling indicated no additional evidence of PCBs. However, since PCBs were found on the site consultation with the Oregon Department of Environmental Quality (DEQ) has been initiated in order to determine whether a letter of no further action (NFA) can be obtained. If DEQ will not issue the NFA, it is recommended that the PCB contaminated soil be removed from the site. The estimated cost to remove these soils is expected to range from $5,000 to $15,000.

Based on the records search and the testing conducted to date, there are no significant development constraints on this site due to the presence of hazardous materials.

Compatibility of Facility with Adjoining Environmentally Sensitive Areas

The perimeter road is the outermost element of construction. As currently planned, the outer edge of the perimeter road will be set back from the environmental zone boundary by approximately ninety (90) feet. The distance from there to the building will be no less than the width of the road, which is twenty (20) feet at its narrowest, plus an additional fifty (50) feet of secure space. The shortest total distance from an environmental boundary to the facility (building) will be one hundred and sixty (160) feet.

As currently planned, buffering and screening of the facility from Bybee Lake and the Columbia Slough will be accomplished in the ninety (90) feet between the environmental zone boundary and the outer edge of the perimeter road. The Port of Portland is responsible for planting the first fifty (50) feet and maintaining the plants and vegetation for three (3) years. At the end of the third year the responsibility for maintaining this area may be transferred to Multnomah County.

In the buffer area between the outer edge of the perimeter road and the area the Port will initially plant and maintain, Multnomah County will use a combination of terms, swales and plant materials to further enhance the buffering and screening of the facility. The exact details of the buffering and screening plan will be finalized with the aid of a Citizen Work Group and other interested persons.

Light escaping from the site into the environmentally sensitive areas is also a concern. This issue has been investigated and can be accomplished by implementing the lighting standard from Section II-F of the Port of Portland Development Standards. Light fixtures that "cut-off" or direct the light emitted are used extensively and are commercially available. These "cut-off" light fixtures coupled with a dense buffering and screening plan would minimize the amount of light visible from Bybee Lake or the Columbia Slough.

Public Access To Smith and Bybee Lakes

Current plans for the project do not include plans for a public access to Bybee Lake or the Columbia Slough. If access to these areas becomes a significant community issue the County will work with the community and the Port of Portland to locate an access and associated parking. The County will have to work closely with the Port of Portland to implement any plan since any access will cross land they own.

Geotechnical and Seismic Concerns

The building will be of Type I construction (noncombustible materials). The site is located in Seismic Zone 3 and the building will be designed as an "essential facility" with an importance factor of 1.25.

A preliminary seismic hazard and geotechnical investigation has been conducted on the site. The investigation found major technical concerns with the site. The concerns were layers of loosely consolidated soils, the potential for liquefaction and the fact that the site has three (3) unconfined faces to its fill. In a seismic event it is estimated that this could mean certain areas of the site could experience from 6 to 16 inches of horizontal displacement and from 2 to 15 inches of vertical settlement. Horizontal displacements and vertical settlements of this magnitude would cause significant damage to the structure.

Three viable solutions exist for overcoming these potential "fatal flaws". They all center around the use of load bearing piles to support the building and various densifications methods to reduce the problems with liquefaction, settlement and horizontal displacement. Vibroflotation, Dynamic Compaction and closely spaced compaction piles were evaluated as potential solutions to minimize the effects of these problems. With the current site orientation, Dynamic Compaction coupled with load bearing structural piles appear to be the most economical solution for Phase I. This combination will provide a suitable foundation system for the Phase I facility that minimizes differential settlement.

It should be noted that while the building will be stable in a seismic event the roads and utilities serving the site, as well as, other roads in the vicinity could be severely damaged or destroyed. Utility connections to the building will be designed to allow for the expected differential movement.

Site Access

The City of Portland has indicated that the area road system is adequate to handle the additional traffic generated by this facility. Trips generated, from all sources, for the Phase I facility are expected to be 200 trips per day and for the facility at full build-out they are expected to be 800 trips per day. Other allowed uses, such as, warehouseing and manufacturing would generate 1280 trips per day and 855 trips per day respectively.

1. Road Configuration

   Access to the site, as proposed by the Port of Portland, is shown on Attachment 1-6. It would involve extending North Leadbetter Road from its current termination to the west where it becomes North Pacific Gateway Boulevard. North Pacific Gateway Boulevard would be constructed from that point to where it intersects North Marine Drive opposite the access road to Terminal 6. The construction of North Pacific Gateway Boulevard would also require the construction of an at-grade rail crossing. Signalizing the new rail crossing would cost from

$80,000 to $100,000. The intersection of North Pacific Gateway Boulevard, North Marine Drive and the access road to Terminal 6 would be signalized when sufficient development occurs and traffic warrants it. The present cost of signalizing this intersection would be approximately $100,000.

Near the point where North Leadbetter Road becomes North Pacific Gateway Boulevard, an access road would be constructed southward to near the proposed property line of the project. Construction of the access roads would also include installation of all utilities needed for the County's proposed jail at full build-out, as well as providing for future development of the vacant land in this area of the Rivergate Industrial Park. Roads and utilities would be designed and constructed to Port of Portland and City of Portland standards. The streets and right-of-ways would be deeded to the City of Portland.

Road configuration and access issues were discussed with Multnomah County Sheriff's Office, City Planners and the City Fire Marshal and it does not appear that the construction of North Pacific Gateway Boulevard is required to meet the needs of Multnomah County's New Corrections Facility. Utility routings however, will follow the proposed North Pacific Gateway Boulevard alignment to where they will tie-in to main lines located in North Marine Drive.

2. Traffic

Primary access routes to the area will be North Marine Drive, Columbia Boulevard or Lombard Street. Based on a travel time study it appears most of the staff and visitors to the facility would use I-5 and North Marine Drive to access the facility. While Columbia Boulevard and Lombard Street provide excellent alternative routes the travel times from a downtown location would be longer along these routes. All of these access routes experience some congestion during peak conditions and from rail traffic which periodically blocks streets.

Construction of the proposed site access roads described above, would require the construction of another at-grade railroad crossing. The new at-grade crossing has not been permitted and would require approval by the Oregon Department of Transportation, Rail Safety Division. To be approved the new crossing must meet the following criteria:

a. Be both useful and needed.
b. Must be at-grade. Grade separation isn't feasible or effective due to land constraints, existing development, cost, or other factors.
   Note: A grade separation at the proposed new at-grade crossing has already been investigated and insufficient distances exist, in the current configuration, for a grade separation to be constructed.
c. New at-grade crossing is safe for public use. It is designed with the appropriate signage, signals, sidewalks and site distances.

It has also been reported by several of the local business owners that rail traffic has blocked the roads in the area for extended periods of time. By ORS 824.222 and OAR 741-125-0010 railroads are not allowed to block roadways for longer than 10 minutes between 6 am and 10

pm with a non moving train. There are however, no restrictions on the length of time a road can be blocked if a train is moving, or has equipment failure or other issues which create a legitimate reason for blocking a crossing. Each reported violation is investigated by State rail safety staff and the railroad can be fined up to $3000 per occurrence. In the 1.5 years that the Burlington Northern/Sante Fe track crossing Leadbetter Road has been open, there has been one complaint actually filed, which was dismissed due to the railroads legitimate reason for exceeding a 10 minute blockage.

Burlington-Northern/Sante Fe is not supportive of another crossing in the area at this time. A new at-grade crossing at the proposed location would interfere with B-N/SF's ability to stage unit trains, which are from 5000 feet to 6500 feet in length, until the grade separation is constructed at Lombard Street. If they decide to oppose the permit the appeals process would be through the Circuit Court to the Court of Appeals to the State Supreme Court. The Multnomah County Sheriff's Office will work with B-N/SF to manage the delays caused by rail traffic. Even if the new access is not permitted it appears that delays caused by rail traffic will be managed so that this will not be a "fatal flaw."

Transit service for the site is indirect and limited. Tri-Met Bus 6-MLK to and from the North Rivergate Industrial Area along Marine Drive is limited to weekday peak period service, approximately 6 a.m. to 9 a.m. and 2:30 p.m. to 6 p.m. Transit is expected to carry a very small share of the site-generated trips because the distance from the site to the nearest transit stop is well over ½ mile, generally considered to be the maximum acceptable distance for transit access. Relocating the transit stop as close as possible to the site on North Marine Drive would still leave it about 3/4 mile from the site entrance.

3. Rail Issues

When North Leadbetter Road is extended to intersect with a new North Pacific Gateway Boulevard and loop back to North Marine Drive the additional at-grade crossing would be approximately two-thirds of a mile from the proposed project site. According to Burlington-Northern/Sante Fe staff, the rail line currently carries two unit trains per day traveling at approximately 10 mph. Currently, unit trains on this route average one mile (5280 feet) in length. Under these conditions, a unit train would block each crossing on North Leadbetter Road for six minutes. Considering the new at-grade crossing would be only 3200 feet west of the existing North Leadbetter Road at-grade crossing, a one mile long unit train could block both crossings simultaneously for 2.4 minutes. The daily schedule of train movements would vary according to arrival of seagoing freighters.

The Port of Portland plans to double-track this line within 5 to 10 years, once freight traffic increases warrant the expansion. Rail traffic on the double-track could range from six to twelve total train movements per day, including three to four full-size unit trains (6500 feet) per day. Assuming trains continue to move at 10 mph, under worst case conditions (trains arriving at the same crossing concurrently from opposite directions), individual crossings could be blocked for 14.8 minutes, and both crossings could be blocked simultaneously for 7.4 minutes.

Typical blockages are usually less than the 10 minutes allowed. Multnomah County Sheriff's

Office is aware of and can tolerate the length of potential delays and will develop operational plans and communication links with the railroad to minimize the delays.

Emergency Vehicle Access

The new corrections facility requires access be open to the site at all times for official and emergency vehicles. Due to the sites' location on a peninsula, however, only one access roadway connecting the site to the external roadway system will be possible. This does not appear to be a "fatal flaw" even with the rail crossing delays discussed above. Officials at the City Fire Marshall's Office have commented that it will be possible to secure the site with only one access route to the facility under the conditions that other safety measures are provided on-site. These measure should include sprinkler systems, an access road circling the facility and a loop road at the site that will provide enough area for emergency vehicles to turn around and maneuver. Additional measures could include a helicopter landing pad, a secure fire resistant area within the facility or a refuge area outside the facility but within the secure perimeter, to shelter inmates in the event of a major fire.

Domestic Water Supply

Water will be provided by the City of Portland. Adequate volume and pressure is available to service the site.

Fire Protection

Initial investigation indicates that adequate water volume and pressure is available to service the site.

Sanitary Sewer

Adequate capacity is available in North Marine Drive if "dry" industrial development is assumed to occur in this area of Rivergate. If "wet" type industries are assumed then 2100 feet of new 24 inch diameter pipe will need to be installed in North Marine Drive.

At this point in the design process it appears that a 12" diameter gravity pipe line would have adequate slope and cover to provide service to the new corrections facility as well as, this area of Rivergate assuming "dry" (low water use type industries such as, warehousing and manufacturing) type industries are developed. If the designers find, during detailed design, that there is not adequate slope for a gravity line then a lift station will have to be installed at the new corrections facility. While this is not a "fatal flaw", it would mean additional construction and operating costs.

Electrical Power

Power will be supplied by Portland General Electric. Adequate power is available in the area to meet the needs of the facility.

Natural Gas

Northwest Natural Gas will supply natural gas to the facility. Adequate supplies exist in North Marine Drive to service the site.

Infrastructure Costs

The proposed site is undeveloped. Access roads and utilities must be constructed to service the site. The distance to adequate utilities is about 3/4 of a mile. The cost for roads and utilities, following the routing proposed by the Port of Portland, would be in the range of $4.5 to $6.0 million. While these costs can be accommodated in the funds available for the project, a method of recovering some of these costs from future "benefitted" developments must be negotiated with the Port of Portland as part of the site acquisition agreement.

Storm Water Issues

A new storm water outfall into the Columbia Slough will need to be installed as part of this project. To install the outfall construction will cross approximately 150 feet of environmentally as well as culturally sensitive land. The County will be responsible for designing and installing this stormwater outfall that will service MCNCF as well as future developments in this section of the Rivergate Industrial Development. It will be designed in accordance with Policy 22 of the NRMP for Smith and Bybee Lakes.

The location of this new potential outfall had already been anticipated in the Natural Resource Management Plan for Smith and Bybee Lakes. While not permitted, the recognition of the need for this outfall in the NRMP should make it easier to obtain the necessary permits. Obtaining the permit to install the outfall will be rigorous but is not seen as a "fatal flaw". Wetland permitting and restoration costs are estimated to be approximately $20,000. Costs for the cultural resource investigation component are included in the costs addressed under the Environmental Review section.

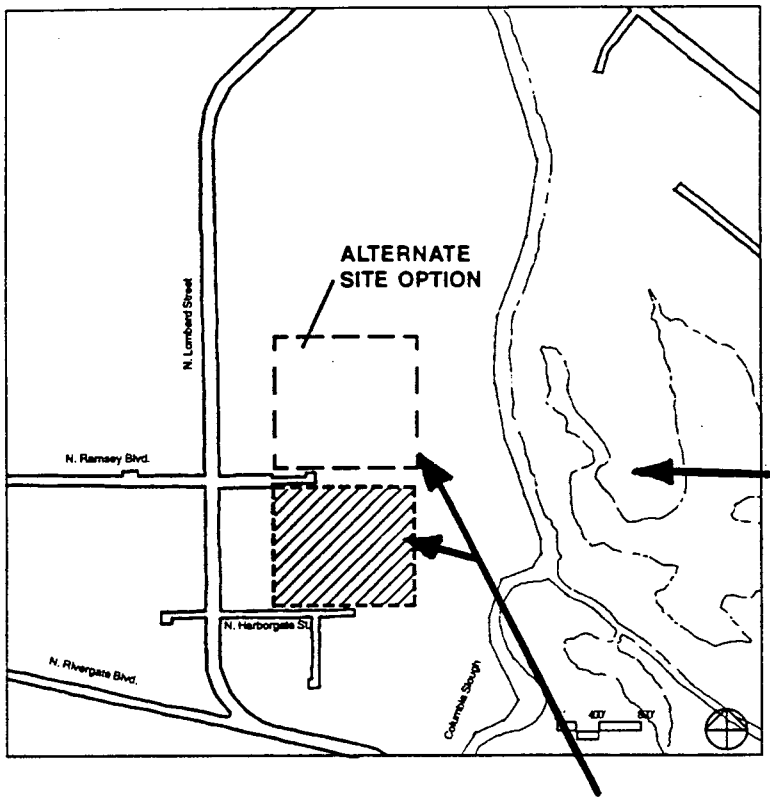
Flood Plain Issues

The Federal Emergency Management Agency (FEMA) has established the 100 year flood plain elevation for the proposed site at 27 feet based on the National Geodetic Vertical Datum of 1929. The required finished floor elevation must be at least 2 feet above this elevation or at least elevation 29. The proposed elevation of the finished floor slab is currently planned to be elevation 32 feet.

An aerial photograph of the site (Attachment 1-9) obtained from the Corps of Engineers for the February 1996 floods show this site above water level, but access to the site would have been cut off based on this evidence.

Initial review and discussions with the Port of Portland indicate that Title 3 does not apply to the proposed site.

Attachments

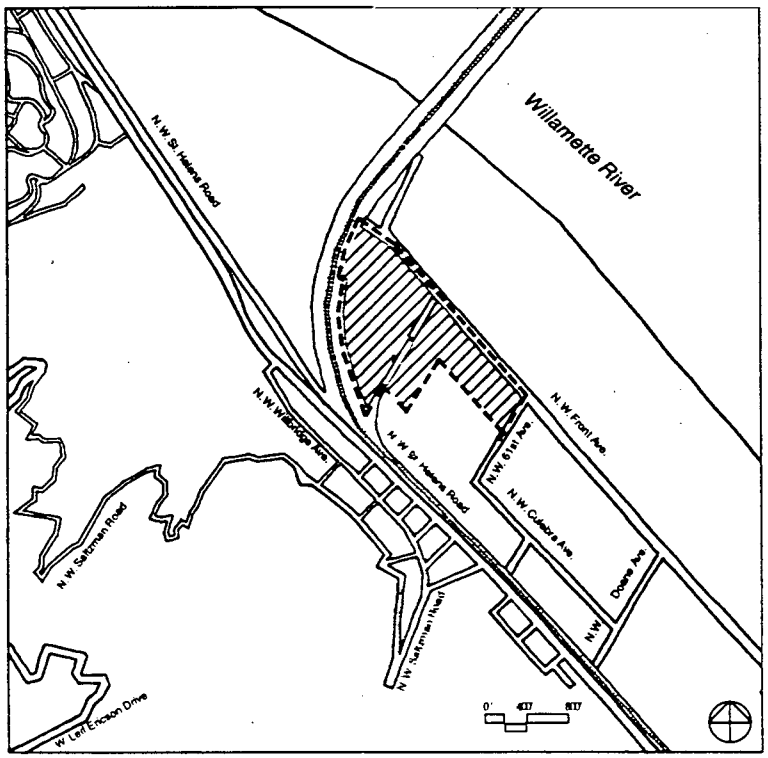


Rivergate Site

This site was identified during the Multnomah County Corrections Facility Siting Advisory Committee. It was located wholly within the Port of Portland's Rivergate Marine Reserve Area next to N Ramsey Boulevard and N Harborgate Street.

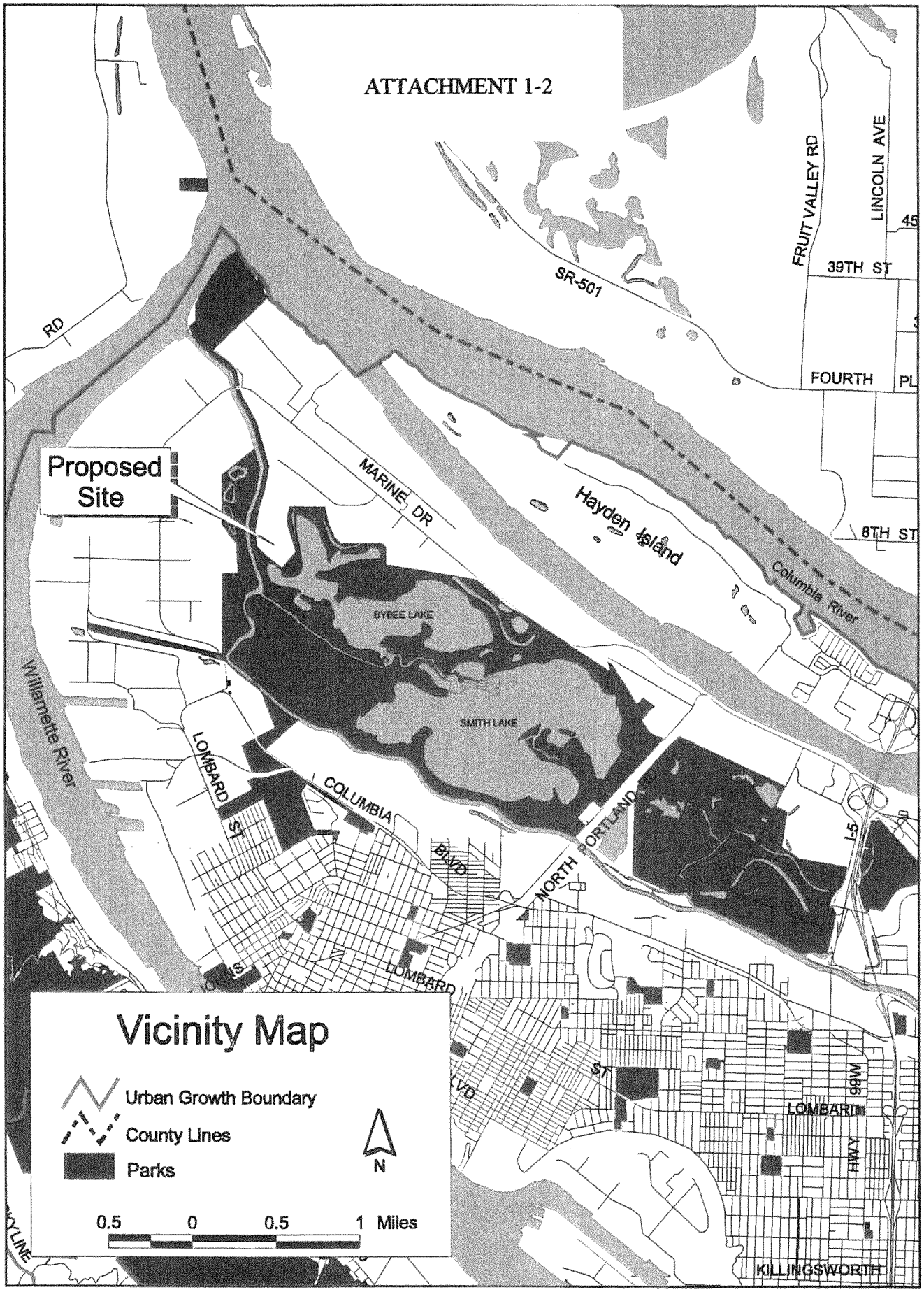
PROPOSED NORTH RIVERGATE SITE

ORIGINAL RIVERGATE ALTERNATE SITE OPTION



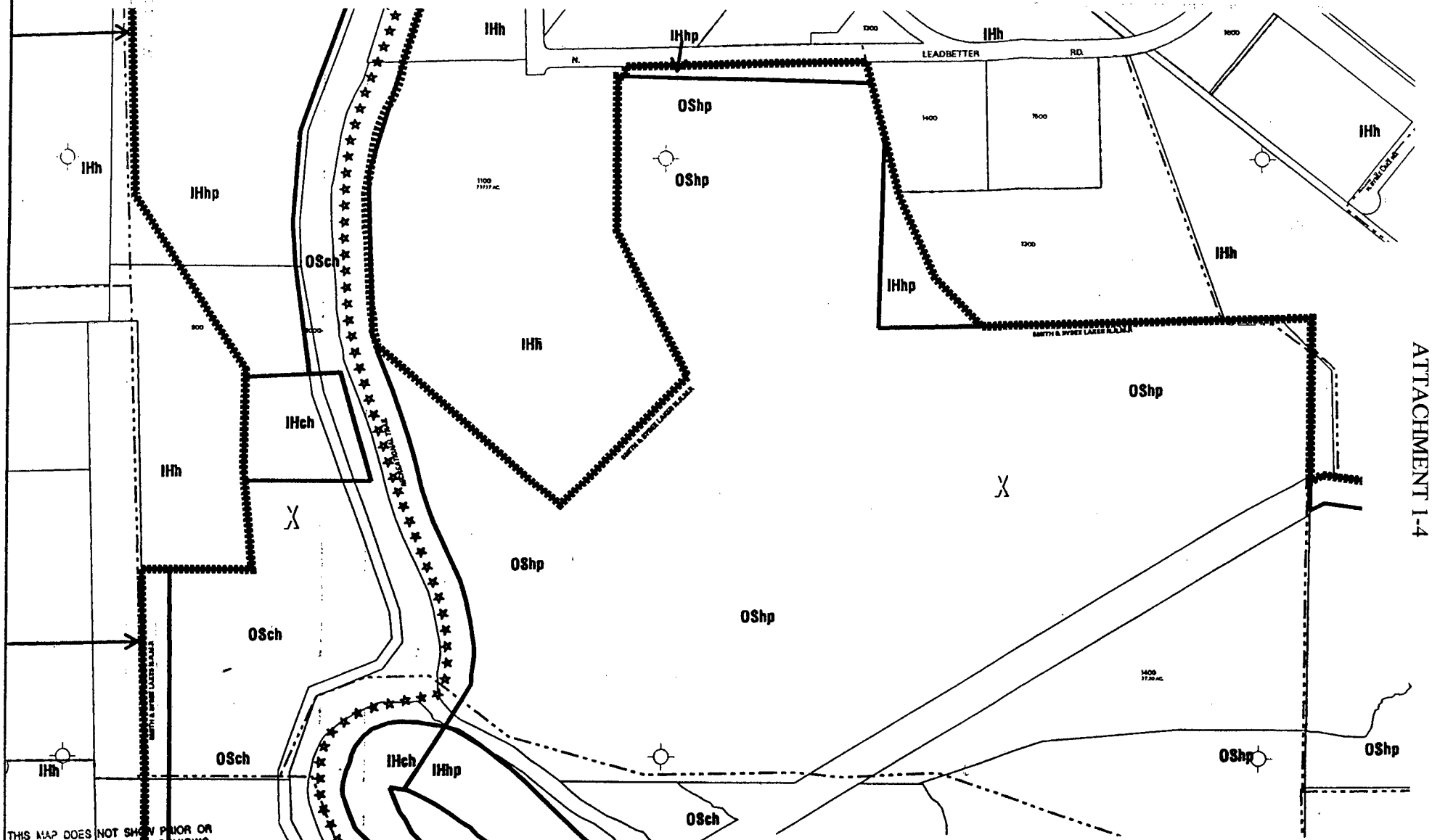
Northwest Industrial Site

This site is located along NW Front Avenue adjacent to NW 61st Avenue near the main line railroad of the Burlington Northern within the Northwest Portland, Northwest Industrial Neighborhood Association


ATTACHMENT 1-2
Proposed Site
Vicinity Map
Urban Growth Boundary
County Lines
Parks
N
0.5 0 0.5 1 Miles
SR-501
FRUIT VALLEY RD
LINCOLN AVE
39TH ST
FOURTH
8TH ST
MARINE DR
Hayden Island
Columbia River
BYBEE LAKE
SMITH LAKE
Willamette River
LOMBARD ST
COLUMBIA BLVD
NORTH PORTLAND RD
I-5
LOMBARD
HWY 99W
KILLINGSWORTH

ATTACHMENT 1-3

ATTACHMENT 1-4



THIS MAP DOES NOT SHOW PRIOR OR PENDING LAND USE REVIEWS, CONDITIONS OF APPROVAL OR RECENT LEGISLATIVE CHANGES. OTHER SOURCES OF INFORMATION CAN BE CHECKED.

NOTE: Zoning designations are subject to change; verify zoning prior to development or sales.

Plan District Boundary

Historic or Conservation District or N.R.M.P. Boundary

R10 Current Zoning

(R10) Maximum Potential Zoning as per Comprehensive Plan

State ID Map Boundary

ZONING REVISED:
07 - 98

BASEMAP ACQUIRED:
04 - 96

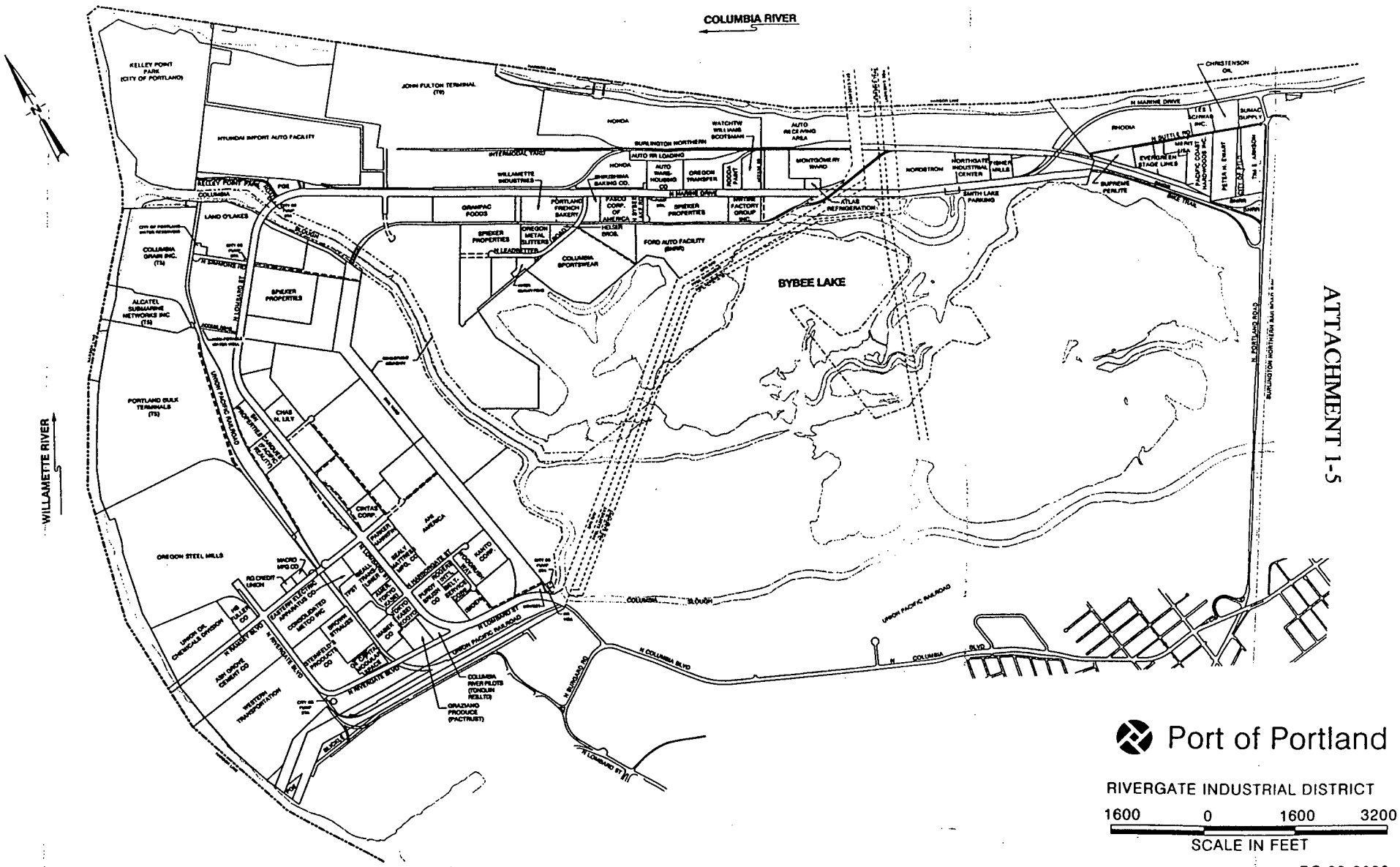
LEGAL DESCRIPTION:
2S - 2N - 1W

CITY OF PORTLAND
BUREAU OF PLANNING

0' 200' 400' 600'
SCALE IN FEET

N

1521-1522
1621-1622



ATTACHMENT 1-5

Port of Portland

RIVERGATE INDUSTRIAL DISTRICT

1600 0 1600 3200

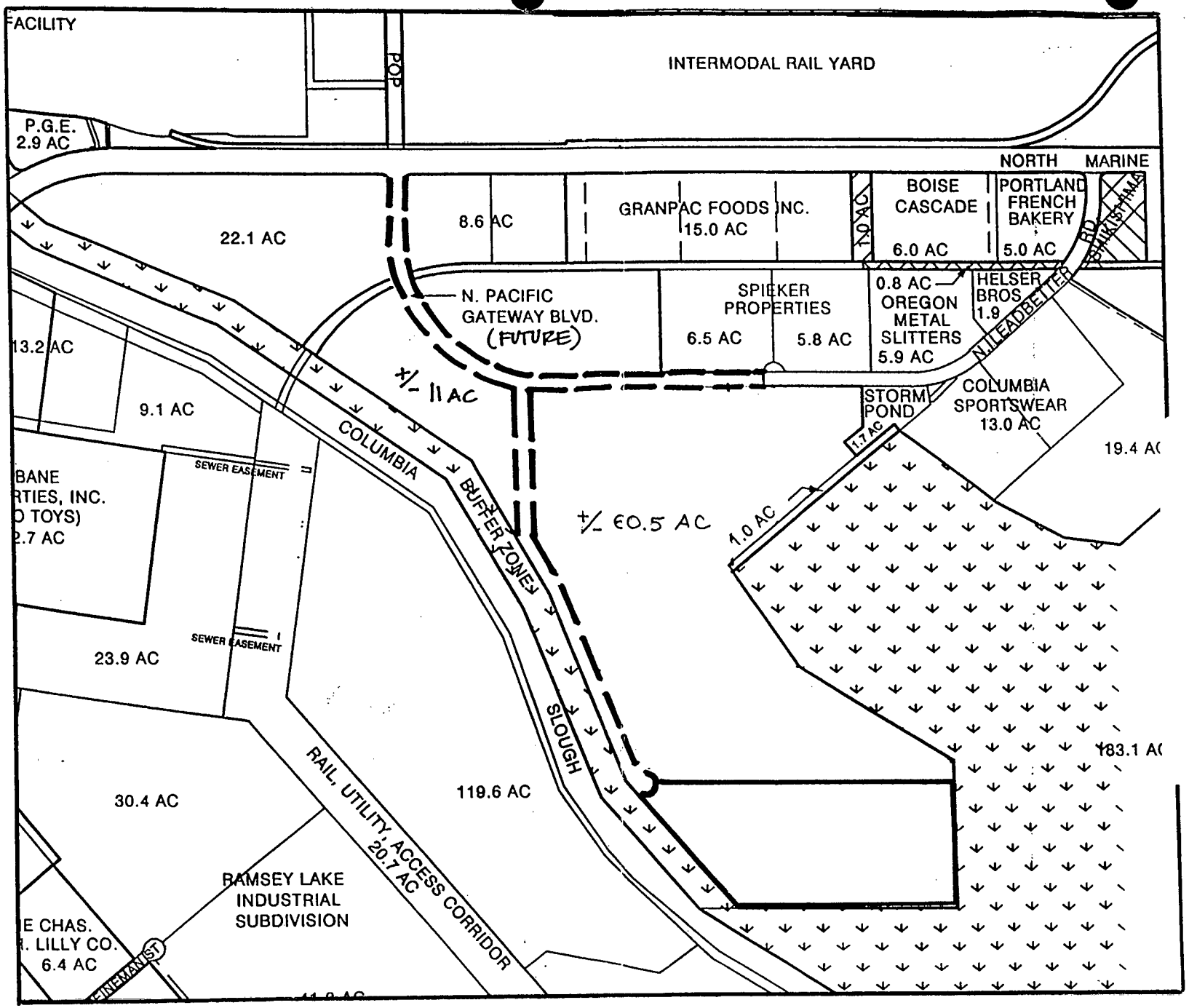
SCALE IN FEET

RG 98-3000

DRAWING INTENDED FOR GRAPHICAL USE ONLY

DATE: JUL 1998

REDUCED 50%



ATTACHMENT 1-6

Attachment 1-7

O'DONNELL
RAMIS
CREW
CORRIGAN &
BACHRACH, LLP

ATTORNEYS AT LAW

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(360) 699-7287
Fax: (360) 699-7221

MEMORANDUM

TO: Multnomah County Jail Project Team

FROM: D. Daniel Chandler

DATE: October 26, 1998

RE: Status of Jones v. Thorne lawsuit.

A. Summary

The following section will outline issues arising from the case of Jones v. Thorne, currently pending in the United States District Court for The District of Oregon (No. CV 97-1674 ST). The case was filed by William Michael Jones, who was not represented by an attorney. The case alleges that the Port of Portland (Port) has illegally filled 200 acres of wetlands, and alleges violations of the Clean Water Act (CWA) and the National Environmental Policy Act (NEPA). The complaint contains 38 pages of allegations against the Port, the U.S. Army Corps of Engineers, EPA and the Federal Highway Administration. A copy of the complaint is attached as ATTACHMENT 1-8

B. Key Allegations of The Complaint.

The complaint alleges numerous violations of the Clean Water Act and NEPA. The key allegations which might effect the subject property are as follows:

1. That the Port illegally filled areas set aside as buffers in previous agreements, including buffers along the Columbia Slough.

2. That the Port illegally filled areas which had been designated as wetlands in previous agreements.

C. Worst Case Scenario.

Under the prayer for relief in the complaint, Jones requests several potential court orders which might affect the subject property. The complaint requests that the court prohibit further development on fill material in Rivergate until "until full compliance with the Clean Water Act and NEPA are achieved. ¶¶ 134-136. The complaint also requests an order requiring the restoration of wetlands filled "along both sides of the Columbia Slough" and areas "along Marine Drive and Smith and Bybee Lakes. . .." (¶¶62, 137) Therefore a worst-case scenario might delay or foreclose the possibility of developing a jail on the

subject property.

D. Current Status of The Case.

Shortly after the case was filed, the various parties began settlement negotiations. Accordingly, the defendants have never formally responded to the complaint..
In a normal litigation process, the facts of the case develop through the discovery process and through motions filed by the parties. Since the case has never reached this stage, it is difficult to independently verify or evaluate the validity of any of the Plaintiff's claims

However, in conversations with the Port's counsel, we have learned that the Port has reached at least a conceptual agreement with Mr. Jones. The Port is currently negotiating with the EPA and the Corps of Engineers regarding some outstanding mitigation obligations the Port has incurred. As related to the subject property, the negotiations revolve around the slopes and plantings at the perimeter of the property.

However, since the case has not formally settled, potential remains for a court to order the relief sought by Jones.

E. Conversations with Counsel for the Port, and Counsel for the United States Defendants.

Attorneys for the Port have asserted that they believe that the likely effect of Jones v. Thorne on the subject property will be in the form of buffering along the slough, and along Bybee Lake. The Port's attorneys do not believe there is any substantial likelihood that the court will ultimately order the removal of any fill on the subject property. The Port's attorneys believe the case will be settled in next several months.

Scott Williams, an attorney with the Environmental Defense section of U.S. Justice Department has indicated that he also could not see the court ordering the removal of any fill at the subject property.[1] Mr. Williams has also indicated that the remaining issues in the lawsuit involve the slopes and plantings at the perimeter of the property.

F. Conclusion

There is a legal possibility that development of the site might be delayed or foreclosed by the lawsuit. However, the attorneys working on the case do not believe that there is any substantial likelihood that this will happen. Given the current procedural posture of the case, we cannot independently evaluate the potential outcome of the case in the event settlement discussions break down and the case is ultimately decided by the court.

There are a range of options available at this point to address the issues created by Jones v. Thorne. The first is to simply assume that the Port's attorneys are correct, and proceed to seek permits.

---

[1]Telephone conversation, 10/26/98 with Scott Williams.

The second option is to wait to see if the case settles. Another option would be to seek some representations and warranties from the Port regarding the potential effect of the lawsuit, or to press the port to seek a partial settlement with respect to the subject property.

Attachment 1-8

IVED

William Michael Jones
2716 NE Mason Street
Portland, OR 97211
(503) 284-0502

CV'97-1674 ST

1997 NOV 25 P 3:22

CLERK, U.S. DISTRICT COURT
DISTRICT OF OREGON
PORTLAND, OREGON
BY

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF OREGON

WILLIAM MICHAEL JONES, Plaintiff, vs. Mike Thorn, Director of the Port of Portland, Frederico Pena, former Transportation Secretary of the Department of Transportation, Rodney Slater, Transportation Secretary of the Department of Transportation, former Administrator of the Federal Highway Administration Gloria Jeff, Administrator of the Federal Highway Administration, R.E. Kremeck, Commandant of the United States Coast Guard, Carol Browner, Administrator of the Environmental Protection Agency, Togo D. West, Jr., Secretary of the United States Army Defendants	)	Civil No. CV'97-1674 ST COMPLAINT FOR DECLARATORY, INJUNCTIVE RELIEF, AND CIVIL PENALTIES (Administrative Procedures Act, Clean Water Act, and National Environmental Protection Act)

1. Introduction

The Port of Portland has illegally filled more than 220 acres of important wetlands.

Complaint for Declaratory and Injunctive Relief, and Civil Penalties

Introduction

1. The Port of Portland has illegally filled more than 200 acres of important wetlands. These wetlands were filled between November 30, 1989 and the present. The illegal fills are in the Rivergate area. The Rivergate area is in the peninsula formed by the confluence of the Columbia and Willamette Rivers. This peninsula is divided by the Columbia Slough. Prior to 1977, three large lakes existed in the Peninsula: Smith and Bybee Lakes to the North; and Ramsey Lake to the South of the Columbia Slough. Many unnamed sloughs connected the lakes and wetlands that made up this beautiful area, first noted by Lewis and Clark for its plentiful wildlife. The Smith and Bybee Lakes still remain, but have been threatened by the Port of Portland's careless, illegal and cavalier violations of the Clean Water Act. Further illegal filling and new uses for illegally-filled property are contemplated by the Port of Portland.

2. In 1972, the Congress of the United States, in passing the comprehensive Federal Water Pollution Control Act, made clear its intent to protect and preserve the waters of the United States from destruction. In 1977, with the passage of the Clear Water Act ("CWA"), the Congress reiterated its intent to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters". In so doing, the Congress entrusted to the Administrator of the Environmental Protection Agency ("EPA") and the Army Corps of Engineers ("COE") the crucial task of administering the Act's "404" program, which prohibits any dredging or filling in our Nation's vital wetland resources and other waters without a permit properly issued under the Clean Water Act.

3. Rather than fulfilling that trust, the Federal defendants have instead, through a series of actions and inactions, allowed, aided, abetted, ratified and even connived in the destruction of these wetlands and in harming fishery, wildlife, recreational values and the vital life of the remaining wetlands, including Smith and Bybee Lakes.

4. All other Federal agencies, specifically the Department of Transportation and its agencies, are required to uphold both the CWA and NEPA.

5. This action challenges the illegal conduct of the defendants in destroying or allowing the destruction of, or perpetuating the destruction of, wetlands on the Rivergate Peninsula.

Plaintiff

6. William Michael Jones is a citizen as described in 33 U.S.C. 1365 (g). His primary residence is located in the State of Oregon, 17751 Amity Vineyards Road, Amity, Oregon, 97101. He is devoted to wise use, conservation, aesthetic appreciation, and restoration of wildlife and other natural resources in the State of Oregon. Mr. Jones has swam, canoed, hiked, fished, picked the mushrooms of, studied the wildlife of, and enjoyed the environmental values of the Rivergate Peninsula for many years. Mr. Jones does business from a riverside warehouse that is 21 ft. mean sea level on the Willamette River.

7. He believes that proper protection of wetlands in the State of Oregon is critical to the quality of its waters.

Defendants

8. Defendant Mike Thorn is sued in his official capacity as Director of the Port of Portland.

9. Defendant Frederico Pena is sued in his official capacity as Transportation Secretary of the United States Department of Transportation.

10. Defendant Rodney E. Slater is sued in his official capacity as Transportation Secretary of the United States Department of Transportation, and in his former capacity as Administrator of the Federal Highway Administration, an agency of the Department of Transportation.

11. Defendant Gloria Jeff is sued in her official capacity as Administrator of the Federal Highway Administration, an agency of the Department of Transportation.

12. Defendant Commandant R.E. Kremeck is sued in his official capacity as Commandant of the United States Coast Guard, an agency of the Department of Transportation.

13. Defendant Carol Browner is sued in her official capacity as the Administrator of the United States Environmental Protection Agency, the principal office of which is located at 401 M Street, S.W., Washington, D.C. 20024. In that capacity, Carol Browner is charged with responsibility for implementing the Clean Water Act and Section 404 thereof, including determining the jurisdictional scope of Section 404, issuing orders to prohibit the discharge of pollutants into the waters of the United States, and prohibiting the specification of sites for the disposal of dredged or fill material.

14. Defendant Togo D. West is sued in his official capacity as Secretary of the United States Department of the Army, the principal office of which is located the Pentagon, Washington, D.C. 20310. Secretary West is charged with ultimate responsibility for insuring that the actions of the Department of the Army and the Corps of Engineers under the Clean Water Act and the National Environmental Policy Act, including the issuance of regulations and permits, are conducted in accord with applicable law. In that capacity, he has responsibility for supervision of the Corps of Engineers and is responsible for insuring lawful implementation of the Section 404 program of the CWA by the Department of the Army and the United States Corps of Engineers.

Jurisdiction

15. This Court has subject matter jurisdiction over the claims set forth in this complaint pursuant to 28 U.S.C. § 1331 (Federal question).

16. These claims arise under 33 U.S.C. § 1365 (Citizen's suit provisions of the Clean Water Act) ("CWA"); the Administrative Procedures Act, 5 U.S.C. § 701, et seq. ("APA"); the National Environmental Protection Act, 42 U.S.C. § 4321, et seq. ("NEPA"). The United States has waived sovereign immunity in this case pursuant to section 702 of the APA. This Court has authority to grant the requested declaratory and injunctive relief under the APA and the Declaratory Judgment Act, 28 U.S.C. § 2201 (declaratory relief), and 28 U.S.C. § 2202 (injunctive relief), and 28 U.S.C. § 1361.

17. This action is brought to enforce §§ 301, 309, and 404 of the Clean Water Act, 33 U.S.C. §§ 1311, 1319, 1344 and its implementing regulations, and § 102(2) of the National Environmental Policy Act of 1969, 42 U.S.C. § 4332(2), and its implementing regulations.

18. This Court possesses authority to award plaintiffs all costs and expenses of this litigation, including attorney's fees and expert witness fees pursuant to 33 U.S.C. § 1365 (d). The Court also possesses the authority to grant attorneys' fees and costs pursuant to the Equal Access to Justice Act, 28 U.S.C. § 2412 ("EAJA"). Venue is proper in the District of Oregon pursuant to 28 U.S.C. § 1391 (e).

Applicable Law

19. The Clean Water Act ("CWA") is a federal statute that seeks to protect wetlands and other waters of the United States. The primary objective of the CWA is "to restore and maintain the chemical, physical and biological integrity of the Nation's waters." 33 U.S.C. §1251 (a).

20. One of six national goals established to achieve this objective is the attainment of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and for recreation in and on the water. 33 U.S.C. §1251 (a)(2).

21. To achieve its objective and goals, the CWA prohibits the discharge of any pollutant into waters of the United States, including wetlands, except in accordance with standards promulgated and permits issued under the CWA. 33 U.S.C. §1311 (a).

22. Section 404, 33 U.S.C. §1344, and Section 309 of the CWA, 33 U.S.C. §1319, as implemented by regulations at 33 C.F.R. Parts 320 to 330 (Corps defendant's regulations) and 40 C.F.R. Part 230 (EPA Guidelines) provide Corps and EPA defendants with the responsibility of regulating the discharge of dredged or fill material into waters of the United States and further provide that the discharge of dredged or fill material into waters

may not lawfully take place without a permit from defendants. Such permits are issued by Corps defendants (§§404(a) and (b), 33 U.S.C. §§1344(a) and (b)), in accord with Guidelines issued by EPA (§404(b), 33 U.S.C. §1344(b)).

23. Section 309 (a)(3), U.S.C. §1219 (a)(3), provides that the Administrator of EPA shall issue an order requiring any person in violation of, inter alia, Section 301, 33 U.S.C. §1311, to comply with such section. Section 301 (a), 33 U.S.C. §1311 (a), prohibits the discharge of dredged or fill material into waters of the United States by any person unless such person has a permit pursuant to Section 404, 33 U.S.C. §1344. The Administrator of EPA is charged with overall responsibility for enforcing the CWA, including Section 404, and is final authority for defining the jurisdictional reach of "waters of the United States."

24. Waters of the United States include wetlands. The definition of wetlands in Corps and EPA defendants' regulations, which has been in effect since at least 1977.

25. Federal defendants EPA, COE, DOT and FHWA are all persons under CWA § 301 . Section 33 U.S.C. § 1323(a) provides in relevant part:

> "Each department, agency or instrumentality of the Executive Branch of the Federal government. . . engaged in any activities which may result in the discharge. . . of pollutants, shall be subject to and comply with, all Federal. . . . process and sanctions respecting the control and abatement of water pollution in the same manner and to the same extent as any nongovernmental agency. . . The proceeding sentence shall apply. . . . B. to the exercise of any Federal, State or local administrative authority. . . . This subsection shall apply notwithstanding any

immunity of such agencies, officers, agents or employees under any law or rule of law."

Exhaustion

26. Pursuant to Section 505 of the CWA, 33 U.S.C. § 1365, plaintiff gave notice to all defendants of his intention to file suit challenging the Port of Portland's failure to respect the CWA and the Federal defendant's refusal to acknowledge their duty properly to regulate the discharge of dredged and fill material on the Rivergate Peninsula.

27. The Port of Portland was given notice first in a letter of October 15, 1996. This letter was amended November 17, 1996. All other defendants were given notice in letters dated November 17, 1996. Plaintiff was never contacted and knows of no corrective action taken.

28. This legal action is being taken only after many years of trying to participate in decision making to no avail.

29. There are no remaining administrative remedies available to challenge the FHWA categorical exclusion.

30. Plaintiffs have exhausted all administrative remedies and further attempts to obtain administrative relief would be futile

Background

31. The Port of Portland began filling on the Rivergate Peninsula in 1963. Beginning with those perimeter fills, the history of the Port of Portland filling and the struggle of the citizens to restrict unintelligent wetland filling becomes a matter of perspective.

32. In the early 1970s, the COE began the Rivergate North Portland Flood Control Study ("RNPFC"). This was a plan to impound the Columbia Slough. This plan made the Slough a veritable nature park. The plan also outlined areas of dredging. The Port of Portland also selected special citizens from North Portland developed the North Portland Peninsula Plan. Excluding real public comment and ignoring the citizens of North Portland, the Port of Portland adopted this plan in 1974.

33. During this period, the COE also issued several special Section 10 permits, as per its authority under the River and Harbors Act.

34. On July 25, 1975, the Clean Water Act became law. NEPA had become law in 1969. When the Port of Portland 1974 Section 10 permit expired, the Port of Portland demonstrated considerable knowledge of the CWA and applied for CWA authority to continue filling. The COE, demonstrating complete a lack of understanding of the CWA and NEPA requirements, issued Permit #010-04A-2-003158. The COE decided not to produce an EIS, because there had already been significant impact to the area.

35. Section 404 permits are given for only five (5) years. The Port of Portland anticipated filling longer than five (5) years, so North of the Columbia Slough, the Port finished a berm supposedly to encircle all legal fills. This berm was to be the furthest extent of filling, supposedly in conformance with the flood control studies. The berm was entirely in place in 1980. The 1980 berm was to be 200 feet from the bank, or was to be 200 feet from the 11 foot mean sea level in the Smith and Bybee area. It, in fact,

impounded parts of Bybee Lake much to the chagrin of the citizens of North Portland who had asked and received from the State Legislature, a law to protect Smith and Bybee Lake, ORS 5.1.622. Also, by this time, it was obvious the only part of the Flood Control Plan and the Port of Portland plan ever to be realized was the dredging and filling.

36. In 1984, the COE issued yet another five (5) year permit. All requirements of the 1979 permit were to be continued including the requirement to respect buffers and to stay behind the 1980 berm. The furthest reach of the fill was also outlined in permit drawings.

37. In 1987, the Port again sought to short circuit the public process and the public's demand for an EIS by negotiating an agreement with the Federal agencies concerning filling after the November 30, 1989 expiration of the 1984 Section 404 permit. That agreement became "Cooperative Agreement Between Port of Portland, Oregon Division of State Lands, Oregon Department of Fish and Wildlife, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers To Establish a Rivergate Development Program and an Acceptable Mitigation Program for Wetland Impacts," ("COMA"). The following is an excerpt from the first meeting's minutes:

> The principal decision made by the group at this first meeting was to define the relationship of the negotiations and their outcome to the 404 permit process. It was decided that the product of the negotiations would be an interagency agreement which will lead directly to, and form the basis for, a new Rivergate 404 permit after the existing one expires in 1989. Toward that end, it was suggested by Ralph Rogers, and agreed to by everyone, that all of the same concerns would be addressed through this process that would have to be addressed as part of a 404 permit process.

38. In following meetings, 400 acres of jurisdictionaal wetlands inventoried by Fishman Associates had been negotiated to 330 acres of "functional" wetlands.

39. The COE signed on Jan. 27, 1989. The EPA signed June 1, 1989. When signed, the Federal defendants EPA and COE had agreed on the following:

1. There were at least 330 acres of jurisdictional wetlands. The current 404 permit would expire November 30, 1989.

2. That a 404 permit would be necessary.

3. That everything discussed in COMA would be the subject of that permit.

4. From COMA:

> 1. The Agreement, and its attachments, shall be in effect throughout the life of the Rivergate fill program, which is comprised of future fill activities within the fill boundary set by this Agreement. The Agreement shall terminate upon completion of the fill program, or five years after the completion of the last mitigation project, whichever is later.

40. No public participation was allowed in these negotiations. None of the projects that were part of these negotiations have been successfully completed and no 404 permit was obtained for filling the wetlands which have been filled.

41. This ended a period of permits authorizing the filling or damaging of thousands of acres of wetlands without an EIS after passage of NEPA.

42. Despite the expiration of its 404 permit on Nov. 30, 1991 and promises in COMA, the Port of Portland decided in 1991 to build a bulk plant in Rivergate Terminal 5, and as part of this plan to build a newly-designed rail line connecting the Burlington Northern port of entry in Rivergate to Terminal 5 in the Union Pacific South Rivergate. The Port of Portland secured funding for this new route in 1991. This funding was provided in the 1991 Intermodal Surface Transportation Efficiency Act.

43. This funding would build a bridge crossing the Columbia Slough in a new place, one quarter (1/4) mile upstream from where tracks were already laid. This New Rivergate Rail Line ("NRRL") would require filling wetlands along its entire route.

44. Anticipating this new rail line, the Port began filling waters of the United States along its route from the Burlington Northern main line to Terminal 5 without the benefit of a CWA authorization or public interest review. The Port of Portland actually stockpiled dredge spoils in the buffer along the Columbia Slough, buffers that it had set aside in earlier 404 permits and had reaffirmed the importance of in COMA.

45. During this period, the Port also augmented the right of way between Marine Drive and Smith and Bybee Lakes. The FHWA had promised, in an EIS for the Marine Drive relocation, that Marine Drive would not impinge in any way on the Lakes. Part of this fill was accomplished by the Port explaining the additional fill was for the Smith and Bybee Lakes parking lot.

46. After completing these fills in 1992, the Port again asked Fishman Associates to study areas that were to become the approaches for the Columbia Slough Railroad Bridge ("CSRB"). Fishman Associates found only dredge spoils, not wetland soils. Failing to

notice that they had covered functioning wetlands Fishman had inventoried in 1997, Fishman still found the need for a Section 404 permit and a functioning wildlife corridor.

47. Segmentation or piecemealing is an attempt by an agency to divide artificially a major Federal action into smaller components to escape the application of NEPA to some or the whole of its segments. The DOT funded the Columbia Slough Railroad Bridge, the most costly piece of the NRRP, without Environmental Review. This created the climate for the Port of Portland to reduce the environmental consequences by illegally filling the approaches to the CSRB, then segmenting the project by applying for permits in small segments between the illegal fills. The DOT and COE then abdicated its duty, allowing the Port of Portland to segment the BRRP partially by preparing their own environmental documents.

48. In 1994, Rene Dowling, an employee of the Port of Portland, selected the type of NEPA analysis, Categorical Exclusion, and prepared all the environmental analysis the FHWA required for the Federally financed CSRB. This was a one-page document. There was no opportunity for public comment.

49. A Categorical Exclusion is a type of Environmental Review. The FHWA has described:

> "Categorical exclusions are categories of actions which do not involve significant environmental impacts or substantial planning, time or resources. These actions will not induce significant forseeable alterations in land use, planned growth, development patterns, or natural or cultural resources."

The CSRB is a 100% interdiction of the floodplain, recreational and wildlife corridors, in addition to having other negative effects. The Port of Portland ignored such impacts in this CE.

50. The fact that Port of Portland prepared environmental documents, instead of FHWA, was particularly damaging because the Port chose to obtain a General Permit. General Permits may only authorize activities determined to cause only minimal adverse environmental effects. On the strength of the CE thought to be produced by the FHWA, the COE issued a Nationwide Permit #15.

51. Nationwide Permit #15 is found at 33 C.F.R. Pt 330 App. B. 15:

> "*U.S. Coast Guard Approved Bridges*. Discharges of dredged or fill material incidental to the construction of bridges across navigable waters of the United States, including cofferdams, abutments, foundation seals, piers, and temporary construction and access fills provided such discharges have been authorized by the U.S. Coast Guard as part of the bridge permit. Causeways and approach fills are not included in this nationwide permit and will require an individual or regional section 404 permit. (section 404)"

52. Notice the clear prohibition of approach fills and the requirement for an individual permit when approach fills exist.

53. The COE, USCG and FHWA have defined bridge approaches in the MOAs implementing the USCG bridge permit program:

> "1. Bridge: The term "bridge and its approaches," as used in 33 CFR 114.05, should be defined in each case by applying proper engineering sense to the facts of the case. The term may be defined generally as including all work integral to the structure itself. For example, if a

bridge's deck grade is the same as the grade of the highway approach to it, the point where the abutment terminates would be considered the limit of the bridge. In a case where the bridge deck is at a higher elevation than the approach highway leading up to it, with a change in grade required to reach that elevation, the point where a change in the grade of the approach highway occurs would be considered the limit of the bridge. Other bridges, whether highway, railroad, industrial conveyors, pipelines, etc., except aerial transmission lines, which are reconstructed, removed, relocated or otherwise involved in the Federal assistance project requiring approval of the location and plans by the Commandant, U.S. Coast Guard, are included in this definition."

54. The CSRB clearly has very long approaches. These approaches cross through buffers set aside in mitigation by the Port of Portland. Plaintiff pointed out to Federal defendants in February, 1996 that the COE had issued NWP #15 which forbade approach fills for a bridge that had approach fills, and therefore was in violation of regulations implementing the CWA.

55. All Federal defendants conferred over these violations and decided to take no action before the bridge was built. They have not yet taken any action. The Port of Portland continues to violate the CWA by illegally filling and violating buffers.

56. Two (2) specific actions are the concern of this civil action

(a) The first is the continued construction and planning of segments of the NRRP. One of which is intended to be built on illegal fills North of Bybee Lake. The Port of

Portland has paid the City of Portland to provide permits and the environmental assessment for this specific route.

(b) The second is a revision and vitiation of COMA. The Port of Portland seeks to have Federal defendants relieve the Port of meager conditions of mitigation, continuing to disallow chances for public comment and hearing, and prevent the public from even attending these negotiations.

Causes of Action

First Cause of Action, Clean Water Act

57. Violations of 33 U.S.C. 1251 *et seq.*, CWA. Plaintiff repeats and incorporates by reference the allegations of paragraphs 1 through 56.

Clean Water Act Violations By the POP

58. Section 301A of the Clean Water Act contains an absolute prohibition against the discharge of pollutants into the nation's waters, except those discharges made in compliance with standards promulgated or permits issued under the Act, 33 U.S.C. § 1311 (a). The Port of Portland has engaged and continues to engage in the unpermitted discharge of dredged and fill materials into areas previously inspected and found by the COE and EPA to be waters of the United States. This is a violation of CWA Section 301, 33 U.S.C. § 1311 (a).

59. The Port of Portland has in the past and is now in the process of or intends to additionally convert lands created by the unpermitted discharge of dredge spoils into the

waters of the United States to a use to which they have not previously been subject, where the flow and circulation of waters may be impaired and the reach of such waters reduced, in violation of CWA recovery provisions at 33 U.S.C. § 1344(f)(2).

60. The Port of Portland has strategically made statements contrary to fact or failed to adequately state facts of relevance to the CWA. This mendacity has resulted in the production of CWA permits not in compliance with standards promulgated or permits issued under the CWA. These actions have resulted in the placing of dredge spoils in waters of the United States, not in compliance with or covered by a valid CWA permit. This is a violation of CWA Section 301, 33 U.S.C. § 1311(a). Failure of the Port of Portland to report the full extent of waters of the United States to be filled in permit applications is a violation of regulations implementing CWA at 33 CFR § 325.1 (d) (1) and (2).

61. The Port of Portland actions to limit the prohibitions and requirements of CWA have been constant and varied. Listed are five scenarios of illegal fills, categorized by time, type and location. Plaintiff believes remedies may vary with each scenario.

Illegal Fill Scenario 1

62. The Port of Portland illegally filled areas, set aside in all fill agreements after 1977 and prior to 1990 as mitigation or buffers, with dredge spoils. For purposes of limitation, these fills date between 1977 and Jan 1, 1992. In particular, these areas include:

(a) illegal fills into buffers along both sides of the Columbia Slough;

(b) areas illegally filled North of the Columbia Slough, but outside the 1980 berm created to establish the limit of legal fill areas;

(c) illegal dredge spoil fills for the Smith and Bybee parking lot and areas along Marine Drive and Smith and Bybee Lakes, also including fills North of Marine Drive.

Illegal Fill Scenario 2

63. Illegally filled areas inside the 1980 berm that were found to be wetlands in Rivergate Cooperative Agencies MOA, COMA, to be covered by the Section 404 Permit process but were filled illegally between Nov. 30, 1989 and Jan. 1, 1992. This area is at least 160 acres.

Illegal Fill Scenario 3

64. Illegally filled areas inside the 1980 berm, that were found to be wetlands in Rivergate Cooperative Agencies MOA finalized in 1989, required by COMA to be covered by 404 permit process but were filled illegally between January 1, 1992 and January 1, 1997. This area is at least 30 acres.

Illegal Fill Scenario 4

65. All areas in Rivergate filled illegally at any time that are now or will shortly be brought to new use along the route of the NRRL.

Illegal Fill Scenario 5

66. All areas in Rivergate outside the 1980 berm filled illegally with dredge spoils without 404 permit from Jan. 1, 1992 to the present.

Clean Water Act Claims Against the EPA

67. EPA defendants have failed their duties to:

(a) exercise their responsibilities under §404 of the Clean Water Act so as to prevent the Corps violations described below.

(b) prohibit the discharge of pollutants into waters of the United States, which discharge by any person is unlawful under §301 (a), 33 U.S.C. §1311 (a), by ignoring their duty either to "issue an order requiring such person to comply with" §301 by obtaining a permit under §404, or to "bring a civil action," in violation of §309 (a)(3), 33 U.S.C. §1319 (a) (3).

68. The EPA Guidelines specify, inter alia, that dredged or fill material must not be discharged into waters of the United States unless the permitting authority determines that the discharge will have only minimal adverse effects on water quality and the aquatic environment. 40 C.F.R. §230.7 (a).

69. The EPA Guidelines also prohibit, among other things, the discharge of dredged or fill material which will cause or contribute to significant degradation of the waters of the United States. Effects contributing to significant degradation considered individually or collectively include but are not limited to:

(a) Significantly adverse effects of the discharge of pollutants on aquatic ecosystem diversity, productivity, and stability, such as loss of fish and wildlife habitat or loss of the capacity of a wetland to assimilate nutrients, purify water, or reduce wave energy; and

(b) Significantly adverse effects of discharge of pollutants on recreational, aesthetic, and economic values. 40 C.F.R. §230.10 (c).

Clean Water Act Claims Against the COE

70. Corps defendants have abandoned their mandatory duty to regulate these dredge and fill activities as directed by Section 404 of the CWA, specifically, §404 (a), (b) and (f)(2), 33 U.S.C. §1344 (a), (b) and (f)(2), which provide that any such discharge shall be required to have a permit (§404 (f)(2)), and which entrusts the issuance of such permits (§404 (a)) and the specification of a disposal site for each such permit (§404 (b)) to the Secretary of the Army.

71. Corps defendants have additionally abandoned their duty to prevent the unnecessary alteration or destruction of these vital wetlands, in violation of their own regulations (33 C.F.R. 320.4 (a), (b)(1) and (2)), and have failed to evaluate the cumulative effect of numerous piecemeal alterations of these wetlands which have resulted in a major impairment of wetland resources, in violation of 33 C.F.R. 320.4(b)(3) (Corps Regulations implementing §404)..

72. The COE violated their own regulations at 33 C.F.R. §320.4 (1981) and (1983) specifying wetlands as vital areas that constitute a productive and valuable public resource and whose alteration or destruction is contrary to the public interest; at 33 C.F.R. §320.4 (1981) and (1983); and at 33 C.F.R. §325.2(a)(1-6) (1981) and (1983) (setting out the steps that must be taken before any dredged or fill activities are allowed in an area under consideration for an individual permit); at 33 C.F.R. §326.2 (1981) (1983) (setting out a mandatory duty to issue an order prohibiting unauthorized activity).

73. The COE has violated ¢404(e)(1) of the Clean Water Act, 33 U.S.C. §1344(e)(1), and the EPA Guidelines at 40 C.F.R. §230.7, which provide that General/Nationwide Permits ("NWPs") may only authorize activities determined to cause only minimal adverse environmental effects when performed separately, and to have only minimal cumulative adverse effect on the environment.

74. Further, the COE has violated its own regulations at 33 C.F.R. §330.4(a), requiring NWPs to satisfy all terms and conditions for a valid authorization to occur.

75. The COE segmented the NRRP by ignoring illegal fills and issuing NWPs and Individual Permits disregarding its own guidelines at 33 C.F.R. §320.2(a) and scope of analysis at 33 C.F.R. App. B. 7., and its own regulations concerning combination of NWPs and Individual Projects at 33 C.F.R. §330.6(d) and (d)(1).

76. The COE errored in using an NWP for a USCG-approved situation, violating specific regulations at 33 C.F.R. §320.2 and 33 C.F.R. §323.3(b), subjecting any other Federal agency to the authorizing procedures of the regulations at 33 C.F.R. §323.3(a).

77. The COE violated their own regulations at 33 C.F.R. 330, App. A (B) Nationwide Permits 15, clearly forbidding USCG bridges with approach fills.

78. In the alternative, Plaintiff believes that the COE is itself a violator of CWA in aiding, abetting, and ratifying illegal fills and modifying, segmenting, and subverting the requirements of CWA regulations and other efforts to accommodate the interests of the Port of Portland.

Clean Water Act Claims Against the DOT

79. DOT defendants are in violation of 33 U.S.C. § 1311 (a) in failing to note known waters of the United States in Columbia Slough Bridge Project after assuming responsibility for CWA 404 compliance. DOT defendants violated MOAs implementing CWA Section 404 (q) requiring DOT to determine and apply for appropriate authority for a permit.

80. In the alternative, plaintiff believes the COE, the FHWA and the USCG are contributing tortfeasers themselves, violating 33 U.S.C. 1311 (a) by knowingly using Nationwide Permit provided for in CFR 330 App. A. B. 15 to cover actions clearly excluded by that same provision.

81. Plaintiff further believes the COE, the FHWA and the USCG are contributing tortfeasers in knowingly violating 33 U.S.C. 1311 (a) by ratifying illegal fills, allowing the Port of Portland to extend these fills in building the NRRP.

Second Cause of Action, Administrative Procedures Act

82. Violation of the Administrative Procedures Act, 5 U.S.C. § 701, *et seq*. Paragraphs 1 through 81 of this complaint are incorporated hereinafter by reference.

Administrative Procedures Act Claims Against the DOT

83. DOT defendants, the FHWA, the USCG, and the Corps took actions permitting the NRRP not in accordance with the law within the meaning of Section 5 U.S.C. § 706(2)(A) in creating the risk to plaintiff's riverfront warehouse. These defendants violated Executive Order 11988 "Flood Plain Management" and Executive Order 11990

"Protection of Wetlands" by giving no consideration to the floodplain or wetlands in permitting the NRRP. The Corps has steadfastly refused to give any consideration to floodplain values in issuing permits #95-00983, #95-00534, #95-00986, and #96-711. DOT defendants have thus violated U.S. Department of Transportation Order 5660.1A in implementing these Executive Orders.

84. The FHWA failed to adequately consider adverse impacts upon the floodplain which the project entirely bisects, failed to devise appropriate mitigation measures both before funding and during initial planning, and in environmental studies and decision documents. These failures violated EO 11988 and 23 CFR Part 560.

85. The FHWA is required by 23 CFR 650 to consult a National Flood Insurance Program map; local, state and Federal water resource agencies; and to provide public involvement as required by 23 CFR 771. No such consultation or public involvement occurred. Nor did FHWA include these studies in the CE as required by 23 CFR 650.11 (e).

86. The FHWA violated 23 CFR 650.113 by not producing a finding of "Only Practicable Alternative" in this 100% interdiction of the floodplain.

87. The FHWA failed to adequately consider adverse impacts upon wetlands. The FHWA, in fact, never even quantifies the impacted area of wetlands. The FHWA issuance of the Categorical Exclusion is arbitrary and capricious because it violates the requirements of the Clean Water Act and its implementing regulations. Such violations are subject to judicial review under 5 U.S.C. § 702, 706 (2) (A) and (D).

DOT Violation of the Clean Water Act Ultra Vires

88. DOT defendants violated APA at 5 U.S.C. § 702, 706 (2) (C) by extending its authority, given in Section 9, 33 U.S.C. 401 to allow the placing of fill, rip rap and dredge spoils into waters of the United States. Such violations are subject to judicial review under 5 U.S.C. § 702, 706 (2) (C).

89. The DOT violated the CWA by extending authority given by the Department of Transportation Act of October 15, 1966 and General Permits issued under 33 CFR 330.5 (A) 15 to cover activities clearly excluded in those same provisions, and in 33 CFR 320.2 (A). The FHWA and the USCG assumed CWA authority by choosing a three-part procedure established for construction of bridges over navigable waterways. In this procedure, on the strength of the environmental assessment by the FHWA, the Corps issues as NWP-15 and the Coast Guard issues a bridge permit . This choice of procedure for handling environmental aspects of the NRRP is ultra vires because approaches made necessary by the Columbia Slough Bridge cross recognized waters of the United States set aside in mitigation thereby requiring CWA individual permit, as prescribed by MOAs implementing CWA Section 404 (q), found in COMDTINST M16590.5.

90. DOT defendants violated NEPA 40 CFR § 1502 (d) (1985), § 1500.2 (b), § 1506.6 by failing to encourage and facilitate public involvement in decision to build NRRP. DOT defendants all violated DOT Order 5660.1A in providing no opportunity for comments or hearing to the public. The FHWA held no meetings, issued no notices, and did not require the state to hold hearings as outlined and required in 23 CFR 771, and specifically required at 23 CFR 650.109.

Administrative Procedures Act Claims Against the COE

91. In the alternative, any CWA claims not sustained by the CWA as a cause of action that are arbitrary, capricious, unreasonable, or not in accordance with law are here claimed as COE violations of the APA.

92. The COE has deprived the Plaintiff of his right to comment and hearing by failing to perform review required by CWA Section 404, 33 U.S.C. § 1344 and implemented in COE regulations at 33 C.F.R. 325.3. The COE has also withheld information and concealed the true nature of permit actions in Rivergate.

93. The COE has violated Executive Order 11988 and its own regulations. There is no delineation of the effect of any of the fillings on the floodplain. Corps regulations are clear on the development on and in the floodway and floodplain. From 33 C.F.R. §320.4(l)(3):

> "In accordance with Executive Order 11988, the district engineer should avoid authorizing floodplain developments whenever practicable alternatives exist outside the floodplain. If there are no such practicable alternatives, the district engineer shall consider, as a means of mitigation, alternatives within the floodplain which will lessen any significant adverse impact to the floodplain."

94. This requires not only adherence to Executive Order 11988, but also that district engineers avoid floodplain impacts, and further still that if it is not possible to avoid them, that beneficial values must be restored and preserved. To this point, the Corps has not even considered them. Floodplain regulations also require the consideration of an alternative. The COE has considered no such alternatives.

Administrative Procedures Act Claims Against the USCG

95. The USCG took arbitrary and capricious action not in accordance with law by failing to properly consider horizontal and vertical clearances. The USCG used temporary legislation found in an appropriations bill to discount earlier controversy. The USCG failed to respond to complaints of Plaintiff concerning differences between the proposal of the bridge and the final construction.

96. The USCG failed to provide adequate notice or opportunity for comment.

97. The quality of the Plaintiff's life has been greatly diminished by actions resulting in claims under the APA above and below.

Third Cause of Action, National Environmental Protection Act

98. Violation of § 102 (2) (C) of NEPA, 42 U.S.C. § 4322 (2) (C) — Failure to Prepare Environmental Impact Statement ("EIS"). The National Environmental Policy Act of 1969, as amended, 42 U.S.C. § 4321, *et seq.* Paragraphs 1 through 97 of this complaint are incorporated hereinafter by reference. Special reference is made to paragraph 82.

Failure to Produce an EIS

99 The Federal defendants violated § 102 (2) (C) of NEPA, 42 U.S.C. § 4322 (2) (C) — Failure to Prepare EIS.

100. The National Environmental Policy Act of 1969, as amended, 42 U.S.C. § 4321 et seq., requires all Federal agencies to prepare a detailed EIS on every proposal for a

major Federal action significantly affecting the quality of the human environment, 32 U.S.C. § 4332 (2) (c). That EIS must always contain a detailed discussion of environmental impacts (40 CFR § 1502.16) and of alternatives (40 CFR § 1502.14).

101. The placement of dredge spoils in Rivergate wetlands after November 30, 1989 was a major Federal action significantly affecting the quality of the human environment because it was an extension of previous Federal action already found by the COE to be significant in 1979. Therefore, Federal defendants violated NEPA because they failed to address the cumulative and connected effects of this project along with past, present and reasonably foreseeable future projects on the site in determining significance.

102. The COE and Federal defendants violated regulations implementing NEPA at 40 C.F.R. § 6.108 (Criteria for Initiating EIS) (e) (3). These illegal fills were all in the floodway, in the floodplain, or adjacent to the floodplain.

COE NEPA Violations

103. COE defendants have violated Section 102(2) of the National Environmental Policy Act (NEPA) and its implementing regulations promulgated by the Council of Environmental Quality (CEQ), and their own NEPA Regulations by failing to prepare an Environmental Assessment and an Environmental Impact Statement on the ongoing and proposed alteration and destruction of these wetlands, in violation of 42 U.S.C. §4332 (2) (NEPA); 40 C.F.R..

104. COE defendants' actions were taken in violation of NEPA and:

(a) their own NEPA Regulations at 33 U.S.C. §230.22 (Policy and Procedures for Implementing NEPA) which limit Corps' action during the NEPA review process and refer to those limitations contained in 33 C.F.R. §230.17; and

(b) in violation of the Council on Environmental Quality's Regulations implementing NEPA at 40 C.F.R. §1506.1, prohibiting any action concerning a proposal which would have an adverse environmental impact or limit the choice of reasonable alternatives until an agency issues a record of decision under 40 C.F.R. §1502.2.

105. The proposal to construct the NRRP is a major Federal action significantly affecting the quality of the human environment for which Defendants must prepare an EIS. It is an action requiring an EIS because:

(a) The NRRP may or will have a significant environmental effect.

(b) by the criteria set out in the CEQ NEPA Regulations there may or will be such significant effects.

106. A different route crossing the Columbia Slough North of Marine Drive is, and was, a superior alternative proposed but not considered by Federal defendants.

Failure to Produce an Adequate Environmental Assessment

DOT NEPA Violations

107. Issuance of the Categorical Exclusion ("CE") for the NRRP is in violation of: the NEPA and its implementing documents; is arbitrary, capricious, and contrary to the requirements of law.

108. DOT defendants all violated NEPA at 40 C.F.R. 1501.5 and 1501.6 in that environmental evaluations were not done in consultation with the COE or other agencies. After reviewing regulation on Plaintiff's request, it was decided that FHWA was the lead agency, a role which it did not play.

Not a CE by Definition

109. The FHWA, in a clear error of judgment, issued a categorical exclusion where no categorical exclusion, as described in 40 CRF 1508.4, can possibly exist. This project is a new rail bridge over a navigable water, encroaching a floodplain in a wetland zoned open space, including buffers on both sides set aside as mitigation in at least three Federal permits. If all these conditions were reduced by and considered as special circumstances per 771 CFR 117, the base category would be new rail bridges. This cannot be a category due to the fact that it is a connected action, and new rail bridges by their very existence have no independent utility.

110. The FHWA violated NEPA and its own regulations in granting a CE for NRRP. FHWA says that the CE in this project was produced under 771 CFR 117 (d), which requires the applicant to submit documents that significant environmental effects will not result, and also refers to criteria in 40 CFR 1508.4 and 771 CFR 117 (a) which, in part, requires actions not to have any significant environmental impacts.

Significant Impact

Site Context

111. The Federal defendants improperly segmented the RGRP in its environmental review violating NEPA and its regulations. The entire project is Federalized by FHWA funding and the fact that it is entirely on legal and illegal wetland and floodplain fills. The Regional Environmental Officer at FHWA in May, 1996 unequivocally said the CE was for the bridge alone, leaving three areas of the NRRP not considered at all.

112. This project can be broken down into three areas; the area from the East or North sides of the bridge to the termini with Burlington Northern Railroad crossing buffers and environmental set-asides North of Smith and Bybee Lakes; the area from the West or South sides of the bridge to the termini with the Union Pacific Railroad wetlands along floodplain in the BPA corridor; the T-5 area of more wetland filling in the construction of a bulk loading facility, but for the construction of the Slough Bridge, would not be built.

Intensity

113. Parts of the new railroad bridge not considered will create new at-grade rail crossings. The FHWA, considering only the effect of one grade crossing, borders on fraud, when as many as five (5) at-grade railroad crossings are involved. 40 CFR 1508.27 (1) and (2) require consideration of the entire effect, both beneficial and adverse, on traffic when considering significance.

114. The Federal defendants violated 40 CFR 1508.27 (3) when it failed to consider close encirclement of the 2,000 acre Smith and Bybee Lakes, a Natural Management Area

given the highest score in environmental ratings of all Columbia Corridor sites due to interspersion attributed to Columbia Slough wildlife corridors. NEPA at 40 CFR § 1508.27 claims significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. The FHWA was unreasonable when it did not consider new fills required by the NRRP on the small amount of area left unfilled.

115. This NRRP traverses the length and breadth of the confluence of the Columbia and Willamette Rivers. This area is now either fill or natural area. Previous fills have significantly affected the area. This new rail line is more significant in new wetlands it fills due to incremental cumulative effects. Various parts of the project were considered in small parts, none considering cumulative effects on wildlife, recreation or floodplains.

116. The FHWA was unreasonable in not considering 40 CFR § 1508.27 (10) in assessing the severity of the action due to intensity, when it disregarded buffers required in mitigation. These buffers have been destroyed. They were requirements imposed for the protection of the environment.

117. FHWA officials at both state and regional levels have refused to consider reports of illegal fill, violating 40 CFR 1508.27 (10), while actions violating the CWA as it relates to intensity in significance.

CE Is Not in Good Faith

118. The FHWA violated NEPA and its own regulations at 23 CFR 771.109 (c), (c)(1), and (c) (4), deferring to 42 U.S.C. 4332 102 (2) (d) with respect to environmental documents:

(a) by allowing the Port of Portland, an agency without statewide authority or any local responsibility for railroad bridges, to prepare the one-page document called CE, whichviolated 42 U.S.C. 4332 102 (2) (d) i;

(b) the responsible FHWA officer received complete documents in the mail after September 12, 1994. By not providing guidance for participating in preparation, FHWA violated 42 U.S.C. 4332 102 (2) (D) ii;

(c) There is no comment by any FHWA official or any sign of independent evaluation, only Elton Chang's signature on the CE dated September 26, 1994, violating 42 U.S.C. 4332 102 (d) iii.

(d) No views of any other State or Federal agency other than the USCG were solicited, violating 42 U.S.C. 4332 102 (d) iv.

119. The FHWA improperly delegated authority, allowing a one page document called CE, failing to demonstrate any bona fide need for the project, and in making false statements that would lead a decision maker to believe such need had been shown.

CE Is at Variance with Supporting Documents

120. The one-page document prepared by the Port, signed by FHWA called CE is not an adequate compilation of relevant information in its own supporting documents. It sets forth statements that are materially false or inaccurate, failing to satisfy the requirements of NEPA in that it cannot provide the basis for an informed decision.

Prayer for Relief

121. I. Wherefore, Plaintiff respectfully requests the Court declare that:

122. (a) After 1989, areas owned by the Port of Portland in the Rivergate Peninsula — which the Port, the COE and EPA defendants previously inspected and determined were in CWA jurisdiction in a signed mitigation agreement — have been filled. More than 235 acres, on which activities associated with dredge spoils fills have occurred or are occurring or are proposed, are areas that are or were inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do or did support a prevalence of vegetation typically adapted for life in saturated soil conditions and are therefore wetlands and part of the waters of the United States, subject to regulation under the Clean Water Act, 33 U.S.C. §1251 et seq;

123. (b) that the Port of Portland has engaged and are engaged in the unpermitted discharge of dredged and fill material, including but not limited to ditching, removing vegetation, milling and sloping the soil, and adding fill material for the primary purpose of replacing waters of the United States with dry land as defined in 33 C.F.R. §323.2(k), (l), (m) and (n) (1981); 33 C.F.R. §323.2(i), (j), (k), and (l) (1983), and such activities constitute the discharge of pollutants into waters of the United States under Section 301 of the Clean Water Act, 33 US.C. §1311.

124. (c) these unpermitted discharges of dredged and fill material in water of the United States, which the COE and the EPA defendants refuse to regulate, are incidental to conversion of wetlands to another use to which they had not previously been subject, where the flow and circulation of waters may be impaired and the reach of such waters reduced, in violation of 33 U.S.C. §1344(f)(2);

125. (d) COE defendants have failed and are failing to fulfill their mandatory duty under 33 U.S.C. §1344 (a), (b) and (f)(2) to designate these wetlands as part of the waters of the United States, and to regulate the discharge of dredged and fill material occurring and proposed to occur thereon;

126. (e) Federal defendants have failed and are failing to comply with the National Environmental Policy Act and its implementing regulations and failed to prepare an environmental assessment and a correct environmental impact statement with respect to the past, ongoing and proposed dredge spoils fills and new projects on these wetlands;

127. (f) EPA defendants have failed and are failing to exercise their mandatory duty under 33 U.S.C. §1319(a)(3) to issue an order or file a civil action to enjoin the discharge of pollutants into these wetlands without a permit issued pursuant to 33 U.S.C. §1344;

128. (g) EPA defendants have violated and are violating 33 U.S.C. §1344 (c) by their failure to deny or restrict the use of these wetlands as a disposal site and to determine that the discharge of dredged or fill materials will have an unacceptable adverse effect on aquatic, wildlife or recreation areas;

129. (h) DOT defendants, by participating and acquiescing in the unpermitted discharge of dredged and fill material by the Port of Portland, by allowing the Port of Portland to select, segment, and prepare its own environmental documents, by approving the uprooting of vegetation and other dredge and fill activities and the alteration of these wetlands pursuant to general permit in lieu of an individual permit and NEPA process, violated 33 U.S.C. §1344(a), (b) and (f)(2); 1311 (a) 33 C.F.R. §325.2(a)(6) (1981) (1983); 33 C.F.R. §§230; Section 102(2)(C) National Environmental Policy Act, 42 U.S.C. §4332(2)(C); and CEQ NEPA Regulations at 40 C.F.R. §1506.1(a);

130. (i) the EPA defendant's participation and acquiescence in the action of Corps defendants set out in (h) above, and their continued failure to take enforcement action violates 33 U.S.C. §1319(a)(3) which directs the Administrator to "issue an order" or "file a civil action" to prevent the discharge of pollutants into the waters of the United States under such circumstances;

131. (j) the DOT and COE defendants' abuse of the Nationwide general permit, 33 C.F.R. 320.2(A), and other actions taken to limit the jurisdiction of the CWA and reduce the regulatory requirements on Port of Portland land developers, violates §404(a), (b)(1), (e)(1) and (f)(2) of the Clean Water Act, 33 U.S.C. §1344(a), (b)(1), (e)(1) and (f)(2); the EPA Guidelines, 40 C.F.R. Part 230; §102(2)(C) of NEPA, 42 U.S.C. §4332(2)(C); and its implementing CEQ regulations, 40 C.F.R. Parts 1500-1508; and Corps NEPA regulations, 33 C.F.R. Part 230. Plaintiff and public will suffer immediate and irreparable harm as a direct result of defendants' failure properly to enforce the mandates of the Clean Water Act and the National Environmental Policy Act, and this harm will continue unless enjoined by this Court.

132. (k) COE and DOT defendants violated Executive Orders 11990, and 11998.

133. II. Plaintiffs additionally request this Court to issue and order preliminary and permanently:

134. (a) enjoining COE and EPA defendants forthwith to issue an order prohibiting development on unpermitted dredge and fill activities associated with the filling of wetlands in Rivergate, or development of plans to continue new uses on illegal fill.

135. (b) enjoining COE and EPA defendants forthwith to determine the precise delineation of the wetlands that have been, are being and are proposed to be illegally filled in Rivergate by the Port of Portland, directing Federal defendants to regulate said areas in accordance with the Clean Water Act, regulations promulgated pursuant thereto, and the National Environmental Policy Act and its implementing regulations, including in such regulation the consideration of the cumulative impact of past, present and proposed dredge and fill activities upon the interconnected wetland resources of the Rivergate Peninsula, requiring the production of an EIS for all future, past and present dredge spoil fill development projects on the Rivergate Peninsula.

136. (c) enjoining COE and EPA defendants forthwith to issue an order prohibiting development on or any further discharge of dredged or other fill material in the Rivergate area until full compliance with the Clean Water Act and NEPA are achieved,

137. (d) enjoining COE defendants to require the restoration of all wetlands of Illegal Fill Scenarios 1 and 5, found by this Court to be dredged and filled in violation of law, to their original, natural state before the illegal activities occurred thereon,

138. (e) enjoin the Corps and EPA from further participation in negotiations vitiating C.O.M.A. until it is either superseded or made part of a proper 404 permit,

139. (f) enjoin the FHWA to require that the Port of Portland return all ISTEA moneys paid for development of NRRP and that they administer those funds as a mitigation project of ISTEA in Rivergate.

140. (g) find the Defendant's actions are set forth above are arbitrary, capricious, and not in accordance with law, contrary to the APA, 5 U.S.C. § 706 (2) (A); (C); (D), and in

doing so set aside or hold as unlawful COE Permits #95-00983, #95-00534, #95-00986, and #96-711 until they become parts of a nonsegmented permit for the entire route of NRRP.

141. (h) enjoin all Defendant's from participating, funding, or accepting any studies or results of processes designed to complete segments of the NRRP.

142. III. Plaintiff additionally requests that:

143. (a) either the Administrator of the EPA or the Secretary of the Army assess the Port of Portland $10,000 per day, or $25,000 per day as Court fees from Jan. 1, 1992 to present, as provided for in 33 U.S.C. 1344(s)(4)(A), 1319(d), 1319(c)(1)(A), or 1319 (g)(1).

144. (b) that the Port of Portland discharge any profits from illegal land creation including BN railroad wheelage rights for the use of CSRB.

145. IV. Plaintiff additionally requests that the Court shall retain jurisdiction over this matter to facilitate prompt judicial review if Defendants fail to comply with its orders;

146. V. Plaintiff additionally requests that the Court award plaintiff all costs and expenses of this litigation, including attorney's fees and expert witness fees, pursuant to 33 U.S.C. § 1365(d) or pursuant to the Equal Access to Justice Act, 28 U.S.C. § 2412(d), and Fed. R Civ 54(d).

147. VI. Plaintiff additionally requests additional equitable relief as this Court deems necessary and proper.


96-3
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Section 2

SECTION 2 - PRE-DESIGN

A. Summary

This section serves to outline the investigative activities associated with the early design of the project. It includes a description of the proposed facility along with other pertinent information related to operations, building configuration, and site utilization. It appears that if sufficient appropriate land can be obtained, the proposed North Rivergate site is adequate for this facility.

B. Introduction

The conceptual design developed for the Multnomah County New Corrections Facility was based upon the criteria established for the architectural space programming sessions and with projections established based on historical data. These programming sessions we conducted in the first months of 1998. While the subsequent design concepts are not intended to be a finished floor plan, the designs were sufficiently developed to test the functional relationships of the major departments and program spaces. The conceptual architectural space program is included in this document as "Attachment 2-1".

With the areas identified, the preferred functional relationships confirmed, and the data projections available concerning the exterior elements (parking for public and staff, security fencing, service yard and perimeter road requirements), a series of conceptual site plans was developed to analyze the facility placement on the proposed North Rivergate District site.

KMD Architects and Planners, and the consultant design team, used the following guidelines in analyzing the appropriateness of the North Rivergate Site with respect to the proposed medium security jail facility.

i. The nearby environmental resources at this sensitive site are to be protected, meeting and exceeding (where feasible) all environmental requirements.

ii. The site and facility must provide the physical elements required to meet the overall program goals for community security and safety. This facility will be an integral component of the Sheriff's commitment to provide for the safety and security of the citizens of Multnomah County.

iii. The facility must be a good neighbor. In this and previous siting efforts there has been a sincere effort to meet with the affected and adjacent property owners and other interested groups to help each party identify the critical issues and then formulate methods by which those issues can be addressed.

iv. The site and facility must meet the fiscal constraints that exist by providing good value for the budgeted funds. We anticipate cost-conscious features that will demonstrate to taxpayers the value of their investment, recognizing the site's constraints and possible needed expenditures to mitigate those constraints.

v. Finally, the site and facility must be able to accommodate future expansion. Suitable land and an adequate utilities' infrastructure must be available to allow the county to respond to increasing population and the varying social concerns.

C. Facility - Program Goals and Conceptual Design

i. The purpose of this jail will be to provide space for housing inmates who have been sentenced, are awaiting sentencing, or are awaiting trial. The inmate housing units are to be secure, separated from the public, assuring community safety. It is also to be safe and secure for the inmate and facility staff.

ii. To accomplish this overall safety goal, the facility will be built as a Medium Security Jail to accommodate inmates' living, sleeping and recreating in supervised units. These living units will be provided as dormitories in the first phase of development. Administrative segregation units are planned as part of future additions. Primary security will be provided through direct observation of the inmate population by trained Sheriff's personnel.

iii. That security is supported by building components that minimize risks of fire, escape or other damage. The secure housing units and other secure areas will be constructed of reinforced concrete and concrete masonry. Those areas outside of the secure perimeter, construction will be of the more conventional metal stud framing and concrete masonry construction

iv. The initial (Phase I) facility will house a population of 225 inmates.

1. Three 75-bed "open" dormitory units will be constructed as a one-story structure, designed to support a future floor of housing. Each dorm will consist of a main floor and a mezzanine. The inmates' outdoor recreation area is provided within the perimeter of each dorm and is accessed from the dorm's dayroom.

   The security officer in each dorm will have direct visual control over all that occurs in the dorm. The inmates will eat, sleep, and recreate in this unit. They will leave the unit only for visiting and sick call. All counseling, education, and the like will be conducted on the Unit. Toilets, showers, and lavatory areas are shared among all inmates within each dorm.

2. The dorm units will be located between the public entrance, administrative, and visitation area and the secure transport area.

3. Inmate support services, such as education, counseling and recreation are accommodated within each housing unit. The counselors and educators will travel to each unit to provide their services.

v. Adequate, functional spaces will be provided for the various required support services. This will be achieved either by providing space for these services either on-site, or by accommodating deliveries from remote services.

1. Food will be locally prepared in a central kitchen and delivered in individual trays via carts to the housing units. Additional, adjoining land will be set aside for kitchen expansion to serve future increases to the jail population.

2. Laundry services will initially by provided from the Multnomah County Inverness

Jail. The need here is for a service dock and protected storage and staging areas to handle clean and soiled linens. It is anticipated that laundry facilities will be provided on-site in future development.

3. Medical services for the initial facility will be provided as a small, in-house clinic. Inmates requiring longer term or more acute medical attention will be transferred to other detention or medical facilities. As this facility expands, it is anticipated that a comprehensive clinic and an infirmary housing unit will be provided.

4. Inmates will arrive and leave this facility through a vehicular sallyport. This will be sized to accommodate standard Sheriff's Office transport vehicles. No intake or release processing will occur at this location.

   In the initial construction phase, this transportation sallyport will be a fully enclosed exterior, secure "cage" into which the vehicles will enter through controlled gates. This item is further discussed in the Site Utilization section below.

5. Storage provided at this initial facility will be that which is minimally needed to support the program. As the jail expands, storage and commissary space will increase.

6. The utilities' infrastructure is discussed in greater detail in Section 5 (Engineering Assessment) of this report. It is understood that there is sufficient capacity in the North Rivergate area to provide the required water, sanitary sewer, power, and natural gas for both the initial and completed facility. Storm water will be detained on-site, appropriately treated, and released into the surrounding natural drainage systems.

vi. In planning for future expansion a final target population will be up to 2,000 inmates. The actual number will depend on the fiscal and other factors present at the time of expansion.

D. <u>Site Description and Observations</u>

i. Geotechnical Properties

1. The proposed site area was filled with dredged sand in 1993. The nature of fill area creates an open and flat site that remains highly visible from the surrounding natural resource areas. The site area can be described as elevated plain that is approximately 15' higher than the adjacent surrounding areas. The fill has created 3:1, or greater, slopes around the perimeter of the site.

2. The average surface elevation of the proposed site is about 29 feet. As noted in Section 5 of this report, the 100-year flood plain is at 27 feet. It is expected that the first floor elevation will be at least three feet above the flood level.

3. To determine the ability of the ground to structurally support this facility is part of the conceptual design process. The soils must adequately support the weight of the building under normal conditions and during a seismic event. This combined

geotechnical, seismic and structural topic and the associated cost implications are discussed in greater detail in Section 5 and Attachment 5-2 of this report.

a. Of the three holes that were bored, two on the eastern half of the site encountered gravel about 20 to 25 feet below the surface. The hole in the western half encountered no gravel.

b. The bearing implications are that the first phase of the building, which is anticipated to be built on the eastern portion of the site, will be supported on steel piles that are driven to bear in the gravel layer.
   (i) The fill material below the slab will, over time, continue to compact. The ground floor, therefore, will be constructed as a reinforced concrete slab, capable of spanning between the foundation piles.
   (ii) During a seismic event, the potential for liquefaction in the loose sand of the fill material will require that the fill material be adequately compacted and stabilized to prevent lateral displacement of the support piles.

c. That part of the future facility that will be constructed in the area without gravel will incur significantly greater costs for foundations.
   (i) The bearing piles must be driven through the fill sand and into the silty clay strata below. As with the Phase I building, the concrete floor slabs must be designed to span between piles.
   (ii) More expensive methods will be required to laterally stabilize those areas to counter the seismic liquefaction. Closely driven compaction displacement piles are anticipated, about 10% of which can be driven deeper and used for structural bearing.

ii. The fill soils consist of well-drained, sandy-silty soils with minimal organic materials. These conditions will only sustain the existing vegetation of sparse grasses and forbs. As a result, significant soil amendments will be required during the site preparation phase for increased nutrients and moisture retention. Natural riparian plant communities with indicator species such as Cottonwood, Oregon Ash, willows, sedges, and grasses grow in the more fertile soils that encircle the site. These vegetation zones, along with the light industrial areas and Bybee Lake constitute the majority of the views from the site with distant views of Mount St. Helens to the North.

iii. Views from Adjacent Land Use Areas

1. Bybee Lake

Primary views of the site from Bybee Lake are only visible when on the water, with the most direct views originating from the western portion of the lake. The viewer, at this location, is approximately 15' lower than the surrounding landscape, thus, the closer one moves to the site the less one sees of its entirety. Views in other directions consist of native bench and bank vegetation of the Columbia Slough to the northwest, the proposed site's 3:1 slopes and surrounding riparian vegetation

to the north, and wetlands with associated vegetation along with tops of adjacent warehouses to the northeast.

2. 40-Mile Loop Trail

This proposed trail system is currently planned to access the west side of the North Rivergate site along the Columbia Slough. From this point, the trail will travel south along the eastern edge where it eventually drops down into the 150' Columbia Slough buffer. The trail, at this point, will be approximately 12' lower than the North Rivergate Site and the combination of plant material and elevation differences restrict views to the site. From Marine Drive, the proposed trail will have clear views of the site, which are primarily flat, open, and developable lands for industrial usage. Additional views from the trail include the St. John's landfill and Bybee Lake riparian vegetation to the south, Columbia Slough native vegetation to the southwest, and limited views to the southeast due to the vegetation and grade differences.

3. Marine Drive

This roadway runs east-west along the northern length of the North Rivergate site. Due to the flat, open landscape, views to the south will be unimpeded leaving the far southern portion of the site visible. Consequently, buffering the northern portion of the site will be necessary. Eventually additional warehouse complexes will be constructed which will contribute to the obstruction of views from the roadway.

4. St. John's Landfill

This landfill lies to the south of the North Rivergate site and is encompassed by the Columbia Slough and Bybee Lake. At this time the landfill site is not open to the public but could, eventually, become usable parkland space. The visible portion of the North Rivergate site is primarily of the natural plant communities that surround the site. However, in the event that the St. John's Landfill is converted to parkland, additional buffering may be required.

5. Adjacent Warehouses

Large warehouse complexes can be found to the north, east and west of the North Rivergate site. There will be minor visual impacts from the adjacent warehouses since windows are primarily on the first floor of these structures and, when combined with the existing native vegetation, result in restricted views. In addition, these warehouse complexes have provided their own landscaping to meet the city's buffer requirements.

E. <u>Site Utilization Goals and Conceptual Design</u>

i. Access to the proposed site will be restricted to surface roads; no current or planned public transportation systems serve the specific site. As noted in the transportation and civil

engineering portions of Section 5 of this report, new roads may be part of the initial facility project costs.

ii. Basic to providing for safety of the public visitors to this facility is a straightforward plan of on-site roads and parking with clear, integral way-finding. Identification for access to the facility from the North Marine Drive will be provided by a sign at the intersections with N. Leadbetter.

1. Visitor and staff access to the site will be by private vehicle. Public transportation, in the form of Tri-Met bus service, does serve the North Rivergate Industrial District, but it is oriented toward industrial workers and their schedules, thus the service is limited. The bus route, also, is along North Marine Drive, nearly three-quarters of a mile to the north of the entrance to this site. It is unlikely that this route will be modified to serve the jail.

2. The public parking lot will be visually monitored for security and safety via strategically placed closed circuit cameras.
   a. Access to the public building entrance from the public parking lot will be clear and direct, augmented by paving patterns. The public's "front door" will have security monitoring by the Sheriff's Office, complimented by security equipment that will scan for metal objects.
   b. The public will be kept from the facility's secure areas by a 14-foot high fence that, except at the public entrance, will encompass the facility.

3. Staff security is enhanced by provision for an entrance and parking area distinct from public access. These areas will also be visually monitored from Central Control.

iii. Inmates will be transported to and from this facility in the standard vehicles now used by the Sheriff's Office for that purpose.

1. Public and staff safety is a fundamental security concern whenever potentially dangerous individuals are moved. Therefore, at this facility, a secure enclosure will be provided in the initial construction phase. The vehicle enters this enclosure through gates that are controlled from inside of the facility.

2. Once the gates have been secured, then the doors to the vehicle and facility are opened. Inmates in restraints are then escorted into the receiving area of the jail.

iv. Emergency access will be required by medical, fire, and security services.

1. A potential compromise to unrestricted access by these emergency services may occur when a railroad crossing is blocked. Possible resolutions to this potential were identified in meetings with the Burlington Northern Santa Fe (BNSF) Railroad. This is further discussed in Section 5 of this report.

2. It is also noted that during the rare flood conditions, such as experienced in the winter of 1995/96, portions of the public street system were under water.

3. Further discussed in Section 5 of this report, it appears that the disruptions caused by this possibility may be mitigated through alternative routes of access or by the various fire suppression and security systems that will be in provided in the facility.

v. The impact of this facility on the surrounding environment is understood and will be mitigated by setting the facility back from the edge of the property and by extensive use of a combination of earth berms and intensive landscaping.

1. The new facility will be set back from the perimeter areas with all sides visually screened or "buffered" to minimize observation of the facility.
   a. Between the east side of the Columbia Slough and the west side of the subject peninsula site, the Port of Portland has set aside a 150-foot wide buffer strip of existing natural habitat.
   b. The Port of Portland also intends to plant the slopes of the fill from the Columbia Slough buffer zone on the west and the Bybee Lake area on the south and east, for a distance of about 50 feet from the boundary of the environmental zone.
   c. Multnomah County plans to expand that planting buffer with at least an additional 40 feet of similar plants. This perimeter planting buffer will effectively screen the building, yet allow the desirable open observations areas around the corrections facility.

2. Site Landscape Improvements - Proposed Buffering Techniques: Note that the County is working with interested Environmental and Citizens' Working Groups to review these techniques and determine their extent of use.
   a. *A vegetative screen* will be a combination of native and naturalized plant materials with a mixture of large deciduous and evergreen trees comprising the canopy. Medium height deciduous trees and shrubs will make up the understory, while ground covers, grasses, and forbs make up the forested floor or ground layer. This level of plant diversity provides a naturally aesthetic screen that helps break up building masses, and is more effective when viewed from longer distances.
   b. *Vegetative screen with soil berms* - This screen consists of the same principles and materials described above while incorporating a 2 to 8 foot high soil mound or berm. The berm provides additional screening protection through mass and height and, when combined with the vegetation, works as a more effective screen from the adjacent land uses.
   c. *Vegetative screen with soil berm and swale* - This screening technique incorporates the principles and materials previously noted along with a 4-foot berm in combination with a 4-foot deep swale. The berm-swale combination, while providing solid mass screening, allows for storm water detention and treatment to occur on-site through natural, biological processes. The occasionally flooded swale is also consistent with the native, wet-footed type of plantings that are found adjacent to the site.
   d. *Vegetative screen with fencing or walls* - This type of screen is comprised of the vegetation assemblage in combination with a 6 to 8-foot fence or

masonry wall. This type of screen is not only effective from a distance, but also screens the adjacent user who is in close proximity. Although effective, this is the most expensive solution and is not always cost effective.

3. Site Landscape Improvements - Plant Materials:
   a. *Native plant usage* - The basic intent is to use drought tolerant, native plant materials found in adjacent upland areas along with the use of native riparian or wetland plantings in swales, retention/detention ponds or low-lying areas.
      (i) It will be imperative that all proposed plantings are supplemented with an irrigation system for the first couple of years until their rooting systems can be established.
      (ii) By mimicking the diversity and composition of the local native plant communities, we will be able to blend into and enhance the surrounding environment through habitat expansion and increased food sources for birds and other wildlife.
      (iii) Some nonnative plants may be used in a more formal or ornamental setting such as entries and parking lots. In these areas, only nonaggressive plants will be considered to prevent the introduction of nonnative species into the natural plant communities of nearby lakes and wetland areas potentially reducing overall ecosystem diversity and health.
   b. The natural model for these buffer areas is outlined in a general form below.
      (i) *Canopy layer* - This is typically the uppermost spreading, branched, layer of the forest. It is composed primarily of large deciduous and evergreen trees that, at maturity, range from 25 to 75 feet in height. It provides habitat and shelter for birds and small animals. This layer of the proposed vegetation will be mainly deciduous but will have a mix of evergreen trees scattered throughout.
      (ii) *Understory layer* - This is typically the middle portion of the forest and, at maturity, ranges from 6 to 25 feet in height. It provides habitat, food, and shelter for small birds and animals. This layer of the site will be comprised mainly of native shade-loving deciduous trees and shrubs. Some native evergreen shrubs may be scattered throughout but quantities will be minimal.
      (iii) *Ground layer* - Includes the herbaceous layer. This is the layer of vegetation covering the forest floor, ranging from 0 to 6 feet in height. It provides habitat for burrowing or ground dwelling animals and small birds. It is comprised primarily of low-lying native shrubs, groundcovers, grasses, ferns, and forbs.

4. Site Landscape Improvements - Landscape Maintenance:
   a. The level of maintenance will vary throughout the life of the project. A maintenance plan must be developed so that those who will be providing the service will understand the importance of proper maintenance and will

ensure that the plants will reach a healthy, mature height and achieve the desired screening effect. The use of native vegetation will require a less intensive maintenance program over time than the typical ornamental landscape plantings.

b. *Initial maintenance* - Initially, maintenance for the first two years revolves around keeping the plants well watered and fertilized. In addition, weeding, re-staking or guying of trees and regular checks of soil moisture content are also performed. Automated irrigation systems allow for the watering to be taken care of efficiently and, ultimately, aids in conserving water over the duration of the project. Fertilizer will be provided during the planting installation but young vegetation will require supplemental applications every year as they become established and until enough mulch can be developed naturally on the forest floor. No pruning should be required because the mature heights and widths of the trees and shrubs are desired for the maximum screening effect.

c. *Seasonal* - Seasonal maintenance includes winterizing the irrigation system to keep the system from freezing then flushing and testing the system in the spring to clean out sediment and to verify the systems working order. Plants that have been damaged due to winter or storm damage may need pruning or possible replacement.

d. *Anti-browsing devices* - These devices are used to keep animals such as beavers and deer from devastating or damaging young plantings. They are typically comprised of lightweight fencing with small openings that surround individual trees and shrubs or can be strung to encapsulate plantings, thus cutting off the animal's access.

e. It is intended that the complete site will be landscaped and planted during Phase I so that the plants will gain height and density before subsequent two-story building phases are begun.

vi. Security Fence - All sides of the facility, except the public and staff entry points, will be securely fenced to control access to the facility. This 14-foot high fence not only will discourage those inside from attempting to get out, but will prevent those outside from trying to get in. It will be positioned about 50 feet from the facility to create a secure zone adjacent to housing units and recreations areas. As with the perimeter landscape buffers, the fence will be part of Phase I.

vii. Storm Water Treatment - The storm water will be collected and treated to meet the required environmental standards before the water is reissued into the natural drainage systems. As noted in Section 5 of this report, this will be accomplished on-site, in appropriate methods so that the storm water discharge meets the quality required.

F. <u>Site Orientation:</u>

i. The proposed site has potential for accommodating the program and conceptual design as well as providing space for future expansion.

ii. As noted in *Attachments 2-2 and 2-3* the proposed 25 acres of buildable land are located at the south end of the peninsula.

iii. The site consists, as noted in the geotechnical assessment in Section 5 of this Report, of several feet of loose, sandy fill over native soils. The west side of the peninsula is bordered by the 150-foot wide Columbia Slough's environmental buffer zone; the south and east sides of the peninsula are bordered by the Smith and Bybee Lake Natural Resources Management Area. While bordered by them, the site lies outside any of these environment zones or overlays. The airport overlay that applies to this site limits the height of buildings; however, this facility will be several hundred feet under the restricted height.

Attachments:

2-1 ***Draft - Departmental Space Program***

2-2 ***Conceptual Site Plan - Phase I***

2-3 ***Conceptual Site Plan - At "Build-Out"***

Attachments

ATTACHMENT 2-1

MULTNOMAH COUNTY'S NEW CORRECTIONS FACILITY — **KMD Architects and Planners**

DRAFT SUMMARY - DEPARTMENTAL SPACE PROGRAM — November 1998

DEPARTMENT	PHASE I 225 BEDS		FINAL BUILDOUT 2,000 BEDS	
1.00 ADMINISTRATION SERVICES				
1.01 PUBLIC RECEPTION		1,416 DGSF		2,808 DGSF
1.02 ADMINISTRATION OFFICES (Outside Security)		1,458 DGSF		5,049 DGSF
1.03 STAFF SUPPORT (Inside Security)		2,394 DGSF		7,356 DGSF
1.04 DETENTION ADMINISTRATION (Inside Security)		1,222 DGSF		5,551 DGSF
2.00 DETENTION HOUSING SERVICS				
2.01 DORMITORY HOUSING UNITS	3 Units	33,096 DGSF	24 Units	264,768 DGSF
2.02 SEGREGATION HOUSING UNITS			4 Units	52,881 DGSF
3.00 PROCESSING SERVICES				
3.01 TRANSPORT SERVICES		3,446 DGSF		7,722 DGSF
3.02 CENTRAL CONTROL		473 DGSF		837 DGSF
5.00 MEDICAL SERVICES				
5.01 MEDICAL CLINIC / INFIRMARY		1,991 DGSF		20,430 DGSF
5.02 MENTAL HEALTH HOUSING UNIT			1 Units	13,407 DGSF
6.00 VISITATION				
6.01 VISITATION		1,210 DGSF		2,519 DGSF
7.00 BUILDING SERVICES				
7.01 FOOD SERVICE		4,054 DGSF		10,724 DGSF
7.02 GENERAL SERVICES				7,282 DGSF
7.03 STORAGE / COMMISSARY		510 DGSF		24,480 DGSF
SUBTOTAL - DEPARTMENTAL GROSS AREA		51,269 DGSF		425,812 DGSF
DEPARTMENT TO BUILDING GROSS FACTOR	@ 20%	10,254	@ 20%	85,162
MECH / ELECT / LOW VOLTAGE ALLOWANCE	@ 8%	4,922	@ 8%	40,878
TOTAL ESTIMATED BUILDING AREA		**66,445 GSF**		**551,853 GSF**
VEHICLE SALLYPORT		1,150 DGSF		2,320 DGSF

ATTACHMENT 2-1

MULTNOMAH COUNTY'S NEW CORRECTIONS FACILITY — **KMD Architects and Planners**

DRAFT - DEPARTMENTAL SPACE PROGRAM — November 1998

817-301-05-001	PHASE I 225 BEDS				FINAL BUILDOUT 2,000 BEDS			
PUBLIC RECEPTION								
1.01 Function	**No. Rms**	**Sq. Ft./ Room**	**Total Net Area (SF)**		**No. Rms**	**Sq. Ft./ Room**	**Total Net Area (SF)**	
1 Entrance Canopy	50%	120	**60**	Lockers outside	50%	120	**60**	
2 Entry Vestibule	1	120	**120**		1	120	**120**	
3 Public Lobby / Waiting	1	600	**600**	Public Phones / Waiting	1	1350	**1,350**	Lockers / Public Phones
4 Metal Detector	1	10	**10**		23	10	**230**	
5 FSO Station	1	110	**110**	(1) Stations	1	200	**200**	(3) Positions
6 Children's Play Alcove / Waiting					1	100	**100**	
7 Public Toilets - Male	1	140	**140**		1	140	**140**	
8 Public Toilets - Female	1	140	**140**		1	140	**140**	
SUBTOTAL / DEPT. NET AREA			**1,180 NSF**				**2,340 NSF**	
Efficiency Factor	20%		236		20%		468	
SUBTOTAL / DEPT. GROSS AREA			**1,416 DGSF**				**2,808 DGSF**	

ADMINISTRATION OFFICES (Outside Security)								
1.02 Function	**No. Rms**	**Sq. Ft./ Room**	**Total Net Area (SF)**		**No. Rms**	**Sq. Ft./ Room**	**Total Net Area (SF)**	
1 Facility Commander Office	1	180	**180**		1	180	**180**	
2 Lieutenant's Office					3	120	**360**	
3 Conference Room	1	150	**150**	Shared w/ Internal Affairs & Interview	1	150	**150**	
4 Intelligence Office					1	280	**280**	
5 Program Administrator					1	120	**120**	
6 Quiet Room	1	120	**120**	Shared w/ Chaplain	1	120	**120**	
7 Waiting Room	1	130	**130**	Shared w/ Reception	1	250	**250**	
8 Receptionist					1	160	**160**	
9 Mail / Copy / File Room	1	250	**250**		1	250	**250**	
10 Archive Room					1	130	**130**	
11 Computer Room (Primary Net Server)					1	100	**100**	
12 Interview Room / Internal Affairs					1	120	**120**	
13 Staff Break Room					1	500	**500**	
14 Outdoor Deck					1	500	**500**	
15 Vending Machine Alcove					1	60	**60**	
16 Phone Room	1	80	**80**		1	80	**80**	
17 Armory	1	100	**100**		1	160	**160**	
18 Staff Toilet (ADA Accessible)	1	70	**70**		2	70	**140**	
19 Janitor Closet					1	80	**80**	
SUBTOTAL / DEPT. NET AREA			**1,080 NSF**				**3,740 NSF**	
Efficiency Factor	35%		378		35%		1,309	
SUBTOTAL / DEPT. GROSS AREA			**1,458 DGSF**				**5,049 DGSF**	

MULTNOMAH COUNTY'S NEW CORRECTIONS FACILITY
DRAFT - DEPARTMENTAL SPACE PROGRAM

KMD Architects and Planners
November 1998

817-301-05-001	PHASE I 225 BEDS			FINAL BUILDOUT 2,000 BEDS			
STAFF SUPPORT							85 Civilian Staff
1.03							192 Sworn Staff
Function	**No. Rms**	**Sq. Ft./ Room**	**Total Net Area (SF)**	**No. Rms**	**Sq. Ft./ Room**	**Total Net Area (SF)**	
1 Conference/Multi-purpose	1	350	**350**	1	1400	**1,400**	(50) Staff Capacity
2 Equipment Storage Room	1	100	**100**	1	300	**300**	Adj. To Conf./Multi-Purpose
3 Male Staff Lockers/Showers/Toilets	1	620	**620**	1	1000	**1,000**	(100) Full Size Lockers
4 Female Staff Lockers/Showers/Toilets	1	400	**400**	1	800	**800**	(40) Full Size Lockers
5 Emergency Equipment Room				1	150	**150**	Adj. To Conf. & Multi-Purpose / for Riot Gear, Non Armory
6 Briefing/Staff Training Room	1	500	**500**	1	1000	**1,000**	(50) Staff Capacity
7 Mock-up Housing Cell				1	70	**70**	Adj. To Briefing/Staff Training
8 Staff Lobby				1	750	**750**	
9 Receptionist				1	110	**110**	
10 Mail Room				1	350	**350**	
11 X-Ray Machine for Mail					in mail room		
12 Public Toilet - Male - Accessable				1	65	**65**	
13 Public Toilet - Female - Accessable				1	65	**65**	
14 Janitor Room	1	25	**25**	1	70	**70**	
SUBTOTAL / DEPT. NET AREA			**1,995 NSF**			**6,130 NSF**	
Efficiency Factor	20%		399	20%		1,226	
SUBTOTAL / DEPT. GROSS AREA			**2,394 DGSF**			**7,356 DGSF**	

ATTACHMENT 2-1

MULTNOMAH COUNTY'S NEW CORRECTIONS FACILITY — **KMD Architects and Planners**

DRAFT - DEPARTMENTAL SPACE PROGRAM — November 1998

817-301-05-001	PHASE I 225 BEDS				FINAL BUILDOUT 2,000 BEDS			
DETENTION ADMINISTRATION (Inside Security)								
1.04 Function	**No. Rms**	**Sq. Ft./ Room**	**Total Net Area (SF)**		**No. Rms**	**Sq. Ft./ Room**	**Total Net Area (SF)**	
Detention Administration								
1 Administration Office	1	120	**120**		1	160	**160**	
2 Classification	1	150	**150**		1	240	**240**	
3 Hearings					1	180	**180**	(2) Officers Shared
4 Work / Copy	1	180	**180**		1	640	**640**	Lockable files / Shared w/ Counseling Officers
5 Staff Toilet - Accessible	1	65	**65**		2	65	**130**	
6 Conference / Break Room					1	400	**400**	Shared w/ Counseling & Education
7 Storage					1	150	**150**	Built-in Storage Shelving
8 Chaplin Office					1	120	**120**	
9 Quiet Room					1	80	**80**	
10 Sergeant's Office					Locate adjacent to Housing Units			
Education								
11 Learning Lab / Computer	1	150	**150**		1	280	**280**	
12 Office	1	120	**120**	Shared in Phase I	1	190	**190**	Shared
13 Office (Adjoining Learning lab)					1	190	**190**	Shared
14 Book Storage					1	80	**80**	
15 Law Library					Incorporated into Housing Units			
16 Multi-Use Room					Incorporated into Housing Program Spaces			
17 Work / Copy					Shared w/ Detention Admin			
18 Staff Toilet					Shared w/ Detention Admin			
Counseling								
19 Shared Office	1	120	**120**		1	120	**120**	
20 Couselor Workstations					18	64	**1,152**	
21 Work / Copy					Shared w/ Detention Admin			
22 Staff Toilet					Shared w/ Detention Admin			
SUBTOTAL/DEPT. NET AREA			**905 NSF**				**4,112 NSF**	
Efficiency Factor	35%		317		35%		1,439	
SUBTOTAL / DEPT. GROSS AREA			**1,222 DGSF**				**5,551 DGSF**	

ATTACHMENT 2-1

MULTNOMAH COUNTY'S NEW CORRECTIONS FACILITY **KMD Architects and Planners**

DRAFT - DEPARTMENTAL SPACE PROGRAM November 1998

817-301-05-001	PHASE I 225 BEDS			FINAL BUILDOUT 2,000 BEDS			
DORMITORY HOUSING UNITS 2.01 Function	**No. Rms**	**Sq. Ft./ Room**	**Total Net Area (SF)**	**No. Rms**	**Sq. Ft./ Room**	**Total Net Area (SF)**	
1 Sallyport	1	80	**80**	1	80	**80**	
2 Inmate Dormitory Sleeping Areas	1	2375	**2,375**	1	2375	**2,375**	(75) Inmates w/ Double Tier Bunk Beds
3 Dayroom Toilets	1	275	**275**	1	275	**275**	
4 Inmate Showers / Dressing Cubicles (9 ea)	1	285	**285**	1	285	**285**	
5 Dayroom	1	4215	**4,215**	1	4215	**4,215**	75 Inmates @ 55 sf
6 Direct Supervision Control Stn.	1	165	**165**	1	165	**165**	(1) Staff Station / Centrally Located
7 Indirect Supervision Control Stn	50%	520	**260**	50%	520	**260**	Shared w/ Housing Unit. Incl (1) Staff Tlt
8 Staff Toilet - Accessible	1	50	**50**	1	50	**50**	
9 Secure Storage	1	60	**60**	1	60	**60**	Med./Handcuffs/Pepper Spray
10 Janitor's Closet	1	60	**60**	1	60	**60**	
11 Interview Room	1	120	**120**	1	120	**120**	
12 Program Rooms	2	250	**500**	2	250	**500**	
13 Law Library / Video Conferencing	2	65	**130**	2	65	**130**	
14 Food Handling Area	1	135	**135**	1	135	**135**	Insta Hot Sink
15 Unit Storage	1	100	**100**	1	100	**100**	Linens, etc.
16 Outdoor Recreation Storage	1	50	**50**	1	50	**50**	
SUBTOTAL/DEPT. NET AREA			**8,860 NSF**			**8,860 NSF**	
Efficiency Factor	20%		1,772	20%		1,772	
17 Outdoor Recreation	50%	800	**400**	50%	800	**400**	
DEPT. GROSS AREA PER HOUSING UNIT			**11,032 DGSF**			**11,032 DGSF**	
Multiplier for number of housing units			3			24	
SUBTOTAL / DEPT. GROSS AREA			**33,096 DGSF**			**264,768 DGSF**	

ATTACHMENT 2-1

MULTNOMAH COUNTY'S NEW CORRECTIONS FACILITY **KMD Architects and Planners**

DRAFT - DEPARTMENTAL SPACE PROGRAM November 1998

817-301-05-001	PHASE I 225 BEDS			FINAL BUILDOUT 2,000 BEDS			
SEGREGATION HOUSING UNITS 2.02 **Function**	**No. Rms**	**Sq. Ft./ Room**	**Total Net Area (SF)**	**No. Rms**	**Sq. Ft./ Room**	**Total Net Area (SF)**	
1 Sallyport				1	80	**80**	
2 Inmate Cell				38	70	**2,660**	10 Cells for Females / Toilets in Cells
3 Inmate Cell - Accessible				2	95	**190**	Accessible toilet in room
4 Dayroom				1	4470	**4,470**	Space for 40 Inmates @ 110 sf
5 Indirect Supervision Control Stn				50%	520	**260**	Shared W/ Adj. Housing Unit, Incl (1) Staff Toilet
6 Staff Toilet - Accessible				1	50	**50**	
7 Secure Storage				1	200	**200**	Medi., handcuffs, pep. spray
8 Unit Storage				2	180	**360**	Linens, etc.
9 Showers / Dressing Cubicles				4	35	**140**	1:8 Inmates
10 Showers / Dressing - Accessible				2	40	**80**	
11 Janitor's Closet				1	80	**80**	
12 Interview				2	70	**140**	
13 Direct Supervision Control Stn.				1	165	**165**	(1) Staff Station / Centrally Located
14 Cart Cleanup / Food Handling Area				1	135	**135**	Insta Hot Sink
15 Law Library / Video Conferencing				1	65	**65**	Replaces Education Law Library
16 Outdoor Recreation Storage				1	50	**50**	
17 Building Storage				1	165	**165**	
SUBTOTAL/DEPT. NET AREA						**9,290**	**NSF**
Efficiency Factor				38%		3,530	
18 Outdoor Recreation				50%	800	**400**	
DEPT. GROSS AREA PER HOUSING UNIT						**13,220**	**DGSF**
Multiplier for number of housing units						4	
SUBTOTAL / DEPT. GROSS AREA						**52,881**	**DGSF**

817-301-05-001

	PHASE I 225 BEDS				FINAL BUILDOUT 2,000 BEDS			
TRANSPORT SERVICES 3.01 Function	No. Rms	Sq. Ft./ Room	Total Net Area (SF)		No. Rms	Sq. Ft./ Room	Total Net Area (SF)	
1 Jail Sallyport	1	170	**170**		1	170	**170**	
2 Large Holding Room	3	250	**750**		7	250	**1,750**	Toilet in each /Used as Swing Hold / Intake/Release
3 Large Holding Room					1	195	**195**	Toilet in ea. Room
4 Incoming Holding	9	70	**630**	Phase I Admin Segregation	9	70	**630**	Toilet in ea. Room
5 Incoming Holding (Accessible)	1	95	**95**	Phase I Admin Segregation	1	95	**95**	Toilet in ea. Room
6 Property & Clothing Storage	1	36	**36**	Phase I - Minimum	1	2,000	**2,000**	2,000 Garment bags requiring space 3" wide, plus general property storage
7 Intake Control Office	1	200	**200**		1	200	**200**	Includes Sallyport
8 Staff Toilet (Accessible)	1	50	**50**		1	50	**50**	
9 Search / Dressing Room	1	120	**120**	Requires privacy curtains	1	250	**250**	Requires privacy curtains
10 Transport/Staging Area	1	600	**600**		1	600	**600**	
SUBTOTAL / DEPT. NET AREA			**2,651 NSF**				**5,940 NSF**	
Efficiency Factor	30%		795		30%		1,782	
SUBTOTAL / DEPT. GROSS AREA			**3,446 DGSF**				**7,722 DGSF**	
Vehicle Sallyport	50%	2300	**1,150**	1 bus - Temporary, fenced area	50%	4640	**2,320**	1 bus, 1 car + 1 van

CENTRAL CONTROL 3.02 Function	No. Rms	Sq. Ft./ Room	Total Net Area (SF)		No. Rms	Sq. Ft./ Room	Total Net Area (SF)	
First Floor - Central Control								
1 Observation Office	1	200	**200**		1	200	**200**	
2 Staff Toilet	1	50	**50**		1	50	**50**	
3 Storage	1	50	**50**		1	50	**50**	
4 Sallyport	1	50	**50**		1	50	**50**	
Second Floor - Floor Control								
5 Observation Office					1	120	**120**	
6 Staff Toilet					1	50	**50**	
7 Storage					1	50	**50**	
8 Sallyport					1	50	**50**	
SUBTOTAL / DEPT. NET AREA			**350 NSF**				**620 NSF**	
Efficiency Factor	35%		123		35%		217	
SUBTOTAL / DEPT. GROSS AREA			**473 DGSF**				**837 DGSF**	

817-301-05-001	PHASE I 225 BEDS				FINAL BUILDOUT 2,000 BEDS			
MEDICAL SERVICES 5.01 Function	No. Rms	Sq. Ft./ Room	Total Net Area (SF)		No. Rms	Sq. Ft./ Room	Total Net Area (SF)	
ADMINISTRATIVE AREA								
1 Department Director's Office					1	120	120	
2 Administration Conference Rm					1	180	180	
3 Health Service Adminitrator					1	120	120	
4 Health Educator's Office					1	110	110	
5 Medical/Mental Directors					1	240	240	Shared Office
6 Lead Nurse					1	160	160	Shared (2 persons) Adjoin Nurse Sta
7 Shift Sup/Operations Sup.					1	110	110	
8 Waiting Room / Alcove					1	40	40	For Admin Area
9 Administrative Secretary					1	120	120	
10 Work Room					1	300	300	w/ Photocopier (Cntrtop)/Fax/Computer/2-Tab Files (36")
11 Storage					1	18	18	(36" deep closet along corridor)
CLINIC AREA								
1 Waiting / Sallyport	1	150	150		2	150	300	
2 Exam Rooms	2	120	240	W/ Storage & Sink	10	120	1,200	W/ Storage& Sink
3 Dental Operatory					1	285	285	2 chairs, X-ray, stor
4 Large Exam Room					1	240	240	
5 Inmate Toilet - Accessible	1	50	50		2	50	100	
6 Clean Utility / Medical Storage	1	200	200		1	120	120	
7 Soiled Utility	1	100	100		1	100	100	
8 Staff Toilet - Accessible					1	50	50	
9 X-ray Facility / Lab					1	500	500	
10 Deputy Station					1	20	20	
11 Wheelchair / Gurney Station					1	75	75	
12 Oxygen Supply Storage					1	20	20	
13 Janitor Closet					1	75	75	
14 Equipment Storage (Durable Medical Equipment)					1	175	175	
CLINIC / ADMIN SUPPORT								
1 Clerical Office	1	120	120	Shared Office	1	300	300	
2 Work Room - Medical Records	1	120	120		1	300	300	
3 Report/Conference Room	1	175	175		1	300	300	
4 Nurses Work Station	1	150	150		1	600	600	
5 Pharmacy	1	120	120	Med Cart/Shelves sink, refrig	1	300	300	
6 Nourishment					1	100	100	
7 Janitor Closet					1	30	30	
8 Cart Storage					1	80	80	
9 Staff Toilets - Accessible	1	50	50		2	50	100	

CONTINUED NEXT PAGE

817-301-05-001	PHASE I 225 BEDS			FINAL BUILDOUT 2,000 BEDS			
MEDICAL SERVICES (CONTINUED)							
5.01 **Function**	**No. Rms**	**Sq. Ft./ Room**	**Total Net Area (SF)**	**No. Rms**	**Sq. Ft./ Room**	**Total Net Area (SF)**	
INFIRMARY							
1 Medical Care Patient Room				10	115	**1,150**	Toilet/Lav in Room
2 Observation Room				2	115	**230**	Toilet/Lav in Room
				Provide patient rooms in groups of five, each group to have one air-handling system for positive or negative pressure			
3 Respiratory Care Patient Room				10	115	**1,150**	Toilet/Lav in Room
4 TB Patient Room w/ Vestibule				3	140	**420**	Toilet/Lav in Room
5 Day Room				2	2000	**4,000**	
6 Exam Rooms				2	150	**300**	
7 Inmate Shower				2	70		
INFIRMARY SUPPORT							
1 Deputy Station				2	120	**240**	
2 Nurses Work Station				1	300	**300**	
3 Nourishment				1	25	**25**	
4 Staff Toilet (Accessible)				2	50	**100**	Adjoin Nurse Station
5 Soiled Holding				2	70	**140**	
6 Clean Medical Supplies / Linen				2	70	**140**	
7 Janitor Closet				1	50	**50**	
Note - Adjoining Inmate Housing Unit (40 beds) to be designed as a Mental Health Unit for observation and care. This Housing Unit is to share the Infirmary Nurse Station and Support.							
SUBTOTAL / DEPT. NET AREA			**1,475 NSF**			**15,133 NSF**	
Efficiency Factor	35%		516	35%		5,297	
SUBTOTAL / DEPT. GROSS AREA			**1,991 DGSF**			**20,430 DGSF**	

ATTACHMENT 2-1

MULTNOMAH COUNTY'S NEW CORRECTIONS FACILITY **KMD Architects and Planners**

DRAFT - DEPARTMENTAL SPACE PROGRAM November 1998

817-301-05-001	PHASE I 225 BEDS			FINAL BUILDOUT 2,000 BEDS			
MENTAL HEALTH HOUSING UNIT							
5.02 Function	**No. Rms**	**Sq. Ft./ Room**	**Total Net Area (SF)**	**No. Rms**	**Sq. Ft./ Room**	**Total Net Area (SF)**	
1 Sallyport				1	80	**80**	
2 Inmate Cell				38	70	**2,660**	10 Cells for Females / Toilets in Cells
3 Inmate Cell - Accessible				2	95	**190**	w/ADA toilet
4 Dayroom				1	4470	**4,470**	Space for 40 Inmates @ 110 sf
5 Indirect Supervision Control Stn				50%	520	**260**	Shared w/ Housing Unit, Incl (1) Staff Ttl.
6 Staff Toilet - Accessible				1	50	**50**	
7 Secure Storage				1	200	**200**	Medi., handcuffs, etc.
8 Unit Storage				2	180	**360**	Linens, etc.
9 Showers / Dressing Cubicles				4	35	**140**	1:8 Inmates
10 Showers / Dressing - Accessible				2	40	**80**	
11 Janitor's Closet				1	80	**80**	
12 Interview				3	70	**210**	
13 Direct Supervision Control Stn.				1	165	**165**	(1) Staff Station Centrally Located
14 Cart Cleanup / Food Handling Area				1	135	**135**	Insta Hot Sink
15 Law Library / Video Conferencing				2	65	**130**	Replaces Education Law Library
16 Outdoor Recreation Storage				1	50	**50**	
17 Building Storage				1	165	**165**	
SUBTOTAL/DEPT. NET AREA						**9,425**	**NSF**
Efficiency Factor				38%		3,582	
18 Outdoor Recreation				50%	800	**400**	
DEPT. GROSS AREA PER HOUSING UNIT						**13,407**	**DGSF**

ATTACHMENT 2-1

MULTNOMAH COUNTY'S NEW CORRECTIONS FACILITY — **KMD Architects and Planners**

DRAFT - DEPARTMENTAL SPACE PROGRAM — November 1998

817-301-05-001

	PHASE I 225 BEDS				FINAL BUILDOUT 2,000 BEDS			
VISITATION								
6.01 Function	**No. Rms**	**Sq. Ft./ Room**	**Total Net Area (SF)**		**No. Rms**	**Sq. Ft./ Room**	**Total Net Area (S.F.)**	
1 Non-Contact Visiting	15	20	**300**		40	20	**800**	
2 Non-Contact Visiting - Accessible	2	35	**70**		5	35	**175**	
3 Contact Visiting Room - Small	2	80	**160**		5	80	**400**	
4 Search Room	1	64	**64**	sink	1	64	**64**	sink
5 Control Room	1	150	**150**		1	150	**150**	
6 Control Rm Staff Toilet (Accessibl	1	50	**50**		1	50	**50**	
7 Video Arraignment					Incorporated into the Housing Units			
8 Sallyport	1	70	**70**		1	160	**160**	
SUBTOTAL / DEPT. NET AREA			**864 NSF**				**1,799 NSF**	
Efficiency Factor	40%		346		40%		720	
SUBTOTAL / DEPT. GROSS AREA			**1,210 DGSF**				**2,519 DGSF**	

FOOD SERVICE								
7.01 per 7/10/98 Halliday Assoc. **Function**	**No. Rms**	**Sq. Ft./ Room**	**Total Net rea (S.F.)**		**No. Rms**	**Sq. Ft./ Room**	**Total Net Area (SF)**	
1 Sallyport @ Loading Dock	1	150	**150**		1	150	**150**	
2 Dry Storage	1	600	**600**	Future Det Staff Dining Male/Female Staff Tlts. and Vending Alcove	1	1,950	**1,950**	
3 Secured Storage	1	50	**50**		1	200	**200**	
4 Walk-in Refrigerator	1	300	**300**		1	1,200	**1,200**	
5 Walk-in Freezer	1	300	**300**		1	500	**500**	
6 Food Prep / Cooking / Serving	1	1300	**1,300**		1	2,900	**2,900**	
7 Warewash	1	600	**600**		1	1,100	**1,100**	
8 Office	1	75	**75**		1	75	**75**	
9 Staff Toilet - Accessible	1	50	**50**		1	50	**50**	
10 Janitor / Chemical Storage	1	50	**50**		1	50	**50**	
11 Inmate Toilet - Accessible	1	50	**50**		1	50	**50**	
12 Staff Break Room					1	500	**500**	
13 Inmate Dining & Classroom					1	600	**600**	Glazed walls for visual observation
14 Loading Dock	Part of General Building Services				Part of General Building Services			
15 Trash / Refuse Holding	Part of General Building Services				Part of General Building Services			
SUBTOTAL / DEPT. NET AREA			**3,525 NSF**				**9,325 NSF**	
Efficiency Factor	15%		529		15%		1,399	
SUBTOTAL / DEPT. GROSS AREA			**4,054 DGSF**				**10,724 DGSF**	

ATTACHMENT 2-1

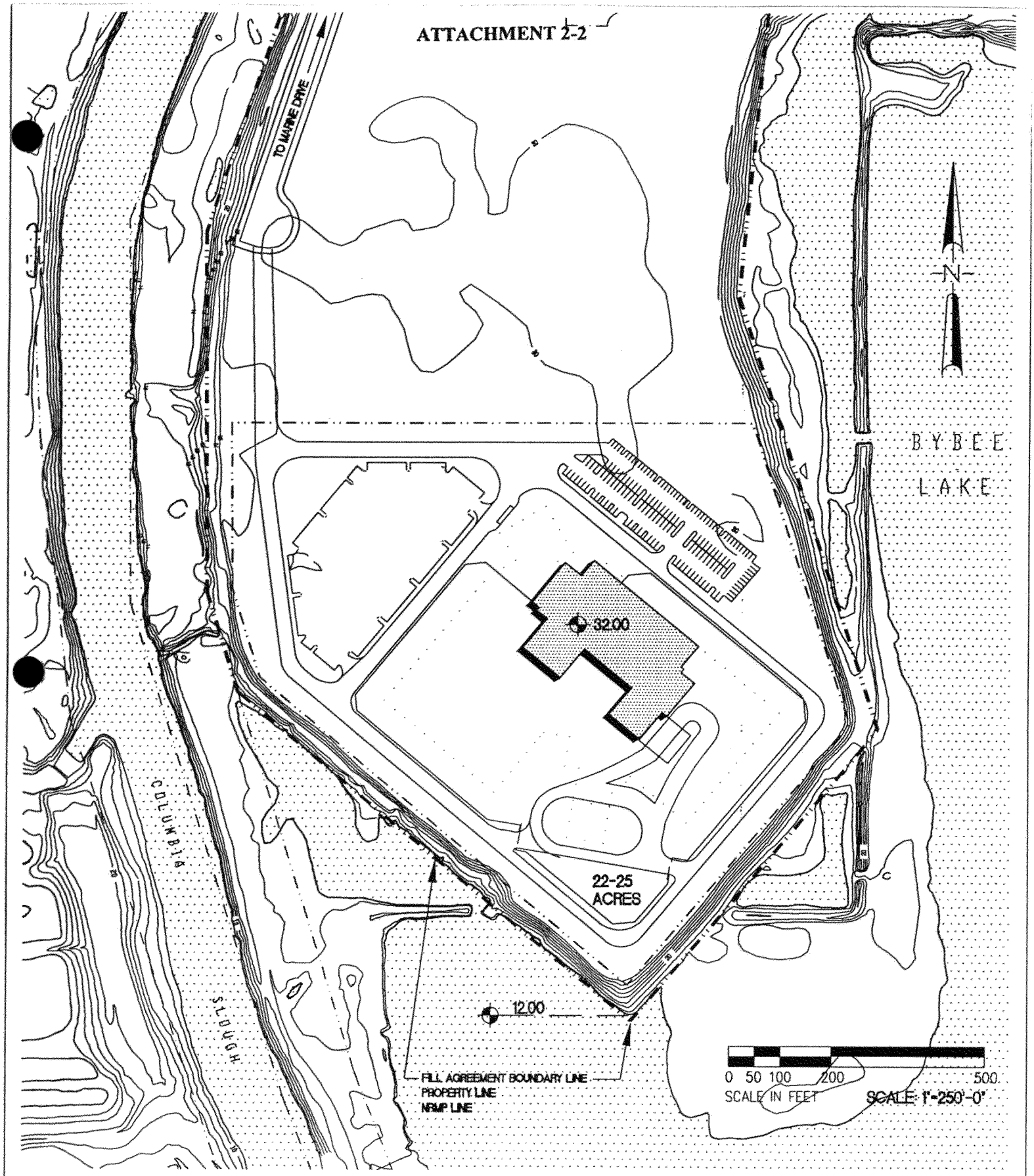
MULTNOMAH COUNTY'S NEW CORRECTIONS FACILITY **KMD Architects and Planners**

DRAFT - DEPARTMENTAL SPACE PROGRAM November 1998

817-301-05-001	PHASE I 225 BEDS			FINAL BUILDOUT 2,000 BEDS		
GENERAL SERVICES **7.02** **Function**	**No. Rms**	**Sq. Ft./ Room**	**Total Net Area (SF)**	**No. Rms**	**Sq. Ft./ Room**	**Total Net Area (SF)**
1 Janitorial / Storage				Included in Various Departmental SF		
2 Loading Dock				Located at Exterior of Bldg., Adjoin Warehouse, Commissary, Laundry, Kitchen		
3 Trash/Recycle Room				1	300	**300**
4 Maintenance Workshop				1	1000	**1,000**
5 Electronics Maintenance Room				Part of Maintenance Workshop		
6 Central Plant			1,300 GSF TEMPORARY ENCLOSURE	1	5000	**5,000**
7 Water Heater Room				1	320	**320** Adjoin Kitchen
SUBTOTAL / DEPT. NET AREA			**0 NSF**			**6,620 NSF**
Efficiency Factor	10%		0	10%		662
SUBTOTAL / DEPT. GROSS AREA			**0 DGSF**			**7,282 DGSF**

STORAGE / COMMISSARY / LAUNDRY **7.03** **ID Function**	**No. Rms**	**Sq. Ft./ Room**	**Total Net Area (SF)**	**No. Rms**	**Sq. Ft./ Room**	**Total Net Area (SF)**
1 Temporary Storage/Commissary Space	1	200	**200** Provide Office and Staff Toilet			
2 Temporary Laundry (Clean & Soiled)	1	300	**300** Separate Clean & Soiled Holding			
3 Storage / Commissary Includes Receiving Office, Secure Storage, Staff Toilet, Non-Staff Toilet, and Sallyport				1	14000	**14,000** w/ mezzanine
4 Laundry				1	10000	**10,000**
SUBTOTAL / DEPT. NET AREA			**500 NSF**			**24,000 NSF**
Efficiency Factor	2%		10	2%		480
SUBTOTAL / DEPT. GROSS AREA			**510 DGSF**			**24,480 DGSF**

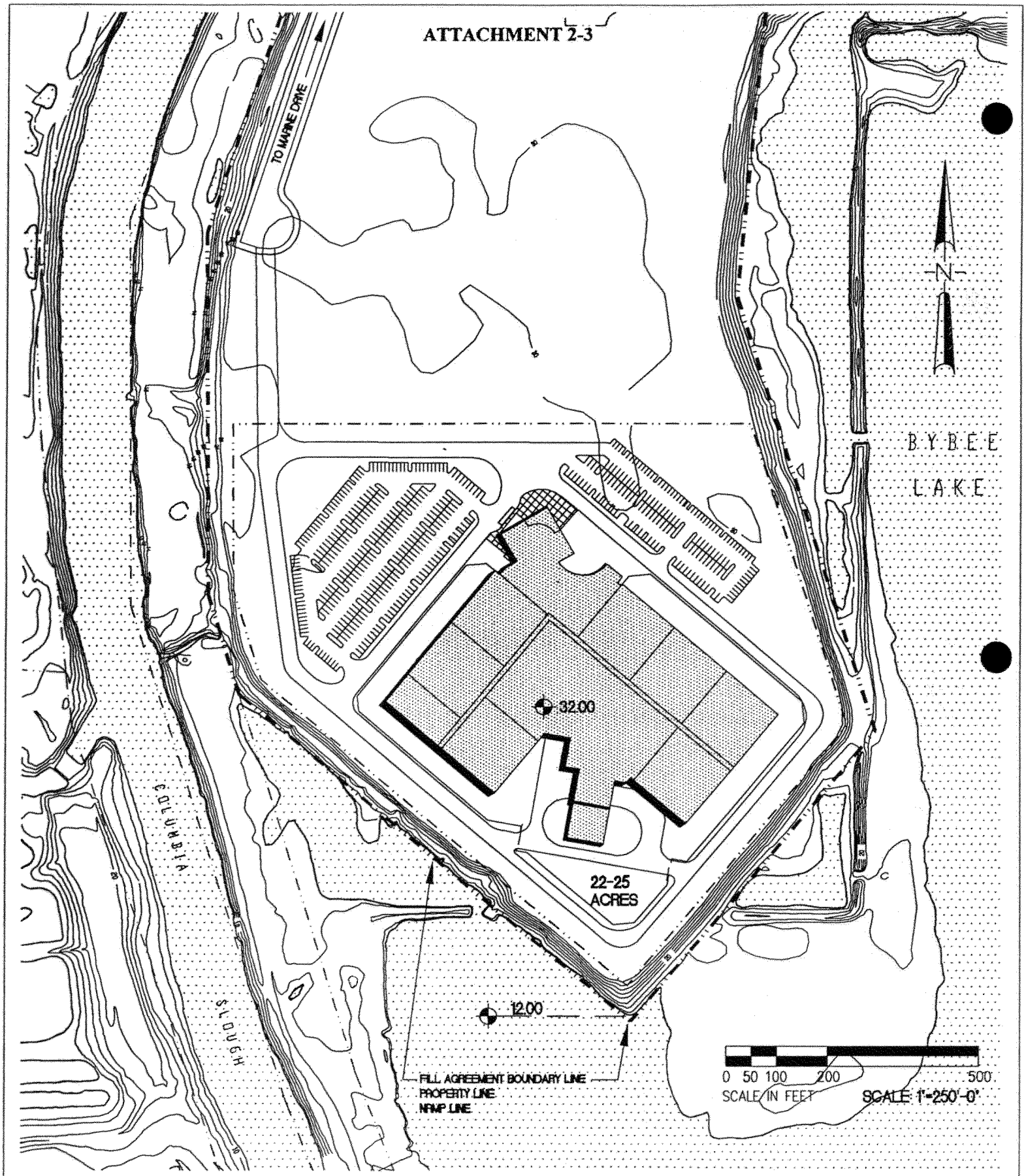
ATTACHMENT 2-2



CONCEPTUAL SITE PLAN AT PHASE I - PROPOSED RIVERGATE SITE for MULTNOMAH COUNTY'S NEW CORRECTIONS FACILITY

MULTNOMAH COUNTY, OREGON NOVEMBER 1998 KMD ARCHITECTS AND PLANNERS - JOB NO. 817-301

ATTACHMENT 2-3



CONCEPTUAL SITE PLAN AT 'BUILD-OUT' - PROPOSED RIVERGATE SITE for MULTNOMAH COUNTY'S NEW CORRECTIONS FACILITY

MULTNOMAH COUNTY, OREGON | NOVEMBER 1998 | KMD ARCHITECTS AND PLANNERS - JOB NO. 817-301

Section 3

Preliminary Site Assessment
for
Multnomah County's New Corrections Facility
at North Rivergate

Summary of Land Use Issues

Prepared for:

Multnomah County, Oregon
Sheriff's Office
Facilities and Property Management Division

Prepared by:

Barney & Worth, Inc.
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Portland, OR 97204
Phone (503) 222-0146
Fax (503) 274-7955

In association with:

Kitchell

November 1998

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IV. APPENDICES

A. Land Use Interviews (September –October 1998)

B. Omitted

C. Bureau of Planning Memorandum (October 9, 1998) re: "New Multnomah County Jail Site"

D. "Bybee Lakes Jail" (September 29, 1998); written comments prepared by Emily Roth, Metro

E. Record of Comments at Each Stakeholder Group Meeting

F. Responses to Mail-In Survey

I. EXECUTIVE SUMMARY

A. Preliminary Site Assessment for Multnomah County's New Corrections Facility (MCNCF) at North Rivergate

In September 1998, Multnomah County engaged a multi-disciplinary consultant team headed by the project management firm Kitchell to coordinate a preliminary site assessment for a new medium-security corrections facility to be located at a site in the Port of Portland's Rivergate Industrial District in North Portland. Team members participating in the preliminary site assessment also include: KMD Architects, Adolfson Associates Inc., O'Donnell Ramis Crew Corrigan & Bachrach Attorneys, Parametrix, and KPFF Consulting Engineers.

The completed assessment is scheduled to be submitted to the Multnomah County Board of Commissioners in late 1998.

A key element of the preliminary site assessment is to determine what land use permits may be required, and the outlook for a successful outcome in the permitting process. In Portland, detention facilities must be located in industrial zones, and require a conditional use permit. Other land use approvals may also be required.

B. Land Use Issues

In September and October 1998, key agency personnel, environmental leaders and others were surveyed to seek their views on many important land use issues linked to the development of Multnomah County's New Corrections Facility (MCNCF) at North Rivergate. Interviews were conducted in-person and by telephone by Barney & Worth, Inc. with some 15 agency personnel and other persons interested in the proposed facility. Participants were asked to share their views related to: land use issues surrounding the proposed corrections facility, impacts, problems, and possible solutions.

Among the persons interviewed were representatives of the Bureau of Planning and other key City bureaus; Port of Portland staff; and environmental/clean water advocates who are active in the Smith & Bybee Lakes area. (A list of participants is attached in an appendix.) This report reflects the information, attitudes and advice provided by those individuals interviewed. A Pre-Application Conference for the project, scheduled for November 17,1998 will provide further information on land use permit issues.

C. Summary of Findings

A summary of key points offered by the agency personnel, environmental leaders and other interested persons who have been interviewed to date regarding proposed development of Multnomah County's New Corrections Facility at the North Rivergate site:

1. **The outlook for land use approvals is favorable.** To date, City of Portland staff have not identified any land use permitting issues which can not be adequately addressed during the permitting and design stages of the project. A Pre-application Conference has been scheduled for November 17, 1998 to test that conclusion with the full range of interested City bureaus.

2. **The Conditional Use Permit is expected to be the main permit review process required.** Agencies say the North Rivergate site presents less complex permitting requirements than the Radio Towers site. Other permits which may be required, beyond the C.U.P., including a land division approval by the City of Portland, and ODOT approval for a new rail crossing, if required.

3. **The major C.U.P. issue is anticipated to be how the facility's visual impact will be buffered from Smith & Bybee Lakes.** The Natural Resources Management Plan for Smith & Bybee Lakes calls for protecting and enhancing wildlife habitat, along with increasing opportunities for passive and active recreation. C.U.P. approved criteria require compatibility with adjacent properties. The jail site must be visually screened and buffered from the natural area, observers emphasize.

4. **Many transportation issues also remain to be ironed out.** While the corrections facility itself won't generate substantial traffic, there are questions about where and how access will be provided to the site. Specific questions center on how the project will impact existing conditions on Marine Drive; how to solve rail/auto conflicts; design of the new access road, and what standards will apply; and construction costs and funding sources for access improvements. Again, C.U.P. approved criteria ensure that traffic impacts for the jail will receive careful scrutiny.

5. **Agency comments on the proposed Radio Towers facility will offer guidance for North Rivergate.** Agencies say their starting point for reviewing the MCNCF proposal at North Rivergate will be to revisit their comments on the Radio Towers proposal. Many agencies expect their C.U.P. comments to be very similar, despite the change of locations.

6. Although the site appears to be outside the E-zone, **environmental issues <u>will</u> be considered in C.U.P. review of the project.** While the project will not require environmental review per se, the site's proximity to important environmental resources ensures these issues will be raised in the conditional use permit process.

7. **Stormwater facilities for the project will trigger environmental review.** A stormwater outfall is being proposed, environmental review will be required.

8. **The need for a Master Plan remains an open question.** The initial facility is planned for only 225 beds. At this scale, the project would not require a Master Plan. However, the reviewing agencies appear to be more interested in anticipating and addressing impacts for the facility at ultimate buildout – questions most often addressed by a Master Plan.

9. **Some observers see the new corrections facility as an opportunity to improve public access to the natural area.** The 40-Mile Loop Trail is designated to be developed along the Slough, next to the site. While the exact alignment is currently in question, most observers want to keep open this option. A few also encourage Multnomah County to explore other on-site opportunities to improve public access to the Slough and Smith & Bybee Lakes.

10. **Current litigation may cloud development potential for the site.** A citizen lawsuit claims that the Port of Portland illegally filled 200 acres in North Rivergate, including the candidate site. Agencies ask whether the legal action could thwart

MCNCF development. (This issue is being studied in another element of the preliminary site analysis.)

11. **Issues raised by citizens closely parallel those identified by agencies.** Initial public outreach suggests the top priorities will be visually buffering the facility from Bybee Lake and the Slough, and developing the site in a manner that's consistent with the NRMP.

The next sections further detail the issues and suggestions raised in interviews conducted with agency personnel and others regarding development of Multnomah County's New Corrections Facility at the North Rivergate site.

II. LAND USE ISSUES AT NORTH RIVERGATE SITE

The following sections summarize issues and suggestions raised by City of Portland staff and other persons regarding land use issues and impacts surrounding development of the new medium security corrections facility at the North Rivergate site.

A. Visual Impacts

- Visual appearance / impacts on Smith & Bybee Lakes natural area.
- Lighting levels; glare; impact on natural area / habitat.
- Visual appearance impacts / compatibility with industrial neighbors.

B. Screening / Buffer

- What will be building height? Can it be screened?
- Following buffer guidelines in NRMP; other Rivergate development nearby did not (Columbia Sportswear).
- Plant native species: Cottonwood, cedar, and other conifers.
- Provide year-round screen from lakes.
- Ensure landscape will be maintained; Enviro-Corps plantings on this site did not survive.
- Will buffer be on jail site, or Port property, or both?
- What are the Port's existing commitments for buffering this site?
- Plant early, allowing trees and other landscape to mature while jail site is being developed.

C. Stormwater

- Will the project use / develop area-wide stormwater facilities? An area-wide solution is preferable.
- New stormwater outfalls require environmental review, but are exempt from C.U.P. review.
- Roads serving site require stormwater runoff collection / treatment.
- Constructive stormwater issue is also an issue at this site – will need to be controlled on-site.
- Minimize impervious surface in MCNCF development.

- Some companies in the area (Purdy Brush) have had problems with inadequate stormwater capacity.

D. Geo-Technical Resources

- What is the seismic zone?

E. Smith & Bybee Lakes

- Future water management regime for lakes is uncertain, due to effects of flooding and litigation.
- Smith & Bybee Lakes and Slough are classified by the State as "water quality limited."
- Under current NRMP, Bybee Lake and surrounding wetlands are being managed as an environmental preserve. No vehicular access is to be provided to the lake.
- Painted turtles have been seen in this area of the lake. Their upland habitat is unknown.
- Lakes will be tidally influenced under new management regime.

F. Transportation

- Access road ownership would probably revert to City of Portland.
- City of Portland (PDOT) will approve design for access road. The City will apply industrial street standards; width is likely 38 to 44 ft. The arrangements for Leadbetter Road may set a precedent.
- PDOT recognizes the limitations on transit service at this site. TDM plans will probably need to rely on other options, such as carpool and bicycle.
- TDM measures should be coordinated with the Port
- More information is needed on railroad crossings. Who owns the rail lines (Burlington Northern)?
- What is current and projected rail traffic? What will the State require?
- What are long-term plans for Marine Drive improvements?

G. Port of Portland

- Stormwater facility near Marine Dr. & Leadbetter is not working. City of Portland is responsible for maintenance.
- Port filled this site without permits.
- Current litigation may involve / affect this site.

- Site preparation for plantings should be done carefully – no soil pushed into wetland.
- Port should implement mitigation plan at Radio Towers site.
- Marine Drive project has heightened awareness of this area among environmental and neighborhood groups.

H. Site Neighbors

- Contact Rivergate business owners.
- Public outreach is a key to City approval.
- City Code requires compatibility with other nearby industrial uses. This is unlikely to be an issue if Port of Portland remains supportive. Rivergate Master Plan may establish standards.
- Lakes will be tidally influenced under new management regime.

I. Other Impacts

- Will the jail produce noise?
- Will there be any hazardous materials stored on-site? If so, containment facilities are needed.
- Are toxic chemicals being used by other industries in the area, which could pose a risk to the corrections facility?
- Explore possible impacts of closed St. Johns Landfill.

J. Requests and Suggestions

- Meet early with environmental community groups to help identify / resolve possible impacts and concerns.
- Maximize building setbacks / buffers as far as possible from lakes and Slough, even if no environmental review is required.
- Restore wetlands in some areas at fringe of site; provide a more natural looking edge along land and Slough
- Leave open option for 40-Mile Loop trail along Slough.
- Request membership in Citizen Working Group.
- Build boat launch in area, as "social mitigation" for unwanted regional facility.
- Arrange tours of Inverness facility.
- Use County jail crews to remove loose strife (nuisance plant) and for cleanup.

- Minimize impervious surface; construct "eco-roof."

K. City of Portland Planning Process

- Blueprint 2000 process manager can help shepherd applicant through occupancy permit.
- A pre-application conference might help the County obtain useful feedback from City bureaus.
- Buildout conditions should be addressed in site planning.
- Many bureaus will likely use their comments on the Radio Towers proposal as a starting point.
- Although the site appears to be outside the E-zone, it will still receive scrutiny due to its proximity to sensitive habitat areas. (Example: Riverdale High School site near Tryon Creek).
- Reminder: a conditional use permit has only a 3-year time limit (vs. 10 years for Master Plan).
- Pay attention to C.U.P. approval criteria.
- A stormwater outfall would require Type II or Type III review, as well as state permits.
- The site will require 2 major or minor land divisions. Major land division involves:
  - Preliminary plat (Type III review)
  - Final plat (45 days)
- Short-cut to minor land division: street deed.
- Land division approval criteria are technical.
- "Citizen involvement will be the biggest issue to the City."

L. Other Permits

- The project will need to comply with Metro Title 3 requirements for stormwater management and wildlife protection.

M. Additional Contact Persons

The agencies and other persons interviewed suggest contacting several additional individuals and groups:

Lee Alverson, Bureau of Environmental Services

Jim Dixon, Bureau of Environmental Services

Howard Fiegels or Craig Riley, ODOT rail safety office

George Hatson & Dawn Uchiyama, Portland Bureau of Parks & Recreation (40-Mile Loop)

Russ Lawrence, Bureau of Environmental Services

Susan McKinney, Bureau of Planning

Linda Peterson, Bureau of Planning (pre-application conference)

Glen Pierce, Portland Office of Transportation (engineering)

Joyce Reyman, Portland Office of Transportation (SDCs)

Kris White, Port of Portland

Members of "Human Resource Group" of Rivergate tenants

III. PUBLIC INVOLVEMENT

A. Summary

The following summary presents the results of public involvement activities associated with the North Rivergate Site Assessment. Sheriff Dan Noelle and Lt. Bobbi Luna attended more than ten meetings with neighborhood, business and environmental groups in October-November 1998. Altogether, approximately 200 citizens attended the meetings.

B. Introduction

The Board of County Commissioners instructed the Sheriff, as part of the site assessment, to meet with key stakeholder groups to gain their input. The consultant team contacted neighborhood, business and environmental groups that had a potential interest in the site to offer Sheriff Noelle and Lt. Luna to attend group meetings.

Meetings were publicized through mailings to the 2,000 subscribers of the New Jail Newsletter. In addition, the Columbia Corridor Association invited over 200 area businesses by fax invitation to its meeting.

Comments recorded at these meetings are attached in an appendix to this report.

The County also published a mail-in survey on the suitability of the North Rivergate site in the November edition of the New Jail Newsletter. Comments received from this survey appear in an appendix.

Finally, the Sheriff and Lt. Luna gave several tours of the North Rivergate site, as well as of the Inverness Jail, to interested stakeholders.

C. Summary of Comments

Comments from stakeholder groups fall in the following nine categories:

Buffering

- The facility needs to be visually buffered from Bybee Lake, the Columbia Slough, neighboring businesses and recreational facilities planned for the area, such as the 40-Mile Loop Trail.
- Lighting for the facility must be kept from dispersing into wildlife areas, and needs to be focused on the facility.
- Buffering plans need to complement Port of Portland mitigation planned for around the site.
- The facility needs sufficient setbacks from the Slough and Bybee Lake to allow for enough vegetative buffering.
- The County must avoid overt signage advertising the facility.

Recreational Uses

- The jail needs to allow for, and, in some cases, construct, agreed to or wished for recreational assets in the area, such as the 40-Mile Loop Trail and a recreational small craft launch into Bybee Lake.
- The jail complex must provide additional access to Smith & Bybee Lakes.
- Inmate labor could be used to build some of the recreational facilities in the area.
- The County should assist groups wishing to revise the Smith & Bybee Lakes Management Plan, through a Type III review, to consider switching Bybee Lake to the designated recreational lake, and, correspondingly, Smith Lake from recreational uses to wildlife preserve.

Environmental Concerns

- The site will require too much wetland to be filled.
- Smith & Bybee Lakes are tidal lakes.
- The fill is contaminated, and will slide into the lake.

Flooding and Seismic Conditions

- The site flooded during the 1996 flood. This is unacceptable.
- The site has flooded repeatedly for the last forty years. It is foolish to put a jail there.
- The facility will be swallowed up whole during an earthquake. The soil is susceptible to liquefaction.

Public Safety

- The site is too close to residential neighborhoods and schools.
- Move the St. Johns parole and probation office to this site.
- The County must make certain no crime increases in the area, perhaps the presence of more uniformed law enforcement will help.
- The County must avoid stigmatizing the area. Avoid chain gangs on buses.
- Publicize the record on jail escapes.

Traffic

- No inmate trips through the neighborhood.
- No employee or visitor traffic through the neighborhood.

- The County should lobby for a new bridge across the Willamette River from Highway 30 to Rivergate downstream from the St. Johns Bridge.

- Facility traffic will force more short cut truck trips through the neighborhood, resulting in more air pollution and health damage.

- The facility will add too much traffic to Marine Drive.

- The railroad crossings block access to the site.

Community Benefits

- To compensate for the negative impacts of the jail, the County should help finance neighborhood improvement projects through contributing annually to a North Portland community enhancement fund.

Budget

- The County should build more than 225 beds now, because it will cost more in the future.

- The County must ensure it can staff the facility.

- The County has spent too much siting this facility.

Siting Process

- This is a new site. It was not presented as a candidate site to the Siting Advisory Committee. It is not an option for selection.

- A reconstituted Citizens Working Group for this site must incorporate the new site's neighbors.

- The Northwest Industrial Site should be considered.

- Build a high-rise jail downtown.

- The City of Portland's Natural Resources Management Plan allowed for development at Radio Towers. The County could have done a great deal of environmental good by enhancing the wetland there.

- You should have talked to more than one person at Audubon about Radio Towers.

- With a smaller facility, there are other potential candidate sites that should be considered.

D. Stakeholder Meetings

Sheriff Noelle and Lt. Luna attended the following group meetings to discuss the North Rivergate site:

October 7, 1998	Friends of Smith & Bybee Lakes
October 7, 1998	Community Association of Portsmouth
October 12, 1998	St. Johns Neighborhood Association
October 20, 1998	Columbia Corridor Association
October 20, 1998	Columbia Sportswear Managers
October 26, 1998	Columbia Slough Watershed Council
October 27, 1998	Smith & Bybee Lakes Management Committee
November 17, 1998	St. Johns Business Boosters
November 18, 1998	Rivergate Businesses Human Resource Managers

The following groups either declined or did not respond to the Sheriff's offer to meet:

Friends of Cathedral Park Neighborhood Association

Lombard North Business Association

North-Northeast Business Association

In addition, results of the preliminary site assessment will be shared in early December at an informal meeting of interested members of the former County's Siting Advisory Committee, and at a meeting for area businesses, to be hosted by the Columbia Corridor Association.

Sheriff Noelle will also present the site assessment results to all interested citizens at a community meeting. After the presentation, the Sheriff will host a public hearing to accept formal public testimony. Public testimony will be forwarded to the Board of County Commissioners before they begin deliberation on the site. The Board will also accept public comment at its meetings before voting on resolutions regarding the North Rivergate site being considered.

E. Mail-In Survey Results

In November 1998, the County included in its monthly New Jail Newsletter a mail-in survey card offering readers the opportunity to comment on benefits and concerns that would accompany locating the new jail at the North Rivergate site. Approximately 2,000 copies of this edition of the newsletter were mailed and distributed. The County received _____responses.

The major issues raised in survey responses echoed comments gathered at the public meetings:

- The facility needs to be visually buffered from Bybee Lake and the Columbia Slough.
- Recreational amenities should be provided by the County in conjunction with MCNCF development.
- Jail development needs to be consistent with the NRMP for Smith & Bybee Lakes.
- The jail should compensate the neighborhood by funding community enhancement projects.
- Citizen input should continue in the jail siting/design process.
- Questions and concerns are raised about traffic, seismic safety, flooding, wetland fills, contaminated soils, access blocked by rail, project cost, and public safety.

Survey comments received by the County are attached in an appendix.

APPENDIX A

MULTNOMAH COUNTY'S NEW CORRECTIONS FACILITY AT RIVERGATE
LAND USE INTERVIEWS
(SEPTEMBER – OCTOBER 1998)

City of Portland

Susan Barthel, Bureau of Environmental Services (public outreach)

Amy Chomowicz, Bureau of Environmental Services

Eric Engstrom, Bureau of Planning (Environmental Planning)

Steve Gerber, Bureau of Planning (current planning)

Mike Hayakawa, Bureau of Planning (Blueprint 2000)

Wendy Cawley, Office of Transportation

Jamie Charbonneau, Office of Transportation

Jonathon Flecker, Office of Transportation

Metro

Dennis O'Neil (St. Johns Landfill)

Emily Roth (Smith & Bybee Lakes)

Port of Portland

Bill Bach

Marilyn Leitz

Dave Lohman

Others

Troy Clark, Friends of Smith & Bybee Lakes

Mike Houck, Audubon Society

CITY OF
PORTLAND, OREGON
BUREAU OF PLANNING

Charlie Hales, Commissioner
David C. Knowles, Director
1120 S.W. 5th, Room 1002
Portland, Oregon 97204-1966
Telephone: (503) 823-7700
FAX (503) 823-7800

October 9, 1998

TO: Jillian Detwieler, City of Portland, Commisioner Hales' Office

FROM: Eric Engstrom, Bureau of Planning, Development Review Section

CC: Clark Worth, Barney and Worth, Inc.
Dan Noelle, Multnomah County Sherrif
David Knowles, Planning Director, City of Portland Bureau of Planning
Amy Scwartz, City of Portland Bureau of Planning
Susan McKinney, City of Portland, Bureau of Planning
Mike Hyakawa, City of Portland, Blueprint 2000 Project

RE: New Multnomah County Jail Site

Jillian,

Per your request I prepared a summery of zoning regulations applicable to the proposed Multnomah County Jail Site in the Rivergate District. Please call me at 823-7815 if you have any questions. My understanding is that the County will be evaluating the feasibility of this site over the next two months. I met briefly last week with Clark Worth to discuss this site. I mentioned to him that we should consider scheduling a formal Pre-Application Conference during this evaluation period to obtain more comments from other agencies and interested parties (such as Smith and Bybee Lakes interest groups). I believe the Blueprint 2000 group has also been in contact with them about this site, so, I'm passing this on to them too.

Zoning Summary of Rivergate Jail Site

The following is a brief summary of zoning designations applicable to the proposed jail site in the Rivergate area. The site in question is located west of Bybee Lake, northwest of the old St Johns Landfill, northeast of the Columbia Slough, and south of the Port of Portland's Terminal 6.

The site is zoned for heavy industrial uses (the IH zone), with an Aircraft Landing (h) zoning overlay designation. Lands to the south, east, and west are zoned for Open Space, with Environmental Conservation and Environmental Protection overlay designations. The site is directly adjacent to the Smith and Bybee Lakes Natural Resources Management Area.

<u>The "IH" base zone designation</u>
The employment and industrial zones are for areas of the City that are reserved for industrial uses and for areas that have a mix of uses with a strong industrial orientation.

The "IH" zone is one of the three zones that implement the Industrial Sanctuary map designation of the Comprehensive Plan. The zone provides areas where all kinds of industries may locate including those not desirable in other zones due to their objectionable impacts or appearance.

The proposed jail would be classified as a detention facility as described in Section 33.920.520 of the Portland Zoning Code. Detention facilities are allowed in the IH zone subject to a Conditional Use Review. A Conditional Use Review is a Type III Land Use review that requires a public hearing. The Conditional Use Request would be approved if the following criteria have been met:

> ***33.815.205 Detention Facilities***
> *These approval criteria ensure that the facility is physically compatible with the area in which it is to be located and that the safety concerns of people on neighboring properties are addressed. The approval criteria are:*
>
> ***A. Appearance.*** *The appearance of the facility is consistent with the intent of the zone in which it will be located and with the character of the surrounding uses and development; and*

- Protecting sensitive or fragile environmental areas; and
- Preserving the capacity and water quality of the stormwater drainage system.

The OS designation would be relevant to the jail proposal in two ways.

First, the Conditional Use process requires that the appearance of the facility be consistent with the intent of the zone in which it will be located and with the character of the surrounding uses and development. In this case, one of the surrounding uses is the Smith and Bybee Lakes Natural Resources Management Area. During the Conditional Use process, the appearance of the facility would be reviewed in the context of the surrounding natural area and the adjacent industrial uses.

Second, it is important to note that some basic utility uses may require a Conditional use Review if they extend into the OS zone, which includes an area along the Columbia Slough adjacent to this site.

<u>The Environmental Overlay and the Smith and Bybee Lakes NRMP</u>
The site is surrounded on three sides by the environmental overlay designation. The lakes to the south and east are protected by an Environmental Protection ("p") overlay. The slough to the west is within the Environmental Conservation ("c") overlay.

Environmental zones protect resources and functional values that have been identified by the City as providing benefits to the public. The environmental regulations encourage flexibility and innovation in site planning and provide for development that is carefully designed to be sensitive to the site's protected resources.

The Environmental Protection zone provides the highest level of protection to the most important resources and functional values. Development will be approved in the environmental protection zone only in rare and unusual circumstances.

The Environmental Conservation zone conserves important resources and functional values in areas where the resources and functional values can be protected while allowing environmentally sensitive urban development.

Application of the environmental zones is based on detailed studies that have been carried out within eight separate areas of the City. The City's policy objectives for these study areas are described in the reports.

Land Use review that requires a public hearing. The Land Division could be processed concurrently with the Conditional Use. Street construction may be required.

The existing tax lot includes a large section of the adjacent lake. A land division to separate the lake area from the jail site may require Environmental Review (for creation of a new lot completely within the environmental zone). As long as the property within the NRMP area stays in public ownership and the NRMP area is not further fragmented, such a land division would be considered "in conformance with the plan." Any Environmental Review application related to the Land Division would be processed concurrently.

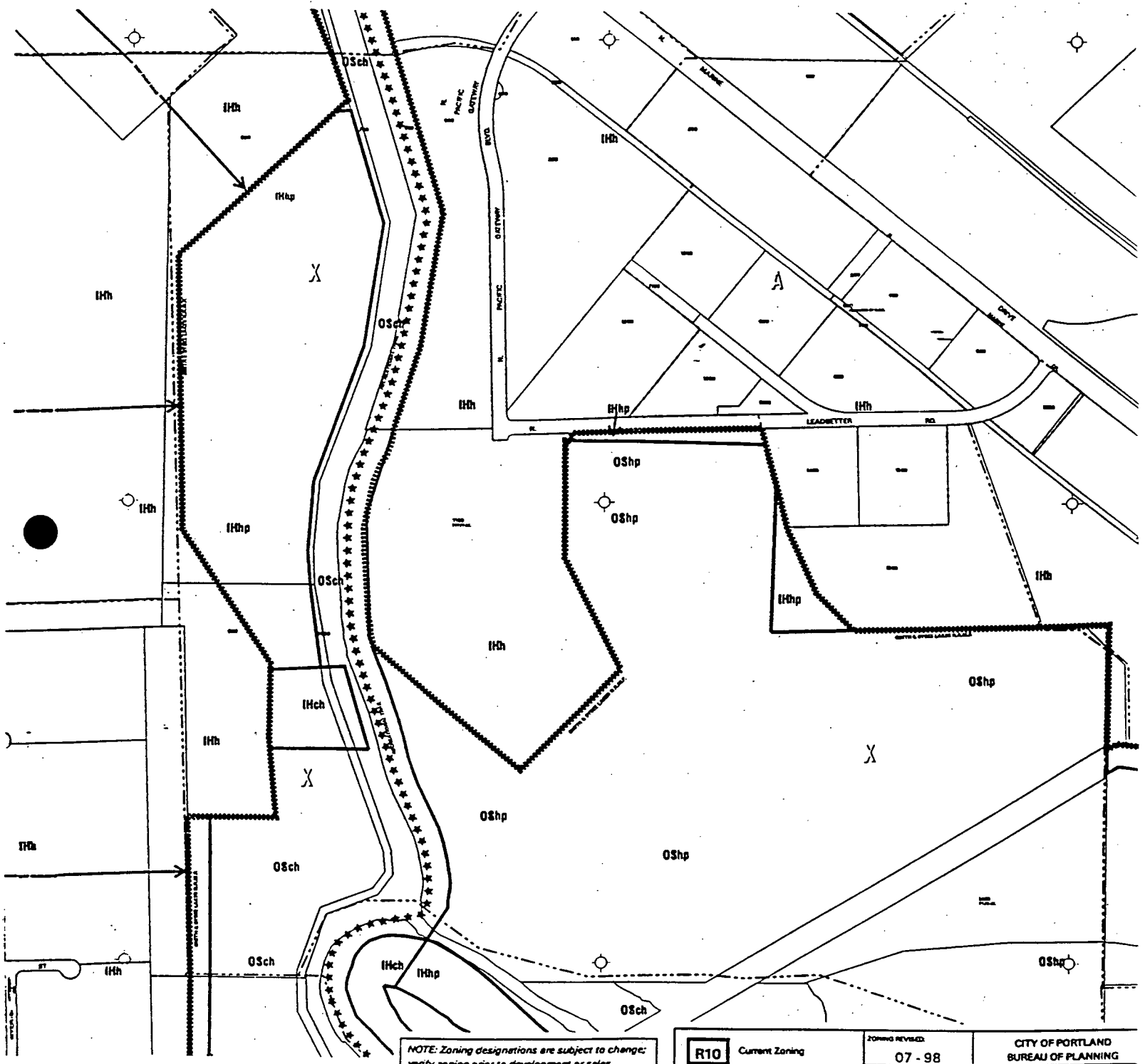
The City is currently in the process of amending the Subdivision Code. This proposal, depending on when it goes forward, may be subject to the amended code.

Zoning Designation Boundary Locations

The location of the zoning boundaries surrounding the site (particularly the NRMP boundary and the Environmental Zone boundary) is based on known surveyed lines. The western edge of the site corresponds to the edge of a linear tract of land following the slough. That tract boundary is also the zoning boundary and NRMP boundary. South and west of the site the zoning/NRMP boundary is based on a fill line surveyed by the Port of Portland. The County should contact the Port of Portland to obtain that survey information.

Disclaimer

This summary is preliminary in nature, and has been prepared without reference to specific building plans. This information is based only on the proposed use, and the identified site. Depending on the specific design proposed, other zoning issues may arise. No site visit was conducted before preparing this information. In addition, this summary is based on current zoning codes. Because the zoning code may change over time, all of this information should be confirmed prior to preparing an actual development proposal.



NOTE: Zoning designations are subject to change; verify zoning prior to development or sales.

R10 Current Zoning	ZONING REVISED: 07 - 98	CITY OF PORTLAND BUREAU OF PLANNING
(R10) Maximum Potential Zoning as per Comprehensive Plan	BASEMAP ACQUIRED: 04 - 96	0' 200' 400' 600' SCALE IN FEET
State ID Map Boundary	LEGAL DESCRIPTION: 25 - 2N - 1W	1521-1522 1621-1622

Plan District Boundary

Historic or Conservation District or N.R.M.P. Boundary

Zoning Line

APPENDIX D

"Bybee Lake Jail"

Main points to make if asked about siting:

1. Locate the building as far from the lakes as possible. Do not push it back to the management area boundary (top of slope).
2. Compliance with Title 3 for stormwater management and wildlife protection.
   - Primary Protected Water Feature – slope adjacent to the wetland edge is probably ≥ 25% for less than 150ft. This would require the width of the vegetation corridor to be the distance from the starting point of measurement to top of the break in the ≥ slope, plus 50 feet.
   - Uncontained areas of hazardous materials as defined by DEQ in the Water Quality Resource Area shall be prohibited,
3. Compliance with the Natural Resources Management Plan for Smith and Bybee Lakes.
   - Stormwater must be pre-treated and emergency containment capability built in for water systems that discharge into the management area. New outfalls will be designed to minimize their potential impact on water quality within the guidelines of the NPDES permit process. Stormwater from the building, parking lots and all impervious surfaces needs to be properly treated.
   - Bybee Lake and surrounding wetlands is managed primarily as an environmental preserve. No vehicular access will be provided to Bybee Lake.
   - Where planting is practicable, fill slopes will be seeded or planted with native vegetation or other methods employed to prevent erosion.
   - A vegetative screen of native vegetation will be provided so that visually displeasing or disruptive development will not be visible from the lakes or the trail system. The screen will be at least 6 feet high and 75% opaque within three years. *
   - Lights adjacent to the natural area will be cut-off type fixtures that do not cast direct light beyond the development boundary. **
   - Any stormwater outfalls and passive water treatment facilities within the management area that were not anticipated in the plan are considered a major exception and will require a Type III land-use review.

*There should be a larger vegetative buffer than required in the plan to ensure protection to the wildlife area. We should push for a minimum of 100 feet from the top of bank towards the development. Also, the planting by the jail should be evergreen to ensure that the building will be screened at all times of year from lake users.

**The lightening should not cast any ambient light on the lakes that would disturb nocturnal wildlife.

4. Other considerations.
   - Painted turtles have been seen in that area of the lake. We have no idea of their upland habitat use in that area. Need to examine other wildlife use in that area.
   - The road leading to the site needs to be buffered and built area from the lakes edge. The stormwater runoff needs to be collected and treated.
   - Noise impacts to wildlife need to be considered.
   - The Port is planning to build a portion of the 40-Mile Loop Trail along the slough in that area. How will this affect the trail?
   - If possible, pull fill out of areas and restore wetlands.

APPENDIX E

RECORD OF COMMENTS AT EACH STAKEHOLDER GROUP MEETING

Friends of Smith and Bybee Lakes
Wednesday, October 7, 1998, 5:30 p.m.
Water Pollution Control Lab
6543 North Burlington Avenue, Portland

- Vegetative buffers (sufficient to screen facility from lake)
- Visual impact on lake (minimize)
- Lighting (prevent from spreading onto lake)
- 40 Mile Loop Trail
- Access to lake:
- Management plan for Smith and Bybee lakes indicates one is for recreation, the other for natural resources
- Ask County to help revise management plan (Type III review)
- Change Bybee Lake to recreational use
- Want boat launch in Port's buffer area
- Examination of peninsula needs to be holistic (Port has a backlog of mitigation in that area; Port mitigation and County's buffering plans need to be compatible)
- Plans should include sufficient setback from earlier plantings completed by the Friends
- Community service: inmate labor could be used for mitigation
- Dennis Keepes: New site not through the process.

Portsmouth Neighborhood Association
Wednesday, October 7, 1998, 7:45 p.m.
Columbia Cottage in Columbia Park
North Lombard Street and North Dana Street, Portland

- What may happen to this site during major flooding episodes like 1996?
- Why are we not considering the NW Industrial site (Giles Lake)?
- Additional access to Smith and Bybee Lakes is needed.
- What is the distance to the nearest residential area?
- Is the site under consideration in Rivergate big enough? Why have you shrunk the size of the facility?
- Why are you only building 225 beds when it would cost less to build more now?
- Will you be able to keep this facility staffed?
- Will you be changing the composition of the CWG to incorporate new neighborhoods?

St. Johns Neighborhood Association
Monday, October 12, 1998, 7:00 p.m.
St. Johns Community Center
8427 North Central, Portland

- No trips with inmates through St. Johns.
- Move parole office from Lombard to the site.
- Flooding – how many times in the last 40 years has the site flooded?
- How much wetland will have to be filled?
- It is absurd to have two public entities buying property – we own both.
- Will there be employee and visitor traffic through St. Johns.
- Seismic issues with landfill – it will not hold up in an earthquake.
- What is the make up of the jail clientele?
- Why not expand other County jails so there is no need for new one?
- Measure the impact of the expanded facility on traffic and on Smith & Bybee Lakes.
- What are the tidal impacts on Smith & Bybee Lakes?
- Where are inmates released? How are inmates moved between jails?
- Does the smaller footprint open up other sites?
- What is the number of trips per day of all types to and from jail?
- Put the jail in an area where people who voted for it live.
- Consider a downtown high rise jail.
- Control route staff take to get to the jail.
- County needs to convince Metro to allow another bridge over Willamette River from Highway 30 to Rivergate.
- Go observe traffic on St. Johns Bridge and through St. Johns.
- What has been spent to-date on this project?
- Traffic analysis needs to measure increased use of shortcuts through the neighborhoods, and the pollution impacts of this.
- What's wrong with the Northwest Industrial site?
- Does flooding cut off access to Leadbetter?
- Will we have a jail industry in the industrial district? Privatized jails?
- The sand fill on the site is polluted and will flow into Bybee Lake.
- The County should contribute to the North Portland enhancement fund.

Columbia Corridor Association
Tuesday, October 20, 1998, 7:30 a.m.
Nordstrom Distribution Center
5703 North Marine Drive, Portland

- We need to preserve "industrial sanctuary" land. This is an inappropriate use.
- What is the number of new jobs the jail will create? What is the average wage?
- The County could have gotten a fill permit at Radio Towers, per the City of Portland Natural Resources Management Plan.
- A public developer at Radio Towers would be more responsive to the environment and the community than a private company.
- The low grade wetland at Radio Towers could have been enhanced.
- What are the environmental impacts at this new site?
- Is the alcohol and drug treatment facility still separate?
- What are the traffic impacts – on Marine Drive?
- This new site is just as environmentally sensitive as the Radio Towers site.
- How is the County reaching out to the business community to reduce the stigma of a corrections facility?
- Image of chain gangs driving by.
- Concern of tenants and employees.
- What is the impact on crime in the area of these facilities? From visitors?
- How big is the footprint?
- What will the signage be?
- Does the railroad crossing pose a problem?
- Concern of crime impact for T-6 vehicle mover, keys in cars.
- Why were all of the sites in North and Northeast Portland? Why not in Beaverton or Hillsboro?
- What is the record of escapes?
- What is the average length of stay?
- Which jails hold which types of inmates?
- Which station will provide fire protection – St. Johns or Hayden Island?

Columbia Sportswear Managers
Tuesday, October 20, 1998, 2:30 p.m.
Columbia Sportswear
North Leadbetter, Portland

- What are the concerns with placing a facility like this on industrial land?
- What is the impact on attracting a day care facility to the Rivergate area?

- What is the impact on crime in the area around a facility like this?
- How quickly will it expand to 2,000 beds?
- Are other jails at capacity?
- Will there be parole officers at the facility?
- How will traffic access Marine Drive and Leadbetter?
- What is the inmate classification at different facilities?
- When was the last escape?
- What is the impact on businesses around these facilities, do they have to increase security?
- What is the safety impact of the person waiting for the bus at night?
- Do businesses get notified when there is an escape?
- Will lighting in the area be increased?
- What are the benefits to the area beyond more uniformed officers?
- Will you offer work crews for the Rivergate area?

Columbia Slough Watershed Council
Monday, October 26, 1998, 5:00 p.m.
Nabisco, 100 NE Columbia Blvd., Portland

- Has the County done more work on the nature of the buffering between the facility and the natural areas?
- What is sufficient buffer? Push the jail further north so that have 150-foot buffer.
- What is the suitability of the fill for supporting the right kind of plantings and trees?
- BES has information about the Ramsey Lake Constructed Wetland.
- As a community benefit, the County should install a boat access and parking area to Bybee Lake.
- Fold into the County's Type III review switching the lakes' designation.
- Watch out for flooding, on the site and access.
- Plant buffering with initial building so offers time to grow to block expanded facility.
- Check out the view angle from being in a boat on Bybee Lake.
- Beware problems with earthquake and liquefaction.
- How deep is the fill on the site?
- Flood in February 1996 cut off access to T-6. Roads are low.
- Who pays the costs of roads and utilities?
- Are there other sites under consideration for the jail?
- No mass transit for use by visitors or employees.

- Will the inmates be offered views of the natural areas?
- Speak to Tri-Met about extending service to site. Or, run shuttle service.
- Will there be work release from this jail?
- Will there be work crews from the jail?
- Is the whole jail on fill?
- What's going to happen to Radio Towers?

Smith & Bybee Lakes Management Committee
Tuesday, October 27, 1998, 5:30 p.m.
Metro, 600 NE Grand Ave., Room 270, Portland

- Will the fence be on the inside or outside of the perimeter road? What kind of fence?
- Is the orientation of the facility set?
- Is the lighting the same intensity for the public entrance and the transport sallyport?
- Where is the road to the site? What is the traffic to & from the jail? Shield the car lights.
- Noise is a concern.
- Lighting is a concern.
- What is the width of buffering you can provide?
- Did the Port suggest the road location? What about road down eastside of peninsula, making access point for Bybee Lake easier?
- Will the roads be lit?
- Shift the building north for 150' more buffer – preserve turtle areas.
- What is the acreage within the perimeter road?
- What is the square footage of the 2,000-bed facility?
- What is the timetable to full build-out?
- Is build-out continual, or does it occur in distinct stages?
- Metro Title 3 guidance to local governments for 50' foot minimum buffer from high value habitat areas.
- Safe access is real issue, keep in mind when positioning the facility.
- Rethink positioning of access road to the site, move to the eastside of the peninsula.

APPENDIX - F

Multnomah County's New Corrections Facility
Mail-In Survey Results

As of 11/24/98
Total responses: 58

1. Below is a list of several concerns people have raised regarding siting the new jail at the North Rivergate site on the south end of the Leadbetter Peninsula. For each concern, please indicate the level of importance you attach to the issue (1 = very important, 2 = somewhat important, 3 = not important).

	Importance		
	Very	Somewhat	Not
A. Too close to businesses	11	11	33
B. Too close to residential areas	16	18	20
C. Too close to the Columbia Slough and Bybee Lake	34	5	16
E. Perceived stigma to the area	23	13	18
F. Increased traffic	20	21	13
G. Need to buffer from nature areas	42	9	4
H. Need to shield lighting of facility from nature areas	40	10	5
I. Appearance of the building	16	24	11
J. Flooding of site	14	22	18
K. Cost of roads and utilities	12	20	21
L. Seismic conditions of site	12	16	24
M. Site differs from Rivergate site identified in earlier siting process	13	15	19

N. Other:

- Wildlife habitat is decreased.
- Put in Rivergate
- Or cost to run the jail/dangerous
- Future tenants: who gets in next?
- Down town
- 1 - Wrong place. Don't know what else is available, but Rivergate area??
- 1 - Wetland concerns on the site.
- 1 - Safety
- 1 - Need to preserve water quality of lake
- 1 - Location
- 1 - Successfully avoids filling wetlands
- 1 - Original footprint required 40 acres which immediately ruled out a number of sites in other areas of the county. Now that only 22 acres are required, go back and investigate one of those sites.
- 1 - Lack of public process
- 1 - Conform with Smith & Bybee. NRMP

- 1 - Comply with siting advisory committee recommendations
- 1 - H (Need to shield lighting from natural areas) for residences as well.

Of the concerns listed in Question 1, please indicate by letter which three are the most important to you:

	Importance		
	First	Second	Third
A. Too close to businesses	2	2	0
B. Too close to residential areas	8	4	4
C. Too close to the Columbia Slough and Bybee Lake	14	5	7
E. Perceived stigma to the area	5	6	5
F. Increased traffic	2	2	4
G. Need to buffer from nature areas	12	11	4
H. Need to shield lighting of facility from nature areas	0	11	9
I. Appearance of the building	0	3	5
J. Flooding of site	3	1	4
K. Cost of roads and utilities	0	1	1
L. Seismic conditions of site	0	2	3
M. Site differs from Rivergate site identified in earlier siting process	2	3	1

For each of these three, please list ways you can think of for the County to mitigate the impact:

FIRST PRIORITY COMMENTS

"A" (Too close to businesses) as first priority:
- Build jails where people want them, not in premium industrial areas.

"B" (Too close to residential areas) as first priority:
- Place facility as far as possible from residential neighborhoods -- this is achieved!
- Don't site it there.
- Should be placed in an undesirable area. Where no one wants to live.
- This is a general answer. Don't know if it applies to proposed site.
- Place higher the concerns of our neighborhoods,
- Place the jail in an area further away from residents
- Place in Rivergate as it is entirely industrial
- Find another site

"C" (Too close to Columbia Slough and Bybee Lake) as first priority:
- Put the jail in the Rivergate site and tell the Port of Portland too bad! Do not put the jail in the same place Metro is trying to keep for Green Spaces and a park!
- Don't put it there.
- Find new site not in wetland area.
- Extinct is forever! Hello?!
- Explore other sites.

- Should be in an isolated location away from business, residents.
- The Smith & Bybee Lakes area is the last bit of wildland-wetlands in this N. Portland area. I think it should be preserved and protected as a peaceful, natural place and balance to our rampant industrial development. The development is here to stay. The natural area has been compromised but a prison here is unacceptable.
- Look for a more stable site
- Keep facility well away from e-zone (300 ft)
- NIMBY
- Move Port of Portland property line North to give more room.
- Leave 150' for buffering - 150' from top of current bank.

"E" (Perceived stigma to area) as first priority:
- Don't put it in Rivergate
- Consider siting outside of North Portland. The area already has an unwarrented bad reputation.
- Put it in eastern Oregon
- Public education. I was not aware of differences between jail and prison. Improvements to neighborhood for residents.

"F" (Increased traffic) as first priority:
- Too much traffic now on Columbia Blvd.
- Keep traffic off I-5

"G" (Need to buffer from nature areas) as first priority:
- I think people should stop fighting the placement of jail they voted for and just get it built.
- Native vegetative and wildlife buffers should be at least 150 feet from top of fill.
- Thick, tall vegetative buffer, evergreen
- 150 Ft. buffer zone
- Adequate buffer planted with native vegetation as soon as county takes possession.
- Hire a competent landscape architect.
- If the average criminal stay in this facility is but 16 days, it does not seem worthwhile for him/her to escape. Leave the lights off that they might sleep. Please think about this.
- 75'-100' minimum setback from top of slope to jail structure.
- Follow flight controls and observation of naturalists.
- Planting native plants around that section of jail.

"H" (Need to shield lighting of facility from nature areas) as first priority:
(None)

"I" (Appearance of the building) as first priority:
(None)

"J" (Flooding of site) as first priority:
- Berms, elevate structure
- Insure that road is passable in flooding - road on dike?

"K" (Cost of roads and utilities) as first priority:
(None)
"L" (Seismic conditions of site) as first priority:
(None)

"M" (Site diffes from Rivergate site identified in earlier siting process) as first priority:
- Do not site the jail in Rivergate. Select a site in another area of the county.
- Compliance with constitutional due process.

"N" (Other) as first priority:
- Expand list of potential sites. Convene SAC, public workshops, involve public in decisions
- Choose Rivergate
- Meet setback and screening requirements, allow or build recreation trail.
- N. Avoid construction in wetland and exceed the buffer requirement
- "Relocate and not to another low-income, close to ""N.E."" Portland; predominantly Black area"

No choice as first priority:
- Should be out of town completely.

SECOND PRIORITY COMMENTS

"A" (Too close to businesses) as second priority:
- Not compatible among businesses.

"B" (Too close to residential areas) as second priority:
- Relocate
- Make certain that inmates are not released from this jail.
- Put it in SE or SW Multnomah County

"C" (Too close to Columbia Slough and Bybee Lake) as second priority:
- Allow 0 cutoff from impermeable surfaces into lake or slough.
- Do not site the jail in a recreational greenspace -- ecological impact will be disastrous to a percentage of wildlife existing there.
- The slough is a slow moving water body already over manipulated!
- Don't site it there.

"E" (Perceived stigma to the area) as second priority:
- Same as above.
- "Stop placing ""social agencies"" in N. Portland and help in its economic development of town center."
- Public relations (education) emphasize short term (facility).
- Wrong location.

"F" (Increased traffic) as second priority:
- Plan stormwater parking lot and control who visits.
- Traffic through St. Johns is already too heavy

"G" (Need to buffer from nature areas) as second priority:

- Densely planted wide buffer area
- Plant fast growing native vegetation
- Extinct is forever! Hello?!
- Leave large wildlife buffer.
- Site or buffer re-vegetation with native plants
- Don't build the jail.
- Buffer (vegetated) at least 150' from NRMP boundary.
- Leave 150' for buffering - 150' from top of current bank. Be sure to plant lots of trees. Maybe have a Phase I perimeter road and fence, not so far out from the Phase I building, for a bigger buffer.

"H" (Need to shield lighting of facility from nature areas) as second priority:

- Lighting should be controlled by lighting type, direction, distance from lakes.
- Thick, tall vegetative buffer, evergreen.
- The 150 ft. of trees should shield your lights.
- Use vegetation design and shields to direct lighting.
- Lighting in a more focused, narrow scope, dimmer lighting; natural vegetation shields
- Lighting might scare and have impact on wildlife
- Allow community involvement to be active.

"I" (Appearance of the building) as second priority:

- Hire a decent architect.
- Hire a competent architect.
- Design it to be pleasing to look at

"J" (Flooding of site) as second priority:

- Build above flood plain.

"K" (Cost of roads and utilities) as second priority:

(No comments)

"L" (Seismic conditions of site) as second priority:

- Assess possibilities for liquifactions
- Build jail to withstand earthquake

"M" (Site differs from Rivergate site identified in earlier siting process) as second priority:

- See above comment!
- Compliance with Multnomah County Charter.

"N" (Other) as second priority:

- The need to comply with the Siting Advisory Committee is important
- My taxes would have to pay for it and I'm on a fixed income.

THIRD PRIORITY COMMENTS

"A" (Too close to businesses) as third priority:
(None)

"B" (Too close to residential areas) as third priority:
- All parts have concern.
- Provide buffers, visual barriers
- Northwest Portland area better site.

"C" (Too close to Columbia Slough and Bybee Lake) as third priority:
- Move jail closer to Road
- Thick, tall vegetative buffer, evergreen.
- This would harm natural scenic area
- Use Radio Tower Site

"E" (Perceived stigma to area) as third priority:
- Address issues of crime in N.E. Portland. Separate from jail; prior to jail bldg.
- Spend $ on prevention and education.

"F" (Increased traffic) as third priority:
- Don't site it there.
- Build enough additional roads.
- Help provide options to eliminate trucks from St. Johns Bridge.

"G" (Need to buffer from nature areas) as third priority:
- Include community organizations like Open Meadow Learning Center.
- Planting shrubs, large (I.e. more mature) and quick growing trees native to the area.
- The least invasion of nature area will be possible in Rivergate
- Berm, evergreen. Planting (shield lighting).

"H" (Need to shield lighting of facility from nature areas) as third priority:
- Lights down cast and aimed toward facility.
- Same as 2nd plus use shielding and careful direction.
- Extinct is forever! Hello?!
- Use state of the art lighting and distance.
- Immediate planting dense, fast-growing evergreens.
- Deflect light away from natural area.

"I" (Appearance of building) as third priority:
- Good design -- Exercise area within walls - reduces need for razer wire.
- Apply sustainable ecological principles as design criteria.
- Make sure building blends well into the landscape.

"J" (Flooding of site) as third priority:
- If there is danger, raise lowest building floor above 100 year flood plain.
- Don't want jail destroyed as result of flood - it would be a waste of tax payers $$$.
- No practical solution

"K" (Cost of roads and utilities) as third priority:
- Don't put the jail here! This site is wrong.

"L" (Seismic conditions of site) as third priority:
- Go deep.
- Build to current seismic standards.

"M" (Site differs from Rivergate site identified in earlier siting process) as third priority:
- Compliance with Open Meetings Public Record Law.

"N" (Other) as third priority:
- Select another site -- not in N. Portland
- No stormwater should be discharged into lakes, including during construction
- I don't feel safe with a jail close. My neighborhood is bad enough already.
- Consider a solution to retain stormwater. Also, cisterns can be underground. To capture stormwater in the winter, to use as irrigation in the summer. This would eliminate all parking lot stormwater.

No choice as third priority:
- Strong structure that exceeds requirements - earthquake mitigation

Several persons have identified community benefits that could accompany construction of the jail at this site. Please rate the importance of each (1 = very important, 2 = somewhat important; 3 = not important).

	Importance		
	Very	Somewhat	Not
A. County could improve recreational access to Bybee Lake.	24	12	13
B. Increased law enforcement presence in Rivergate will deter crime.	12	18	19
C. County could develop effective buffer of native plants.	30	10	8
D. Road and utility infrastructure increases value of industrial area.	5	18	27
E. Jail will keep more criminals behind bars.	17	16	18
F. Public developer more sensitive to neighboring natural areas than a private industrial developer would be.	21	17	12
G. Less traffic-intensive development than typical industrial development.	15	21	9
H. Other.	5	0	1

If the County works with interested citizens on the designing, planning and operation of the new jail, can this site work for the new jail?

Yes:	29
No:	18
No answer:	6
Maybe:	3
This isn't a yes/no answer:	1
Yet to be determined: 1	

Any other comments or suggestions?

- F (Public developer more sensitive to neighboring natural areas than a private industrial developer would be) Not true
- Go out of town. N. Portland constantly dumped on.
- I'm exceptionally pleased that Radio Towers was abandoned and that the site design efforts utilized there will be adapted, to the extent possible, to this Rivergate parcel.
- Rivergate is industrial area. Smith & Bybee Lakes should be a beautiful recreational area for all the people of Portland to enjoy and Multnomah. Not a jail for a few.
- Concerned about site constraints with wetlands, natural areas, impact to slough and Smith & Bybee Lakes. Flooding and earthquake. Traffic impact - fair amount already for expo center events etc. - Potential for 2000 beds later will generate traffic!
- It still is not a good place for a jail. It should be on 33rd St. Close to the other jail. Away from industrial bldg. Railroads, public parks. N. Portland has enough of stuff people dumped on us and location of a jail.
- Keep up the good work. Your involvement of concerned people has been commendable, a real model for others!
- At a time when wetland areas have become more important because so many have been filled and destroyed and most government agencies admit that it should stop, it is happening more and more by government agencies. I am sure a site better suited to the task exists.
- Good luck!
- Smith & Bybee Lakes are public nature and recreation areas. Placing a jail on a nature area or this close to one would inevitably harm the nature area. Also, the lighting necessary for a jail would disturn wildlife.
- If this (Public developer more sensitive to neighboring natural areas than a private industrial developer would be and Less traffic-intensive development than typical industrial development) were only true
- Build it and work with Audubon Society and other experienced, knowledgable naturalists to prevent damage or improve conditions of the Wetlands as you go. I live very near the Columbia River Jail and its not a problem. Just get it built.
- Minimize impacts, improve habitat near lakes, study turtles.
- I prefer the Radio Towers site. I don't like the proximity to the Smith & Bybee Lakes

- 4.A. (County could improve recreational access to Bybee Lake) Who wants to take their children to play near a jail?
- 4.B. (Increased law enforcement presence in Rivergate will deter crime) It will only help in the industrial area - most of which is closed up at night.
- 4.C. (County could develop effective buffer of native plants) What about the destruction of the wetlands?
- 4.D. (Road and utility infrastructure increases value of industrial area) Why would residents care about this?
- 4.E. (Jail will keep more criminals behind bars) Let's spend the money to work on crime prevention!
- 4.F. (Public developer more sensitive to neighboring natural areas than a private industrial developer would be) If you're so sensitive - why are you allowing the destruction of the wetlands?
- 4.G. (Less traffic-intensive development than typical industrial development) I concede
- Half this questionnaire sounds like an ecology study? I don't believe the wildlife would even like prisoners!
- Increased law enforcement in the area should already be priority if it's needed. Wealthier neighborhoods counties, areas vote NOT to have jails built in their communities - poorer Black (predominantly) neighborhoods should enjoy the same. Stop "dumping" in low-income areas!
- The Smith & Bybee Lake areas are prime recreation areas in North Portland. We have boating, biking, hiking, and pedestrian traffic in this area. Multnomah County is a large area. We do not need another prison here. Inverness should be enough to satisfy the need of having a prison in our backyard! Why not build out by PCC and share the wealth?
- The sheriff's office's credibility could be improved if misleading statements were not made "Will inmates be released from this jail? Absolutely not. All inmates are released from the Justice Center." My understanding is that the plan is in the next few months for inmates to be released directly from Inverness.
- Reminder to the Port of PDX and Mult. Co. Commissioners! Rivergate was the first choice of the Siting Advisory Committee and it would have been built by now if the Port had not refused to cooperate with the Committee's decision. The Port needs to come to the table and support community efforts for the public good. The Port views themselves as a monarchy, but they are dependent upon the tax payers! Therefore, they need to contribute too. The Board of County Commissioners and the Port need to work together and build this jail in Rivergate.
- Thanks for the opportunity to help.
- This part of Portland is a unique blend of commercial real estate and native spots. We discovered Smith & Bybee Lakes 5 years ago (when we took up kayaking) and fell in love with them. They are magical spots - I'd lived in Portland 16 years and never before knew they existed. They're one of the things I am proud of Portland for having, and protecting and preserving. They are irreplaceable - Please protect them.

- But since you are going there anyway, I hope that you will make serious efforts to include key Friends of Smith & Bybee Lake players in the entire process. (I am not a board member but trust their judgment.)
- I would like to see information made public on whether all other possible sites have been explored.
- You are doing a great job of eliciting public comments and addressing these concerns. Thank you for doing a difficult job - which we all know must be done.
- I don't think a new recreation access is addressed in the NRMP. This would be a concern because of wildlife impact and the process you would have to go through to have it reviewed.
- Don't make it ugly. Don't disturb the wildlife.
- The quieter, natural setting could have positive effects on troubled inmates. Canoe launch parking lot next to jail could be safer for people than at N. Marine Drive.
- Letting people think that more jails = anything but more jails is lame. Isn't it true that small groups like Smith & Bybee Lakes supporters can only beat the drum to call attention to what the mighty Port of Portland wants to do with all its clout? Is Governor Kitz gonna be invited to any of these meetings or are you gonna let him off the hook?
- I don't see community benefit but rather loss if a prison is sited next to Smith & Bybee Lake area.
- Better site than Radio Towers. Best site of all sites studied by Sheriff's task force.
- County can work with Tri-Met to improve public transit access to the area. This would help people get to jobs in the area and improve air quality - 2 benefits to society.
- It is unfortunate that so much time and money was spent on the radio towers site. Hopefully, much of the design work can be transferred directly to this site.0
- I would like to see all jails, court houses, attorneys offices, anything to do with the criminal justice system moved to desert land in eastern Oregon.
- Why does this jail have to be built in North Portland? Aren't there any sites elsewhere in Multnomah County? North Portland gets all the "unwanted" that no other part of the city wants.
- It would probably be a better, more affordable product if the committee approach is eliminated.
- I feel the site is unsuitable for a jail because of its location in a top earthquake hazard zone, and its proximity to lakes and rivers.
- With the increased size of the water treatment plant there is a planned park and access to the Lakes. Why do this and put a jail there. No one will want to go to a park where a jail is nearby! Think again -- Do the Rivergate site and quit moving around and changing your mind! Just do it in Rivergate!
- This is an unscientific survey and it was created without public input. This site violates the county's initial screening criteria and the SAC's selection criteria. Start over again. Involve the public in choosing a site.

- 4.A. (County could improve recreational access to Bybee Lake) Jail should not be built next to Bybee Lake.
- 4.B. (Increased law enforcement presence in Rivergate will deter crime) Not true. Police and State Police broke in the door across the street from N. P. Parole Office on 11/16/98 looking for drugs. Confirm with Wayne Salvo!
- 4.C. (County could develop effective buffer of native plants) No buffer can be planned to eliminate negative impact on wildlife.
- 4.D. (Road and utility infrastructure would increase the value of industrial area) Yes it would! We tax payers would flip the bill for the infrastructure so industry wouldn't be paying for their roads or sewers.
- 4.E. (Jail would keep more criminals behind bars) Yes, it will. And it can do it at another location in the county.
- 4.F. (Public developer more sensitive to neighboring natural areas than a private industrial developer would be) I don't believe that's true in all cases.
- 4.G. (Less traffic-intensive development than typical industrial development) I disagree - there will be continual traffic coming and going all day - Many more cars in and out than industry.
- County should purchase sufficient land from the Port to provide for large vegetative and wildlife buffers. This should NOT be dictated by the Port.
- Oregon Transfer objects to the Rivergate jail site proposal based on the Port of Portland's declaration of this area as an industrial use area and the fact that the Port has elected to not sell land to potential users if they do not have a business link requiring use of Terminal 6. We feel this is a waste of prime industrial property and that a better site could be found. Please call on questions - Ed Sammons, VP Oregon Transfer Co., 786-3311.
- Re: Question 5 - Site has not received proper process. Siting violates Multnomah County Facilities Siting Public Involvement Manual.
- My concern is for the preservation of the S&B Management Area. I do not approve a jail at this site per se my acceptance is based on what kind of resolution of environmental protection can be provided.
- Look at the revision by County and more recently PDC - City of Portland on Sunderland Road. (Columbia R. Corrections). None of public agencies adhered to wetland mitigation or regulations there -- I really wonder how this can be?

Additional Notes

- 4.G. (Less traffic-intensive development than typical industrial development) Not with 2000 beds in future. 5. I don't think the Port will change! Let us use a more appropriate site.
- The Radio Towers site was a better choice!!!
- Let's leave St. Johns alone for awhile!
- 4.G. (Less traffic-intensive development than typical industrial development). Oh Please!

- 4.A. (County could improve recreational access to Bybee Lake) I would be less inclined to go to the lakes area if a prison were sited there.
- Question 5. The area is a sanctity for the wetland wildlife and must never be violated with any building where this is proposed. This is a recreational, peaceful area that must never be compromised.
- Add to #1 - Stormwater discharge - very important.

Section 4

ENVIRONMENTAL REPORT

MULTNOMAH COUNTY NEW CORRECTIONS FACILITY: RIVERGATE SITE

Prepared for
Multnomah County Sheriff's Department
12240 NE Glisan Street
Portland, Oregon 97230

by
Adolfson Associates, Inc.
Archaeological Investigations Northwest
Cascade Earth Sciences

In Association With
Kitchell

NOVEMBER 1998

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LIST OF APPENDICES

A. SUMMARY

This report contains the results of the environmental analysis of the proposed site for the Multnomah County New Corrections Facility at the Rivergate Industrial District (North Rivergate site) in North Portland. This analysis was one element of an assessment of the site authorized by the Multnomah County Board of Commissioners that also included evaluation of engineering, land use and other issues. The focus of the overall assessment was to determine whether any "fatal flaws" to development of a new corrections facility were present at this site. A "fatal flaw" was defined for the purposes of the environmental analysis as a constraint to development due to existing environmental conditions that could not be successfully addressed in order to allow the design, construction and operation of the corrections facility to proceed within the County's financial and time requirements.

The environmental analysis included investigation of potential constraints to the County's development plans due to factors related to natural resources, cultural resources, and the presence of hazardous materials. Detailed studies included review of available records, field reconnaissance, laboratory analysis of soils and groundwater, and an inventory of natural resources, cultural resources and hazardous materials. The results of these studies were then evaluated to identify potential environmental fatal flaws that would prevent successful development of the North Rivergate site. Estimates of cost and schedule impacts of actions required to address environmental concerns at the site are also provided.

Investigation of the Rivergate site did not reveal fatal flaws to development due to the presence of natural resources. The entire facility would be located on a layer of recently deposited dredge sands that is sparsely vegetated and provides poor habitat for wildlife. However, the presence of highly sensitive natural areas adjacent to the site will require efforts on the part of the design team to provide adequate screening and buffering to mitigate possible lighting and noise impacts to offsite areas. In addition, if construction of a stormwater outfall to direct stormwater runoff from the facility to the Columbia Slough is required, some impacts to adjacent sensitive natural areas will occur. Costs associated with addressing these impacts are estimated to be approximately $20,000.

There is also a high likelihood that native soils beneath the layer of fill at the site contain prehistoric archaeological deposits. The presence of these deposits will require further investigation should the County develop the site and may present a significant cost factor. Estimated costs for performing this work will be determined by the extent of the deposits found at the site and their cultural significance, and range from $45,000 to $150,000.

There were no fatal flaws identified due to the presence of hazardous materials at the Rivergate site. However, results of laboratory analyses of site soils indicate that soils with a low level of contamination from polychlorinated biphenyls, or PCBs, are present at one subsurface location on the site. The volume of soil affected by PCBs is limited, and the level of contamination does not exceed the minimum recommended clean up level. Consultation with the Oregon Department of Environmental Quality (DEQ) about this soil has been initiated in order to determine whether a letter of no further action (NFA) can be obtained. If DEQ will not issue the NFA, it is recommended that the PCB contaminated soil be removed from the site. Estimated costs for removal of these soils range from $5,000 to $15,000.

B. INTRODUCTION

The Multnomah County Sheriff's Department has proposed construction of a new corrections facility in the Rivergate District in North Portland, Oregon. The proposed location is between Bybee Lake and Columbia Slough approximately 3,500 feet south of N. Marine Drive. The corrections facility would occupy about 22 acres in an area presently zoned for industrial development. It is situated primarily in the E 1/2 of the SW 1/4 of Section 25, T. 2N, R. 1W, Willamette Meridian, with small portions of the project location extending into the S 1/2 of the SE 1/4 of the NW 1/4 and the NW 1/4 of the SW 1/4 of the SE 1/4 of Section 25 (Figure 1). The property is currently owned by the Port of Portland.

The Multnomah County Board of Commissioners authorized a preliminary assessment of the Rivergate site in order to identify any significant obstacles to development, and to determine the processes, requirements and timetables needed to obtain necessary permits and approvals. This assessment included analysis of environmental, engineering, land use and other issues. This report contains the environmental analysis.

The environmental analysis included review of the available records for each site, field reconnaissance, laboratory analysis of soils and groundwater, and an inventory of natural resources, archaeological resources and hazardous materials either present at the site or with the potential to affect site development. The results of this work were then evaluated in terms of potential constraints to the County's development plans. This evaluation is provided below. Separate reports detailing the natural resource assessment, the archaeological investigation, and the Level I and Limited Level II Environmental Site Assessments upon which this report is based are attached as appendices.

C. ANALYSIS

i Site Description

The proposed site for the new Multnomah County corrections facility is located in the Rivergate Industrial District on the North Portland Peninsula at the confluence of the Willamette and Columbia Rivers (Figure 1). The new facility would be situated at the south end of Leadbetter Peninsula, which extends into Bybee Lake (Figure 2). This region is historically a component of an extensive, interconnected complex of shallow lakes, sloughs, marshes, and other wetlands associated with the floodplain of the Columbia and Willamette Rivers. Much of Leadbetter Peninsula was filled by the Port of Portland in the early 1990's with dredge materials from the Columbia River. The Smith and Bybee Lakes Management Area (SBLMA) lies adjacent to the project site on the west, south, and east (Figure 3).

For the purposes of the natural resources investigation, the study area encompassed approximately 75 acres of the Leadbetter Peninsula along the western edge of Bybee Lake (Figure 2). The study area also included the Columbia Slough on the west and the margins of Bybee Lake on the east and south. The study area extended north from the point of Leadbetter Peninsula approximately 2,100 feet.

ii Development Constraints

Regulated Natural Resources

Evaluation of the site and vicinity indicates the presence of highly sensitive natural areas, including Bybee Lake and the Columbia Slough, immediately adjacent to the site. Though the facility would be located on a layer of recently deposited dredge sands that is sparsely vegetated and provides poor habitat for wildlife, efforts on the part of the design team will be necessary to provide adequate screening and buffering to mitigate possible lighting and noise impacts to these areas.

If construction of a stormwater outfall to direct stormwater runoff from the facility to the Columbia Slough is required, some impacts to adjacent sensitive natural areas will occur, including wetlands and riparian areas along the banks of the slough. Federal, state and local permits would be required for this work. Permit review is expected to require about 90 days. The county would also be required to perform restoration of impacted wetland and riparian areas.

Severe water quality problems in the Columbia Slough have led to a designation of the slough by the Oregon Department of Environmental Quality (DEQ) as "water quality limited" for a number of substances. Design of stormwater treatment facilities and any stormwater discharge from the corrections facility to the Columbia Slough would therefore receive considerable scrutiny from DEQ and City of Portland Bureau of Environmental Services.

Regulated Cultural Resources

A review of previous cultural resource studies indicates that the North Rivergate site lies in an area which contains a high density of prehistoric archaeological sites. Within a 3,500-foot radius of the site there are 12 known archaeological sites, situated along the shoreline of Bybee Lake and along the banks of Columbia and North Sloughs. This frequency suggests an archaeological site density of at least one site per 15-20 acres. There is therefore a high probability that cultural artifacts exist in native soils beneath the location of the proposed corrections facility.

Use of pilings to support the facility would disturb native soils and could impact archaeological or other cultural resources. Construction of a stormwater outfall to direct stormwater runoff from the facility to the Columbia Slough could also impact buried archaeological sites. Subsurface exploratory excavations, limited to the proposed footprint of the facility and to the alignment of a stormwater outfall, are required to determine if there are archaeological resources present in native soils underlying site fill material. These preliminary studies are expected to take a maximum of 60 days and cost approximately $45,000.

If deposits of prehistoric artifacts are found, obtaining the required permits, coordination with agencies and conducting required additional studies is expected to take a maximum of 6 months and result in additional costs of $35,000 to $105,000, depending on the significance of the artifacts present on the site.

It is extremely unlikely that Native American human remains (burial sites) are present on the site. However, if human remains are discovered during the cultural resource survey work, additional costs could be incurred. A protocol that would address this type of discovery will be included in the State Historic Preservation Office permit issued for the initial survey work. This protocol will contain provisions for consultation with the appropriate Tribes and public agencies and for disposition of the remains. Disposition of the remains could involve performing additional documentation and protection-in-place, reburial at an on-site location, or reburial at an off-site location selected by tribal representatives. Addressing this type of discovery is not expected to have schedule impacts beyond those described above, while costs could range from about $5,000 to in excess of $100,000 in the unlikely event that off-site burial of discovered remains is required.

Hazardous Materials

There are no significant development constraints at this site due to the presence of hazardous materials. However, results of laboratory analyses of site soils indicate that soils with a low level of contamination from polychlorinated biphenyls, or PCBs, are present at one subsurface location on the site. The volume of soil affected by PCBs is limited, and the level of contamination does not exceed the minimum recommended clean up level. Consultation with the Oregon Department of Environmental Quality (DEQ) about this soil has been initiated in order to determine whether a letter for no further action (NFA) can be obtained. If DEQ will not issue the NFA, it is recommended that the PCB contaminated soil be removed from the site. Estimated costs for removal of these soils range from $5,000 to $15,000.

iii <u>Environmental Fatal Flaws</u>

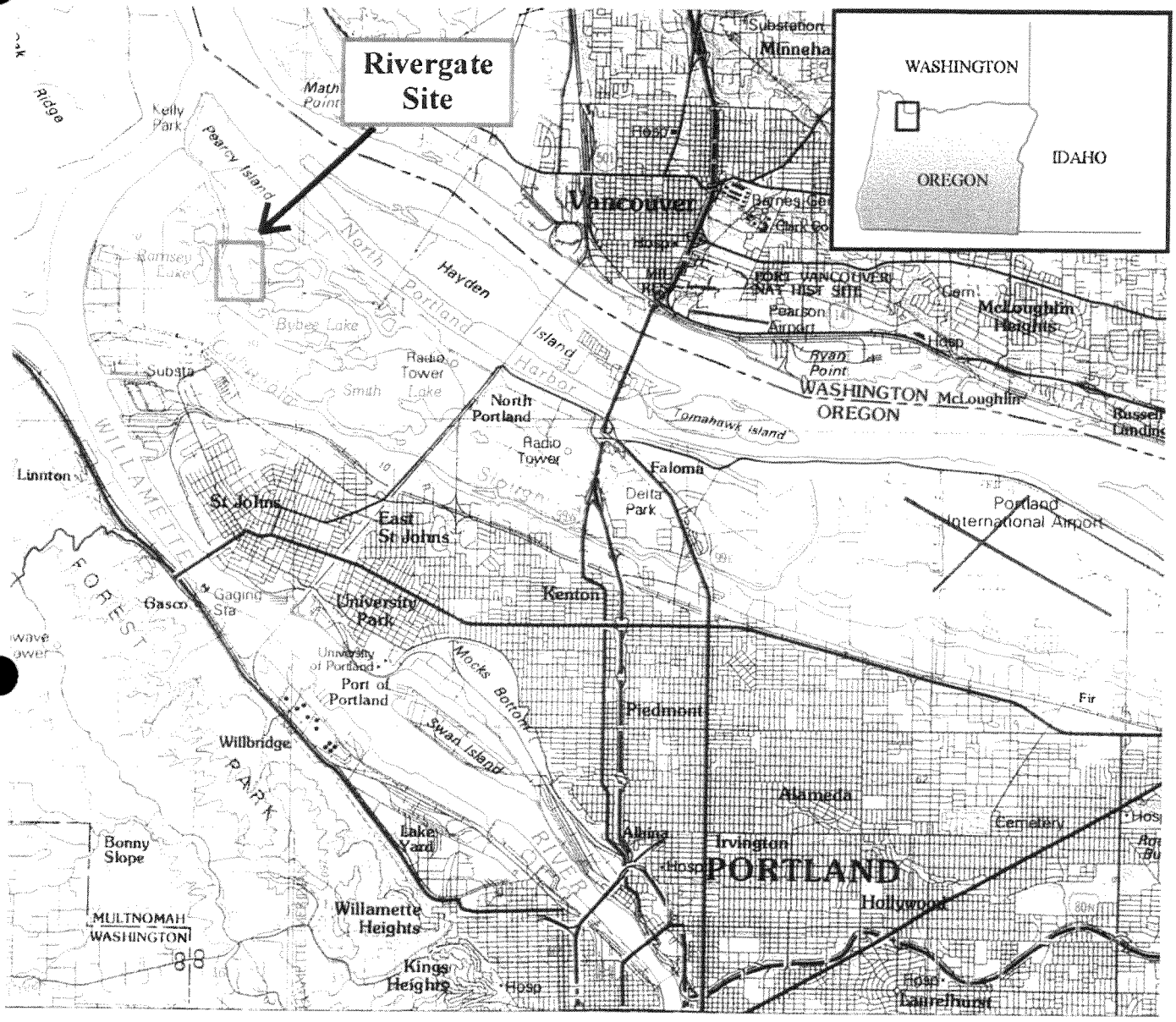
No potential environmental fatal flaws were identified for this site.

D. FINDINGS AND CONCLUSIONS

Costs related to environmental factors at this site include costs for wetland and riparian area restoration and permitting for possible construction of a stormwater outfall, further cultural resource evaluation, and possible clean up of low level PCB contamination of site soils. Wetland permitting and restoration costs associated with outfall construction are estimated to equal $20,000. Costs for the initial recommended cultural resource evaluation are expected to equal $45,000. There is a high probability that the results of the initial evaluation will indicate a necessity under federal and state law for additional studies, which are estimated to range in cost from $35,000 to $105,000. Estimated costs for clean up, if necessary, of site soils contaminated with low levels of PCB's range from $5,000 to $15,000.

Total estimated costs associated with environmental factors:	$70,000-$185,000
Estimated schedule impacts due to environmental factors:	2 to 6 months.

Attachments



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Approx. Scale: 1"=160 miles

Vicinity Map

Multnomah County New Corrections Facility: Rivergate Site

Portland, Oregon

Source: 30 x 60 minute Quadrangle, Vancouver, Washington (USGS 1979)

Figure 1

ADOLFSON ASSOCIATES, INC.

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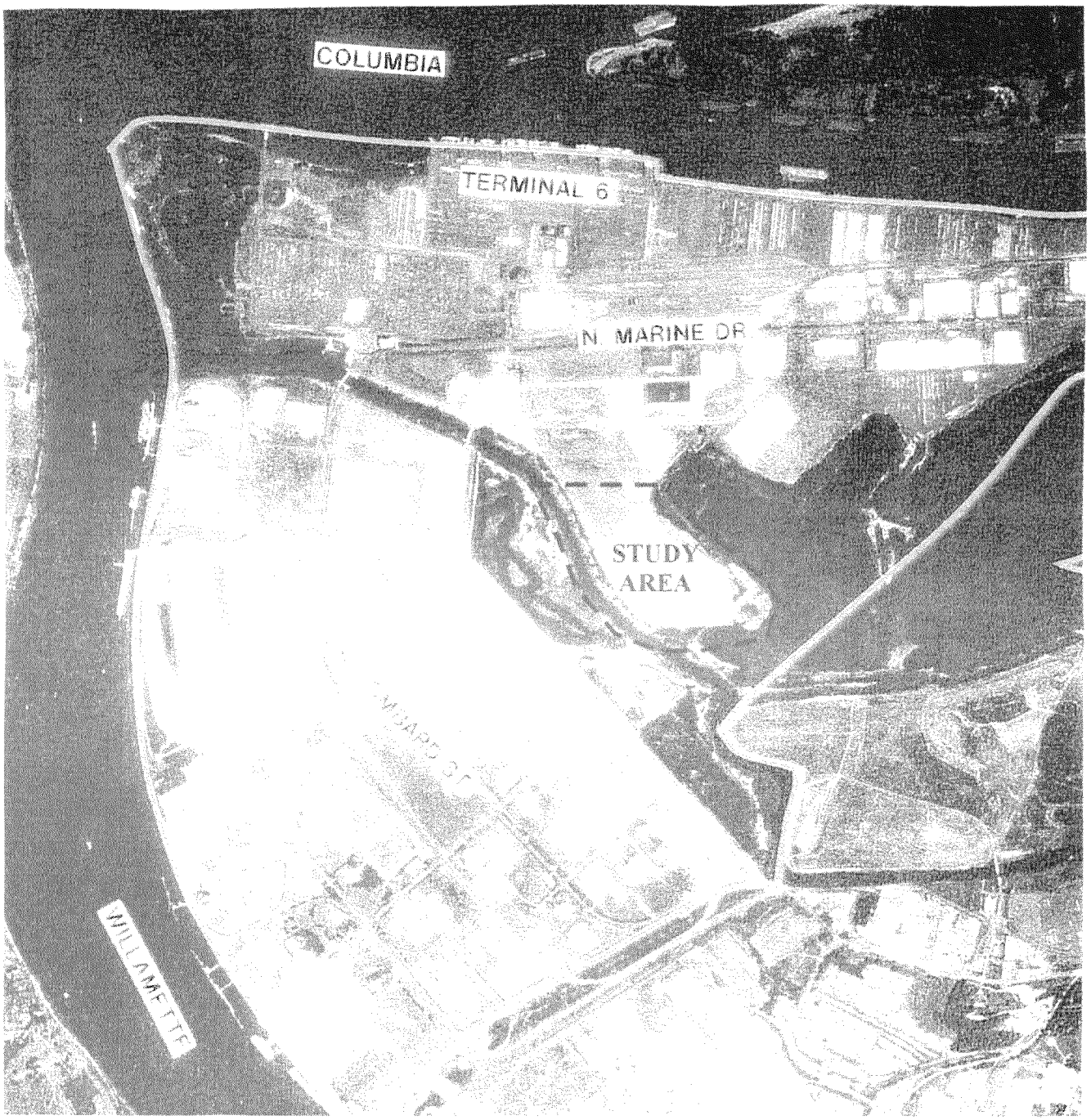

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Natural Resources Study Area

Multnomah County New Corrections Facility: Rivergate Site

Portland, Oregon

Figure 2

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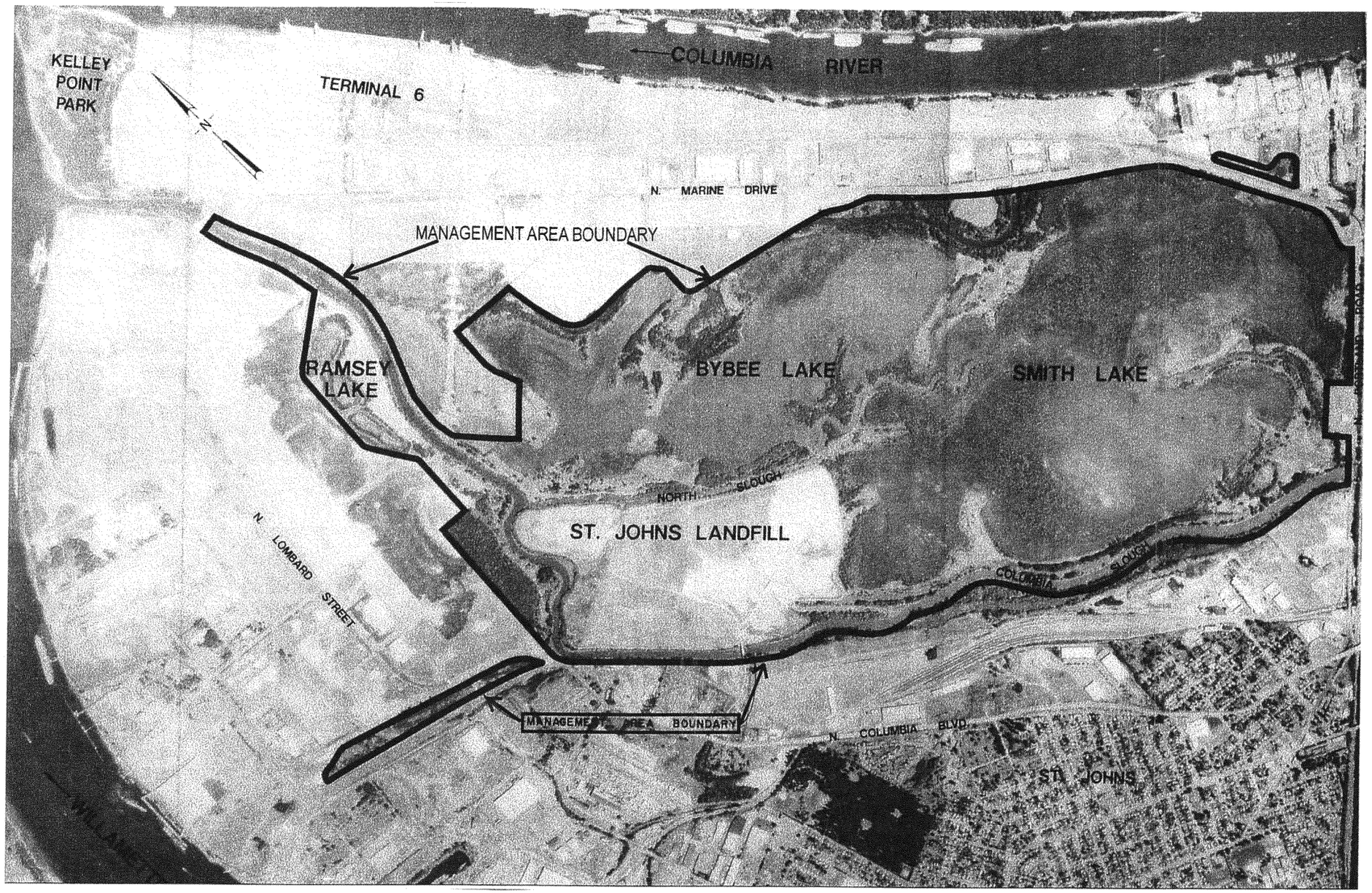

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Scale: 1"=1,700'

Smith and Bybee Lakes Management Plan Area

Multnomah County New Corrections Facility: Rivergate Site
Portland, Oregon

Source: Natural Resources Management Plan for Smith and Bybee Lakes, City of Portland and Port of Portland, 1990

Figure 3

ADOLFSON ASSOCIATES, INC.

APPENDIX 4.1
NATURAL RESOURCES ASSESSMENT REPORT

NATURAL RESOURCES ASSESSMENT

MULTNOMAH COUNTY NEW CORRECTIONS FACILITY: RIVERGATE SITE

Prepared for
Multnomah County Sheriff's Department
12240 NE Glisan Street
Portland, Oregon 97230

by
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In Association With
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421 SW Sixth Avenue, Suite 1300
Portland, Oregon 97204

OCTOBER 1998

Introduction

This technical report provides the results of a reconnaissance-level natural resources analysis by Adolfson Associates, Inc. (Adolfson) for the proposed construction and operation of the Multnomah County New Corrections Facility (MCNCF). The proposed MCNCF site is located in the Rivergate Industrial District in North Portland (Figure 1). This document supports the Preliminary Site Assessment for the site authorized by the Multnomah County Board of Commissioners. The reader is referred to that document for a detailed description of the project.

Adolfson conducted an on-site investigation on October 16 and November 2, 1998 to assess vegetation and wildlife resources both on and adjacent to the site. The study area encompasses approximately 75 acres of the Leadbetter Peninsula, an undeveloped industrial property located south of N. Leadbetter Road and bordered on three sides by the Smith and Bybee Lakes Management Area (Figure 2). This peninsula consists primarily of dredge fill material, between 10 and 20 feet in depth, with an approximate finish grade of 29 feet mean sea level (City of Portland datum). The study area included adjacent lands located between the fill slopes and the Columbia Slough to the west, and Bybee Lake to the south and east, and a corridor to the northwest of the proposed MCNCF that is proposed for a facility access road. From the southern tip of the Leadbetter Peninsula, the study area extends north approximately 2,100 feet. The proposed road corridor is approximately 9000 feet long and 125 feet wide.

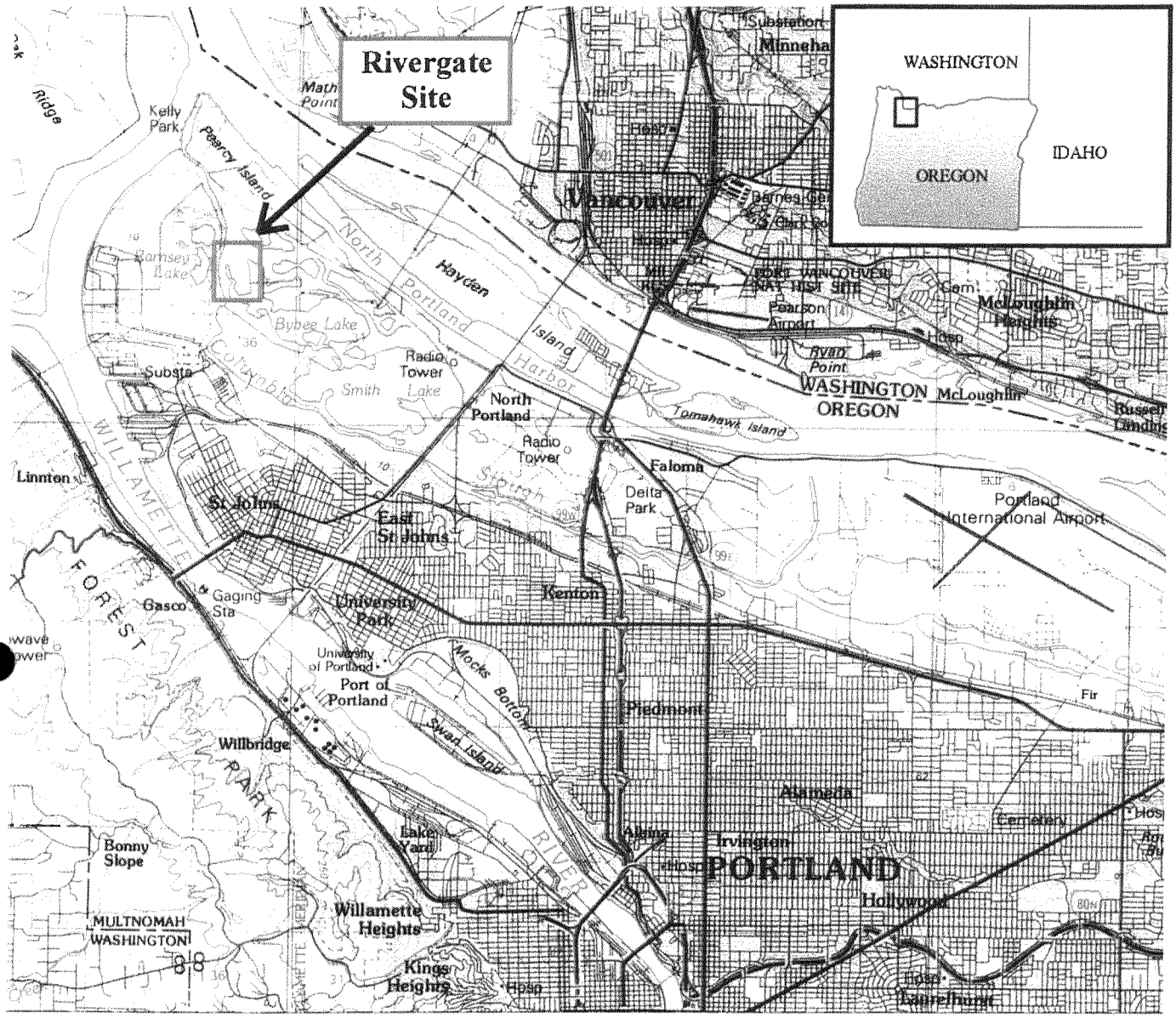
In addition to the on-site investigation, Adolfson reviewed available literature, maps, air photos, local zoning regulations, preliminary project documents and other background information. This review included discussions with representatives of Metro and other agencies. Adolfson also requested records of rare, threatened, and endangered plant and animal species reported at or near the project site from the Oregon Natural Heritage Program (ONHP).

Following is a review of natural resource reconnaissance findings and a summary of applicable local planning requirements. This review distinguishes between "on site" and "adjacent area" findings. Where applicable, potential impacts of construction and operation of the proposed facility are noted.

Natural Resources Reconnaissance

The proposed site for the MCNCF is situated in the City of Portland's Rivergate Industrial District near the confluence of the Willamette and Columbia Rivers (Figure 1). The site is located on a peninsula of industrial zoned land extending south from Leadbetter Road into designated open space lands containing Bybee Lake and the Columbia Slough (Figure 2). Historically, the site and the surrounding area were part of an extensive, interconnected complex of shallow lakes, sloughs, marshes, and other wetlands associated with the floodplain of the Columbia and Willamette Rivers. The Columbia Slough and the Smith and Bybee Lakes wetlands area are remnants of that historic ecosystem. After designation as part of the City of Portland's Industrial Sanctuary, the Leadbetter Peninsula was filled by the Port of Portland in the early 1990s with dredge material from the Columbia River. As currently planned, the corrections facility and all associated utilities would be located on this area of fill.

The east, west, and south edges of the filled Leadbetter Peninsula form the approximate boundaries of the Smith and Bybee Lakes Management Area (Management Area) (Figure 3). At approximately 2,000 acres, the Management Area contains the largest remaining semi-natural wetland complex in the Portland area. It includes Smith Lake, Bybee Lake, portions of the Columbia Slough, the former Saint John's Landfill, and the Ramsey Lake Wetlands. The *Natural*



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Approx. Scale: 1"=160 miles

Vicinity Map

Multnomah County New Corrections Facility: Rivergate Site

Portland, Oregon

Source: 30 x 60 minute Quadrangle, Vancouver, Washington (USGS 1979)

Figure 1

ADOLFSON ASSOCIATES, INC.

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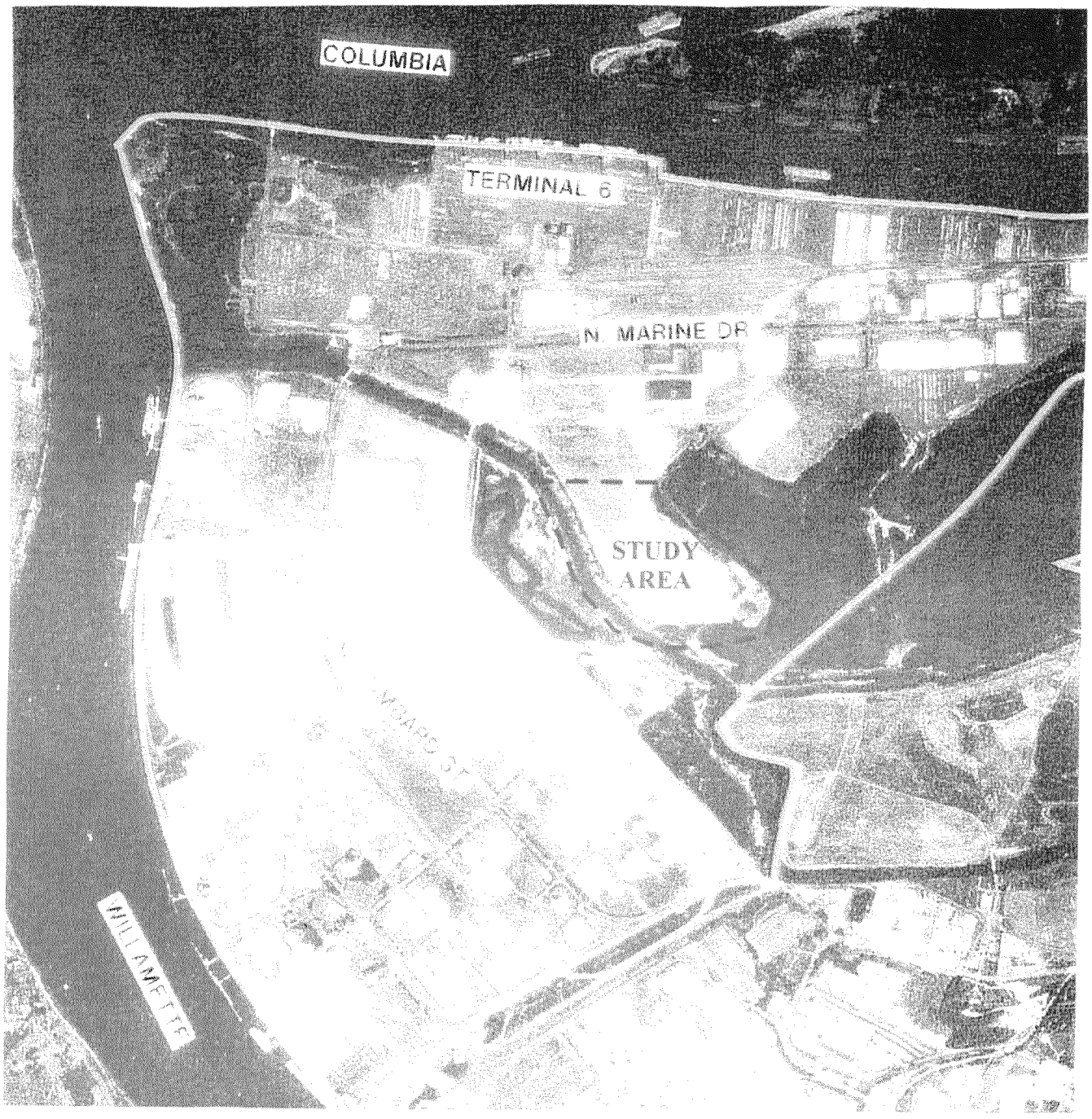

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Natural Resources Study Area

Multnomah County New Corrections Facility: Rivergate Site

Portland, Oregon

Figure 2

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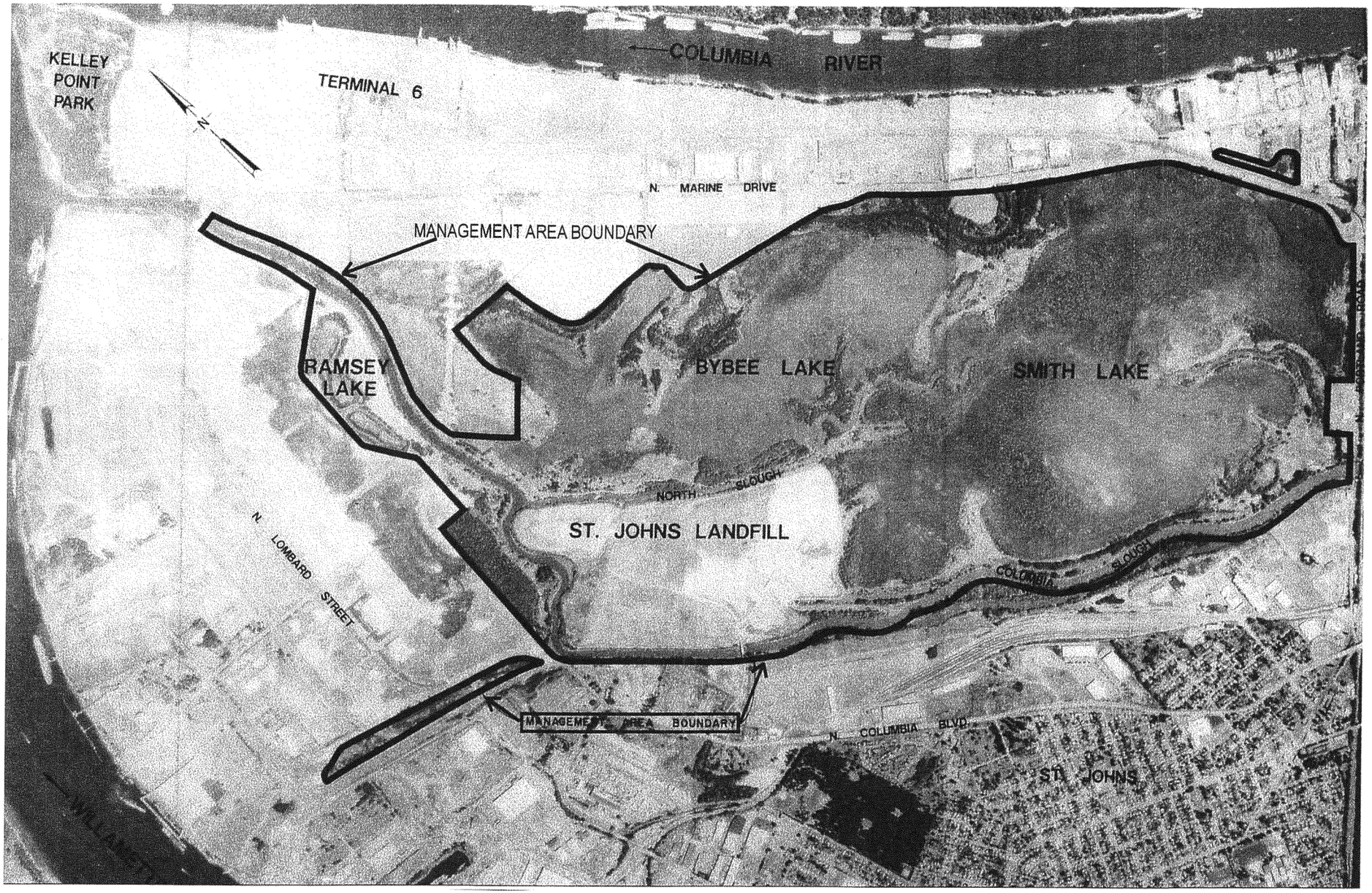

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Smith and Bybee Lakes Management Plan Area

Multnomah County New Corrections Facility: Rivergate Site

Portland, Oregon

Source: Natural Resources Management Plan for Smith and Bybee Lakes, City of Portland and Port of Portland, 1990

Figure 3

ADOLFSON ASSOCIATES, INC.

Resources Management Plan for Smith and Bybee Lakes (NRMP) (City of Portland and Port of Portland 1990) identifies specific goals, objectives, and policies for management of this area. Metro currently manages the Management Area.

Other local land uses include industrial developments along N. Marine Drive and N. Lombard Street and the St. John's residential neighborhood located two miles south of the site (Figure 4). The Heron Lakes Golf Course, Portland International Raceway, and the Metro Exposition Center lie east of the Management Area between N. Portland Road and Interstate 5.

Vegetation

On Site

The proposed correction facility would be placed on an upland site created from sandy, dredge fill material. This upland area is sparsely vegetated (less than 30 percent cover) primarily with weedy (invasive) species. Evening primrose (*Oenothera biennis*), Japanese brome (*Bromus japonicus*), tansy (*Tanacetum vulgare*), teasel (*Dipsacus fullonum*), Canada goldenrod (*Solidago canadensis*), Watson's willow-herb (*Epilobium watsonii*), and Canada thistle (*Cirsium arvense*) are distributed over most of the filled area. A small area (less than one acre in size) in the north central portion of the peninsula is dominated by sand plantain (*Plantago psyllium)* and an unidentified grass (thought to be *Agrostis* spp.). In this small area, vegetation also included black cottonwood (*Populus balsamifera trichocarpa*) saplings, Scouler's willow (*Salix scouleriana*) saplings, groundsel (*Senecio* spp.), pearly everlasting (*Anaphalis margaritacea*), tansy, common rush (*Juncus effusus*), evening primrose, bull thistle (*Cirsium vulgare*), and Canada thistle.

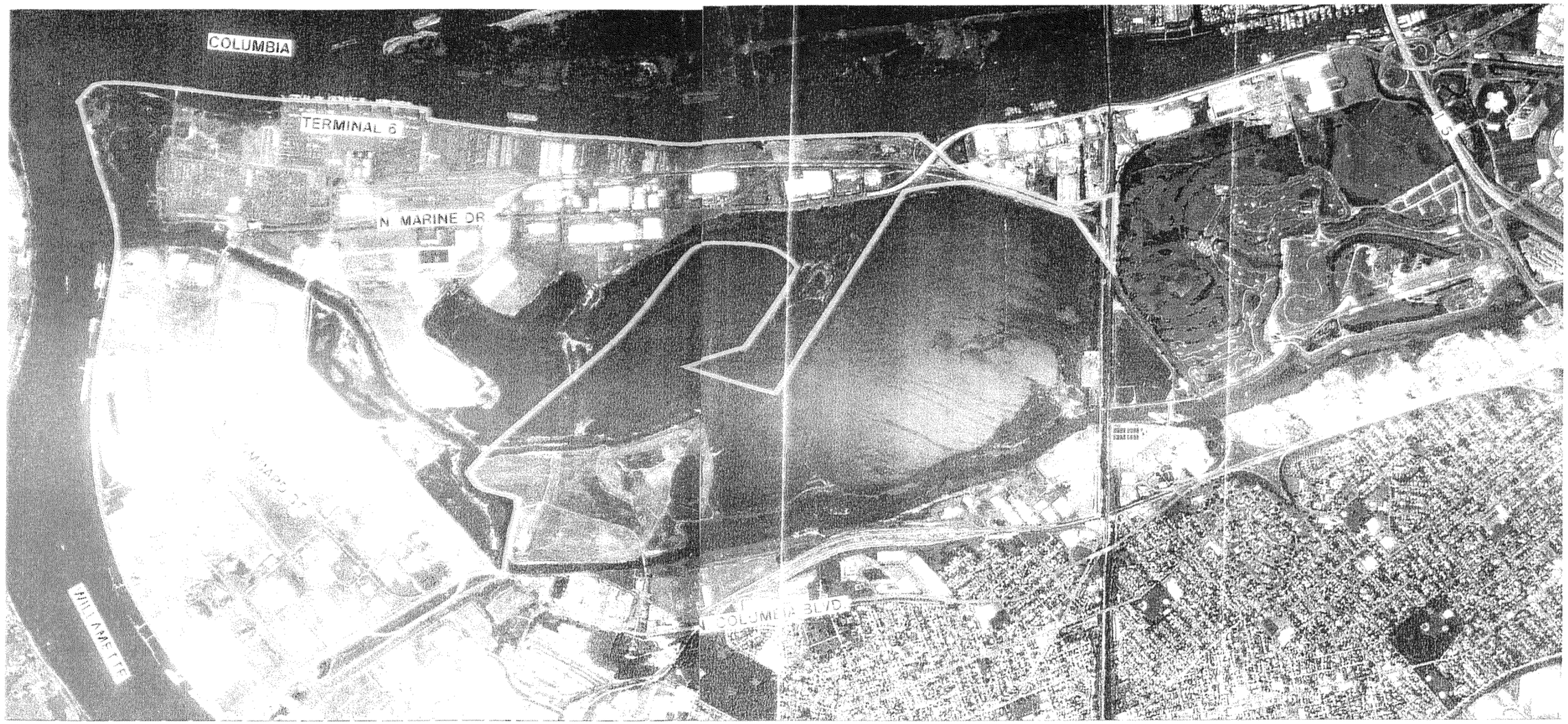
The proposed facility access road would intersect one area that was not filled during previous alterations of the site*. The area is located immediately south of a railroad grade and is best described as a ditch that conveys subsurface flow and is surrounded by filled areas. The area is approximately 200 feet long by 20 feet wide and contains a broad bench approximately eight feet below the filled area. At the lowest elevation (approximately 20 feet below the surface of the fill), a defined channel contains water that flows south into a 24-inch corrugated metal pipe. Plants within this portion of the area consist of those commonly found in wetlands including Columbia River willow (*Salix fluviatilis*), Scouler's willow, starwort (*Callitriche stagnalis*), soft rush (*Juncus effusus*) and common cattail (*Typha latifolia*). Plants growing on the bench and sideslopes are similar species and compositions as those in the filled areas described above. Due to the presence of hydrophytic plants, hydric soils, and hydrology, the lower elevation portions of the area meet the definition of wetlands as defined by the U.S. Army Corps of Engineers Wetland Delineations Manual (Environmental Laboratory 1987). Whether or not USACE or DSL would claim jurisdiction over the area is questionable, however, because the area may be included in a prior Section 404 permit to fill the area.

The ONHP Data Base search found no records of sensitive plant species occurring within two miles of the project site (Campos 1998, personal communication).

Adjacent Areas

Forested, scrub-shrub, and emergent wetland vegetation communities are located adjacent to the project site in the ecotone (edge habitat) between the sand fill and the Bybee Lake and Columbia Slough waterbodies. This area is dominated by reed canarygrass (*Phalaris arundinacea*), Oregon ash (*Fraxinus latifolia*), Pacific willow (*Salix lucida var. lasiandra*), and Scouler's willow (*Salix scouleriana*). Himalayan blackberry (*Rubus procerus*) is also found in this area, and is abundant in some locations.

* This area was filled subsequent to the field investigation and previous to November 20, 1998.



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Aerial photograph of North Portland Peninsula illustrating the location and extent of area land uses

Multnomah County New Corrections Facility: Rivergate Site

Portland, Oregon

Figure 4

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Vegetation assemblages of the Management Area were inventoried in 1992 and 1993 and documented in *The Biota of Smith and Bybee Lakes Management Area* (Lev et al. 1994). "Reed canarygrass," "water smartweed," "dead Piper's willow," "mixed deciduous forest" and "open water" assemblages are identified bordering the project site (Figure 5).

The only vegetation that will be subject to direct impacts from the construction and operation of the corrections facility at the project site will be the weedy upland species on the sand fill and those that inhabit the ditch that is within the proposed access road alignment. No direct or indirect impacts to adjacent wetland communities that are adjacent to the study area are anticipated.

Wildlife

On Site

Wildlife use of the sandy, upland area proposed for the corrections facility is limited. Evidence of coyote, fox, deer, rabbit, and rodents was noted in this area during the October 16, 1998 field investigation (Appendix A). The few bird species observed on site were chiefly associated with vegetation at the edges of the site along the slope of the fill. No amphibian or reptile species were observed in the study area during the field investigation.

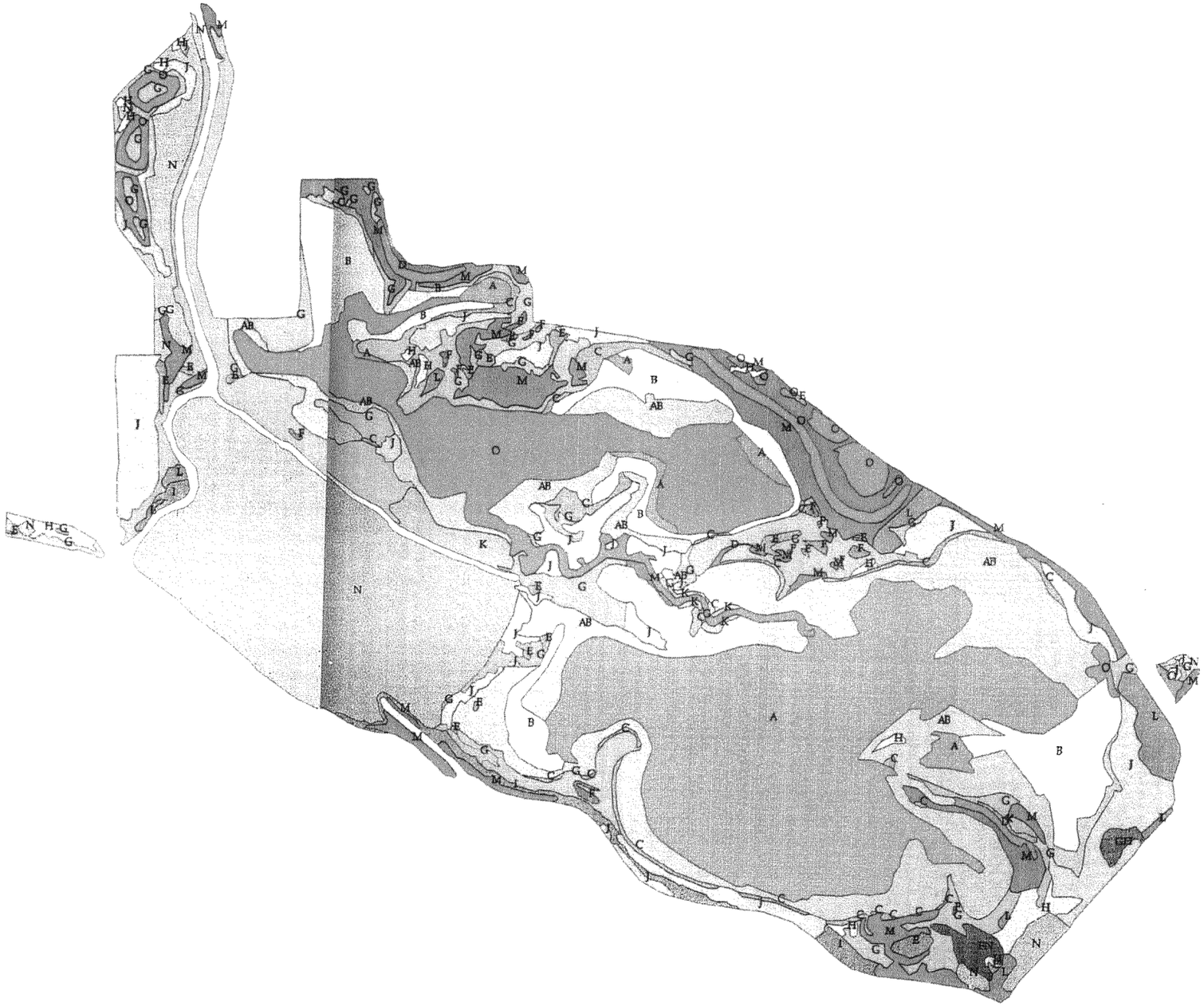
The ONHP Data Base search found no records of sensitive animal species occurring within two miles of the project site (Campos 1998, personal communication). The endangered peregrine falcon and threatened bald eagle have been observed at the adjacent Smith and Bybee Lakes (Metro unpublished data, Lev et al. 1994). These species may forage and/or perch in the wetland areas near the site, but there is no designated critical habitat for either listed species in the vicinity.

Due to the limited wildlife use of the sand fill site, construction and operation of the proposed Multnomah County corrections facility are not expected to have significant direct impacts to wildlife.

Adjacent Areas

During the October 16, 1998 field investigation, numerous species of birds and mammals were observed in the wetland ecotone located between the project site and the open water of Bybee Lake and the Columbia Slough (Appendix A). Bird species included kingfisher, American goldfinch, spotted towhee, black-capped chickadee, white-crowned sparrow, golden-crowned sparrow, song sparrow, and northern flicker. Important features of the wetland habitat include the structural diversity of the vegetation, the proximity to water, and the presence of habitat elements such as snags and downed logs.

Mammal species observed during the field investigation included a group of five river otters along the northwestern shore of Bybee Lake south of the project site. An individual otter was observed in the Columbia Slough near the outfall from the Ramsey Lake constructed wetlands. Evidence of beaver and raccoon was observed at several locations around Bybee Lake. Though not detected, bats and other mammals such as striped skunk and bushy-tailed wood rat are likely to occur in the area. Bats may forage over the project area, but no suitable roosting habitat is present.



SMITH/BYBEE LAKES

VEGETATION ASSEMBLAGES
JULY 1992

- O Open Water
- A Water Smartweed
- AB Water Smtwd & Dead Willow
- B Dead Willow
- C Shoreline Emergent
- D Drainage Channel Emergent
- E Pond Emergent
- F Columbia Sedge
- FN Sedge & Developed
- G Reed Canarygrass
- GH Reed Canarygrass & Willow
- H Willow Shrub-Scrub
- I Blackberry Shrub-Scrub
- J Pacific Willow Forest
- K Oregon Ash Forest
- L Black Cottonwood Forest
- M Mixed Deciduous Forest
- N Disturbed/Developed

No Scale

Vegetation Assemblages of the Smith and Bybee Lakes Management Area

Multnomah County New Corrections Facility: Rivergate Site
Portland, Oregon

Source: The Biota of Smith and Bybee Lakes Management Area, Lev et. al., 1994

Figure 5

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The Smith and Bybee Lakes Management Area, located adjacent to the proposed corrections facility site, is one of the most diverse and high quality natural resource sites in the Portland area. More than 100 species of resident and migratory birds have been reported at Smith and Bybee Lakes (unpublished Metro data). Waterfowl including wood duck, mallard, pintail, northern shoveler, hooded merganser, Canada goose, American wigeon, and bufflehead use the area. Numerous species of hawks, owls, shorebirds, woodpeckers, wrens, warblers, sparrows, swallows, swifts, and other birds are documented at Smith and Bybee Lakes.

Two peregrine falcon nest sites are located within eight miles of the project area; both are on man-made structures (personal observations). There are several bald eagle nest sites along the Columbia and Willamette Rivers in the project vicinity; the nearest is approximately two miles to the northwest of the project area (Isaacs and Anthony 1998). There are no bald eagle winter roosts in the Portland metropolitan area. It may be necessary to informally consult with the U.S. Fish and Wildlife Service to assure the project would have no effect to any listed and proposed threatened and endangered species under their jurisdiction.

Recent surveys of the Management Area reported the occurrence of three reptile species (western painted turtle, northwestern garter snake, and common garter snake) and three amphibian species (long-toed salamander, pacific treefrog, and bullfrog) (Lev et al. 1994). These species may use the wetland ecotone between the project site and Bybee Lake. The western painted turtle has been observed just east of the project site near the Columbia Sportswear development (Roth 1998; Brooks 1998). Lev et al. (1994) also reported 20 mammal species within the Management Area, including six species that are introduced, non-native species (i.e., opossum, nutria, eastern cottontail, red fox, domestic cat, and domestic dog).

The Columbia Slough and Smith and Bybee Lakes are occupied primarily by non-game fish and warm water game fish (Fishman Environmental Services 1987, City of Portland and Port of Portland 1990). However, juvenile chinook salmon are documented in these water bodies, which appear to provide rearing habitat for the species (Fishman Environmental Services 1987, City of Portland and Port of Portland 1990). Lower Columbia Evolutionary Significant Unit (ESU) chinook salmon is proposed for listing as threatened under the Endangered Species Act. Neither the Columbia Slough nor Bybee Lake is currently identified as designated critical habitat for any presently listed threatened or endangered fish (e.g., Lower Columbia River steelhead, Upper Columbia River chinook).

Wildlife within the Management Area adjacent to the project site may be indirectly impacted from both construction and operation of the facility. Wildlife occupying Bybee Lake and the Columbia Slough and the wetland edge habitat may be subject to visual and noise disturbance from construction activities on the site. The duration and magnitude of the potential impact of noise and visual disturbance would depend upon the location of the facility and associated utilities, the design, materials, and construction techniques, and the construction schedule (season and duration).

Facility operation will require nighttime illumination of structures and surrounding areas. Increased illumination at night (direct and indirect) has the potential to disrupt habitat use and the behavior of wildlife, particularly species that are nocturnal and crepuscular (active in twilight, at dawn or dusk). The west end of Bybee Lake contains numerous standing dead trees and woody debris, supports a large waterfowl population, and may serve as an important night roost for migrating and wintering waterfowl. Typical of urban areas, the project vicinity is presently highly illuminated. Existing forest vegetation buffers (or diffuses when the deciduous trees do

not carry foliage) Smith and Bybee Lakes from much of the direct light from nearby facilities. However, forest vegetation that could serve as a potential buffer between the proposed corrections facility and Bybee Lake is limited along the perimeter of the Leadbetter Peninsula.

Local Planning Requirements

The Rivergate site is zoned for Heavy Industrial (IH) use with an Aircraft Landing (h) overlay zone designation. Adjacent lands to the south, east, and west are zoned Open Space (OS) with Environmental Conservation (c) and Environmental Protection (p) overlays. The site shares a common boundary with the Management Area (see discussion below). Development activities within this area are subject to the requirements of the NRMP.

On Site Zoning

The IH zone implements the Industrial Sanctuary map designation of the Comprehensive Plan. This zone allows all types of industrial uses, including those not desirable in other zones due to their objectionable impacts or appearance. Detention facilities, such as the proposed corrections facility, are allowed as Conditional Uses in the IH zone. A Conditional Use is reviewed as a Type III procedure that normally takes three to four months and requires a public hearing. The approval criteria for Conditional Uses for detention facilities address (A) appearance, (B) safety, and (C) public services. Criterion A is the most applicable to environmental issues. This criterion requires that the appearance of the proposed facility be compatible with the surrounding industrial and open space uses.

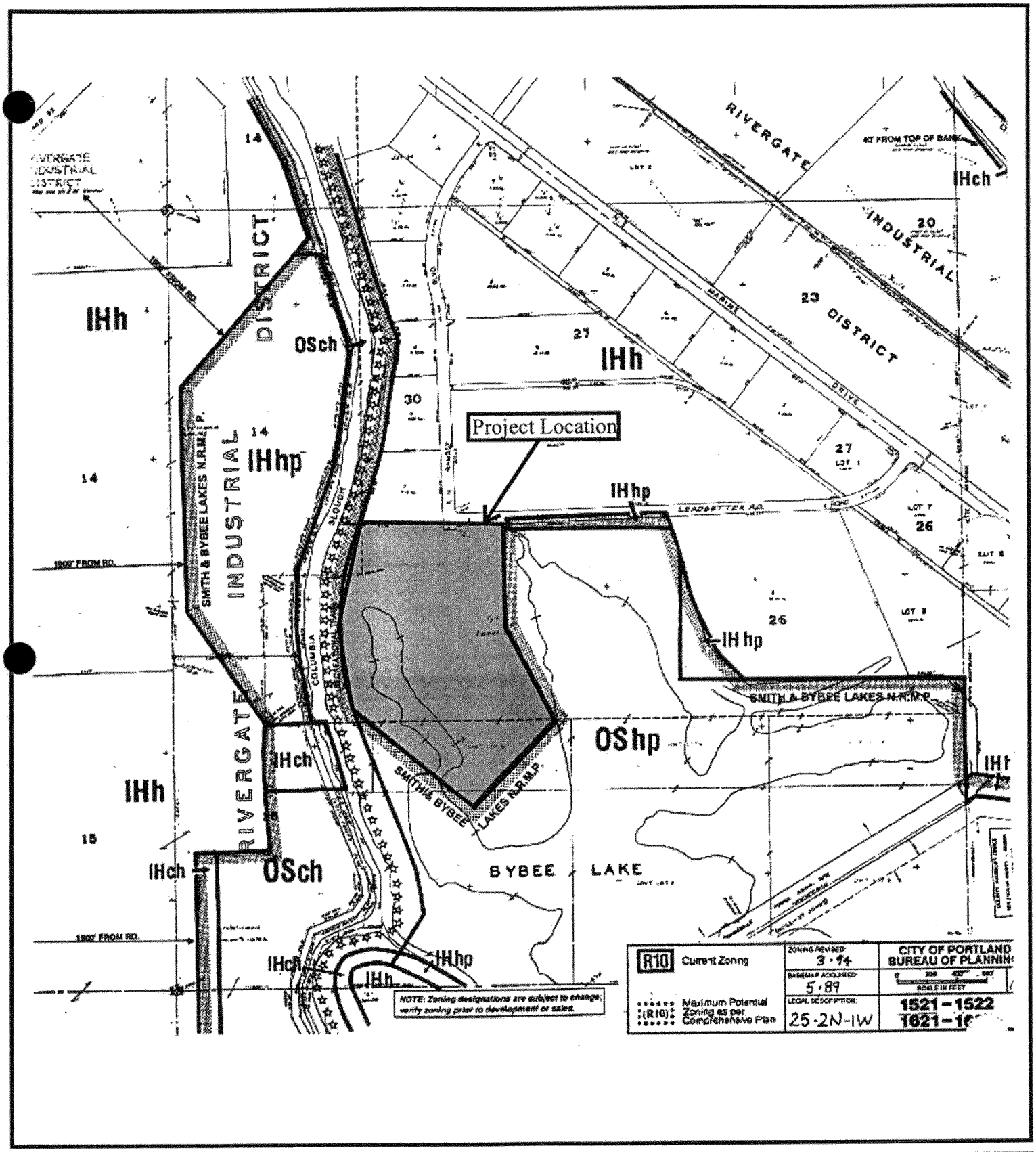
The Aircraft Landing overlay zone requires all structures and vegetation to be subject to the height limits shown on the Aircraft Landing Zone Map. According to Engstrom (1998), the height limit for vegetation and structure at this site is hundreds of feet above the ground, and will not likely impact the proposed jail.

Adjacent Zoning

Zoning to the south, east, and west of the site is classified as Open Space (OS). This zone preserves public and private open space and natural areas identified by the Comprehensive Plan. Although the proposed facility will not be located in the OS zone, associated infrastructure such as stormwater outfalls to the Columbia Slough may cross into the zone. Such basic utilities are Conditional Uses in the OS zone.

In 1989, the City of Portland adopted the *Columbia Corridor Environmental Mapping Project* (Columbia Corridor Plan), which applied environmental zones to resource areas adjoining the proposed jail site. These areas included the Columbia Slough and the Smith and Bybee Lakes ecosystem. The Slough, identified as Water Feature Site 40 in the Columbia Corridor Plan, received a limited level of protection as a conservation (c) zone. Among other noted resource values, the Slough received one of the higher Wildlife Habitat scores for water features within the Columbia Corridor. The Columbia Corridor Plan notes that Smith and Bybee Lakes (Site 55) form "the largest, most significant wetland area in the City of Portland" (City of Portland 1989). This site received full protection and the City designated it as a protection (p) zone.

The NRMP, adopted by the City of Portland in 1990, superseded the environmental zoning requirements contained in the Columbia Corridor Plan. The NRMP established a series of



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Approx. Scale: 1"=600'

Zoning Codes

Multnomah County New Corrections Facility: Rivergate Site

Portland, Oregon

Source: City of Portland, Bureau of Planning, March, 1994

Figure 6

ADOLFSON ASSOCIATES, INC.

97146zone.cdr

management zones within the larger Management Area. The Resource Boundary, which borders the project site, sets forth the following objectives:

- utilize external buffers that protect the resource (e.g., landscaping)
- limit public access to the resource to desired points
- develop strategies in cooperation with adjoining property owners and neighborhood organizations to protect the resource, and
- to the extent possible, inform users and potential users as they approach or enter the resource.

As currently planned, no development will occur within the Management Area and thereby require compliance with the NRMP. However, Policy 22 of the NRMP establishes standards for lands adjacent to the Management Area. Engstrom (1998) references this policy in his discussion of zoning requirements. It should be noted that these policies were adopted by the City as part of the NRMP, yet no corresponding zoning or other implementing provisions were created. The standards contained in Policy 22 include: (1) planting on slopes, (2) vegetative screening to obscure views of the facility from the lake and trail system, (3) providing a 10-foot wide vegetative screen to minimize industrial activity if no opportunity exists to buffer the site from the resource, and (4) the use of cut-off type light fixtures to minimize illumination into the management area.

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APPENDIX A

WILDLIFE SPECIES OBSERVED OR EVIDENCED DURING FIELD RECONNAISSANCE

Latin name	Common Name
Mammals	
Sylvilagus spp.	rabbit
Castor canadensis	beaver
Canis latrans	coyote
Vulpes vulpes	red fox
Myocastor coypus	nutria
Odocoileus hemionus	black-tailed deer
Procyon lotor	raccoon
Lutra canadensis	river otter
Birds	
Podilymbus podiceps	pied-billed grebe
Phalacrocorax spp.	cormorant
Larus	gull
Branta canadensis	Canada goose
Anser albifrons	greater white-fronted goose
Anas platyrhynchos	mallard
Anas clypeata	shoveler
Anas strepera	gadwall
Anas acuta	northern pintail
Anas americana	American wigeon
Anas crecca	green-winged teal
Aix sponsa	wood duck
Fulica americana	American coot
Ardea herodias	great blue heron
Casmerodius albus	great egret
Zenaida macroura	mourning dove
Buteo jamaicensis	red-tailed hawk
Begaceryle alcyon	belted kingfisher
Colaptes auratus	northern flicker
Aphelocoma coerulescens	scrub jay
Corvus brachyrhynchos	common crow
Parus africapillus	black-capped chickadee
Turdus migratorius	American robin
Agelaius phoeniceus	red-winged blackbird
Melospiza melodia	song sparrow
Passerculus sandwichensis	Savannah sparrow
Junco hyemalis oreganus	Oregon junco
Zonotrichia leucophrys	white-crowned sparrow
Zonotrichia atricapilla	golden-crowned sparrow
Pipilo erthrophthalmus	spotted towhee
Carduelis tristis	American goldfinch
Reptiles	
Chrysemys picta bellii	western painted turtle

APPENDIX 4.2
CULTURAL RESOURCES INVENTORY

CULTURAL RESOURCES RECONNAISSANCE FOR THE LOCATION OF A PROPOSED NEW MULTNOMAH COUNTY CORRECTIONS FACILITY IN THE RIVERGATE DISTRICT, PORTLAND, OREGON

By

David V. Ellis
and
Maureen M. Zehendner

November 9, 1998

Archaeological Investigations Northwest, Inc. Letter Report No. 247

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INTRODUCTION

The Multnomah County Sheriff's Department has proposed construction of a new corrections facility to be located in the Rivergate District in North Portland, Oregon. The proposed location is between Bybee Lake and Columbia Slough, about one kilometer (3,500') south of N. Marine Drive. The corrections facility would occupy about 22 acres in an area presently designated for industrial development. It is situated primarily in the E 1/2 of the SW 1/4 of Section 25, T. 2N, R. 1W, Willamette Meridian, with small portions of the project location extending into the S 1/2 of the SE 1/4 of the NW 1/4 and the NW 1/4 of the SW 1/4 of the SE 1/4 of Section 25 (Figure 1). The property is currently owned by the Port of Portland.

The corrections facility would be constructed in phases. The first phase would consist of a 225-bed facility, with associated parking areas, access roads, etc. At full build-out, the facility would accommodate 2,000 beds. The main building would occupy about 1.4 acres in the first phase, expanded to about 6.2 acres in the second phase. This building would possibly involve disturbance of the native soils underlying the dredged sands. This disturbance would consist of pilings driven through the dredged fill into native soils, if the building cannot be supported by spread footings. The other elements of the facility (e.g., roads and parking areas) would involve excavations only into the upper portion of the dredged material. At this time, underground utilities to service the corrections facility would largely entail excavations only into the dredged sands, but a new outfall would be constructed from the facility to Columbia Slough. The new outfall would require excavations in native soils from the facility to the slough. From the first phase building to the slough is about 245 m (800'), about 75% (185 m [600']) of which would be through native soils underlying the dredged fill. The remainder of the alignment would be through native soils along the slough that have not been covered by dredged sand.

As presently planned, construction and development of the corrections facility would have no federal involvement except for the new outfall to Columbia Slough. Construction of the outfall would require obtaining a permit under the Clean Water Act from the US Army Corps of Engineers (ACOE). This portion of the project would therefore be subject to provisions of the National Historic Preservation Act. All of the proposed development would also be subject to the provisions of ORS 97.745, 358.920, and 390.235, which prohibit the disturbance of Indian graves and significant archaeological sites on public lands in Oregon. In addition, the project may be subject to the provisions of the Smith and Bybee Lakes Natural Resources Management Plan (NRMP), although the proposed corrections facility is situated just outside of the NRMP boundaries. Policies 27 and 28 of the NRMP state the importance of the archaeological resources of the management area and require archaeological surveys for proposed projects that "include dredging, excavation, fill, or possible changes in the hydrological regime of the lakes and Columbia Slough."

To address these requirements, Multnomah County contracted with Archaeological Investigations Northwest, Inc. (AINW), to conduct a reconnaissance survey for the proposed corrections facility location. The reconnaissance survey consisted of a review of records of the Oregon State Historic Preservation Office (SHPO) and the literature to determine (1) if there are previously recorded archaeological resources at the project location or in the immediate vicinity or (2) if archaeological resources are likely to occur at the project location. In addition, the reconnaissance survey included archaeological monitoring of geotechnical probes conducted at the project location. Based on the results of the records search, literature review, and monitoring of the geotechnical probes, AINW was to provide recommendations for any additional investigations needed to address the legal requirements.

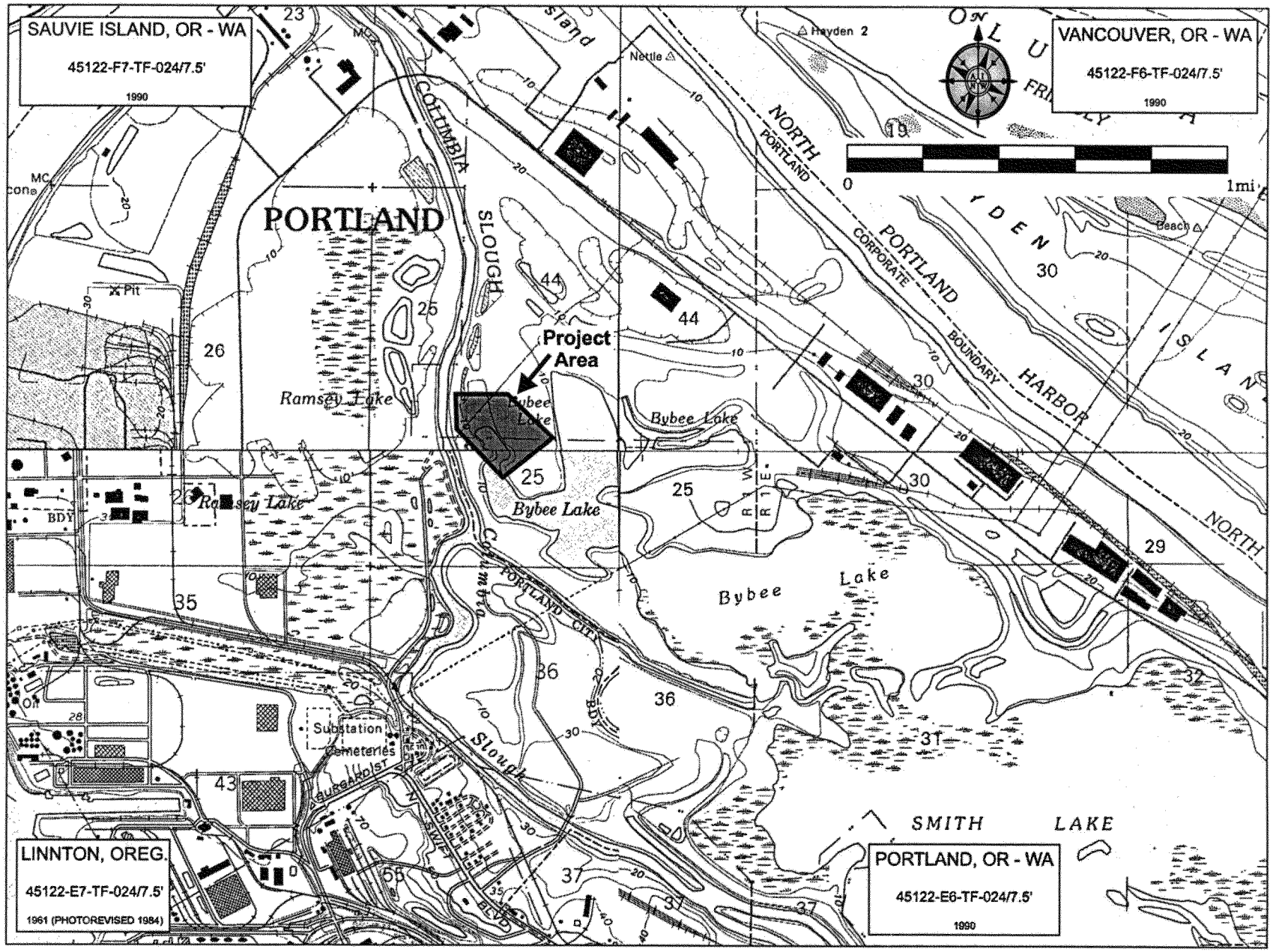

Figure 1. Proposed Rivergate location for the new Multnomah County Corrections Facility and known archaeological resources in the project area. **(This version of Figure 1 has omitted sensitive site locational information.)**

ENVIRONMENTAL SETTING

The project location is on the floodplain of the Columbia River about 3 km (1.8 miles) SSE of the confluence of the Columbia and Willamette rivers. The modern Willamette River channel is about 2.3 km (1.4 miles) to the west. The corrections facility would occupy a peninsula along the northwestern shore of Bybee Lake, a broad, shallow body of water typical of floodplain lakes in the Portland Basin. About 100 m (330') west of the project location is Columbia Slough, the major floodplain drainage. The western terminus of the slough with the Willamette River is about 1.8 km (1.1 miles) to the northwest. Bybee Lake is connected to Columbia Slough via North or Bybee Slough, an east-west tributary of Columbia Slough. The confluence of Columbia and North sloughs is about 400 m (a quarter mile) southwest of the present project location.

Most of the floodplain in the project area is at an elevation of 3.0-6.1 m (10-20') NGVD. Water levels in Columbia Slough and Bybee Lake fluctuate in response to changes in the Willamette and Columbia river levels, which are in turn influenced by precipitation, tidal fluctuations, and releases of water at Bonneville Dam. Modern stream-gage data indicate that water levels in Columbia Slough vary from about 1.5 m (5') in the fall to about 4.0 m (13') during normal winter floods. In rare, major flood episodes, water levels may reach 9.1 m (30') in elevation. Bybee Lake is generally characterized by a shoreline that slopes very gradually back from the water to higher ground (although a well-defined bank 50-80 cm (20-32") high occurs along some portions of the shoreline). Broad mud flats may be exposed along the shoreline at times of very low tides or when river levels fall. Presently the water level in Smith and Bybee lakes is controlled by means of a pump at the upper end of North Slough, where an earthen dam now blocks the connection between the slough and Bybee Lake.

The project location is now characterized primarily by a 4.0-4.7 m (13-16') layer of fill composed of dredged sand and deposited within the past seven years. The surface of the fill has a very sparse cover of grasses and weedy plants. The dredged fill does not extend to the eastern edge of the peninsula or to Columbia Slough to the west. As a consequence, the fill is bounded on the west and east by a broad band of riparian vegetation dominated by cottonwood, ash, and willow trees. These riparian zones have a dense understory of shrubs and grasses, especially reed canarygrass.

The project area has been substantially altered since Euroamerican settlement in the 1840s and 1850s, with the greatest changes having occurred over the past 50 years. When the project area was first mapped in 1854, it was landscape dominated by water—the Columbia Slough network, Ramsey Lake between Columbia Slough and the Willamette River, Smith and Bybee lakes to the east, and numerous ponds and marshes (General Land Office [GLO] 1854a, 1854b). Neighboring land areas tended to be low and wet except for higher ground along the banks of the major sloughs and the Columbia and Willamette rivers. Cottonwood, ash, and willow trees lined the banks of the sloughs and rivers, with lower ground occupied by thick brush or wet prairie. Much of this area was subject to flooding every year, most notably in the spring freshets that lasted 2-4 weeks in late spring or early summer.

The historical character of the immediate project location first emerges in a detailed map prepared in 1888 (US Coast and Geodetic Survey 1888). This map (Figure 2) shows the peninsula well-defined at the northwestern edge of Bybee Lake and apparently occupied by wet prairie or grasslands. The banks of Columbia Slough to the west were occupied by trees or brush. To the north, the Columbia River was closer than it is today. Until the 1920s, Pearcy (or Pearcy's) Island extended along the Columbia River shoreline upstream from the mouth of the Willamette River. The island was separated from the mainland by a narrow, shallow channel (Pearcy's Slough). This channel was filled through a combination of natural accretion and artificial fill, and the island coalesced with the mainland. The modern south shore of the

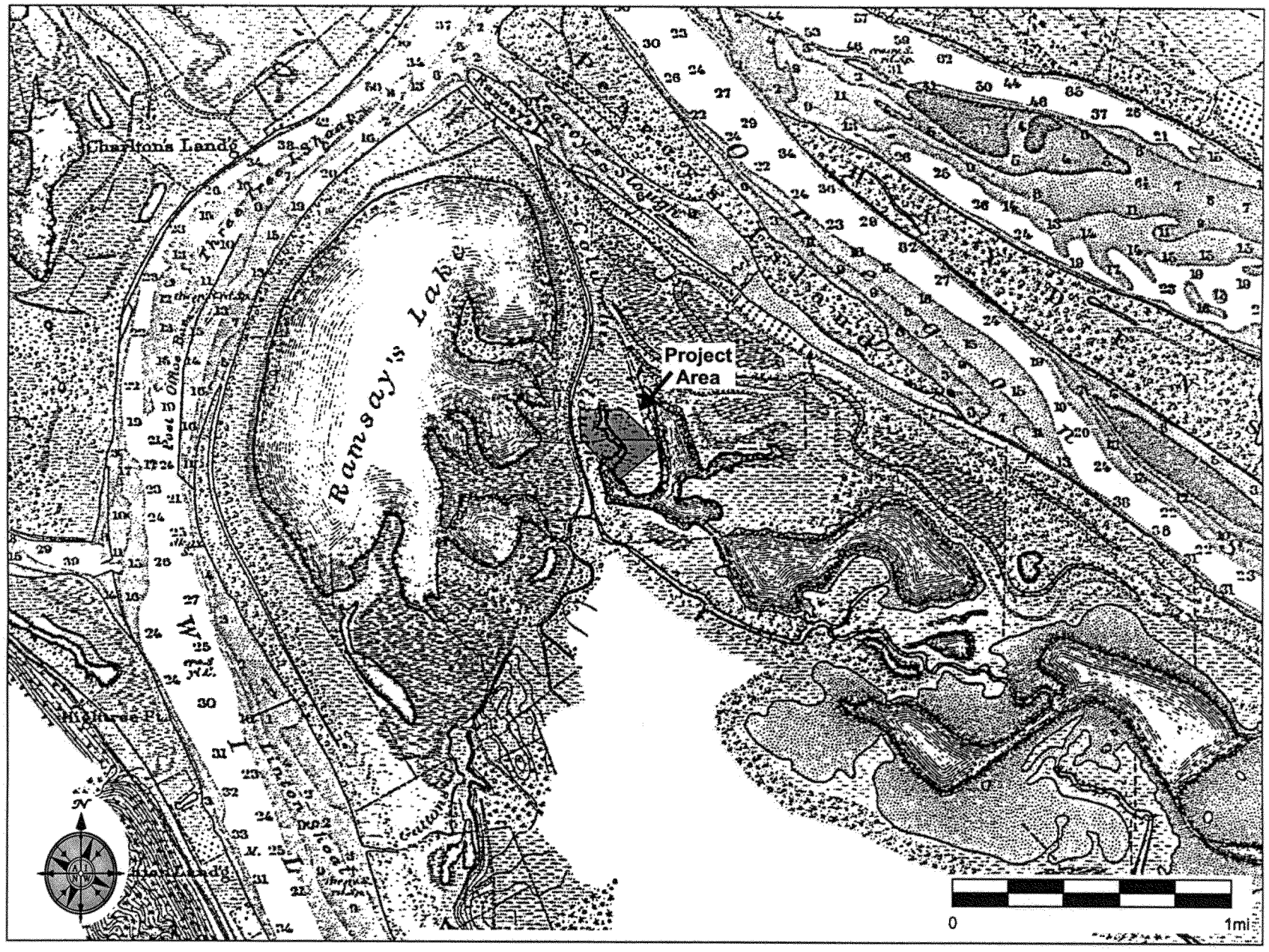

Figure 2. Project area setting in 1888. (Base map: US Coast and Geodetic Survey 1888)

Columbia River for 2-3 km (1.2-1.8 miles) above its confluence with the Willamette River represents the former Pearcy Island shoreline. Modern N. Marine Drive follows the old river shoreline through this area.

Until the early twentieth century, farming of the Columbia River floodplain in the Portland area was limited by the annual spring freshets. Grazing of cattle and hay production were the only viable agricultural uses in most areas. The 1888 US Coast and Geodetic Survey map reflects these constraints. The only signs of Euroamerican settlement in the general project area were a few fences cutting across the grasslands. The few farms in the area were clustered on the banks of the Columbia River, with some orchards on this higher ground. Diking and drainage projects were initiated on the floodplain in the years just before and after World War I, which allowed growth of row crops. These projects, however, never extended west of Smith Lake, and the immediate project area never experienced the transition to more intensive farming seen farther east.

The project area landscape remained rural in character until about World War II. Aerial photographs of the project location in 1929 and 1936 (US Army Corps of Engineers, aerial photographs 29-136 and 36-5851, on file, US Army Corps of Engineers, Portland District) show the peninsula occupied by grasslands (which appear to be harvested for hay in the 1936 aerial photograph). There was a narrow band of trees and brush along the Bybee Lake shoreline, with slightly greater vegetation along Columbia Slough. This rural character began changing in the years just before and during World War II. The "City Dump" (St. Johns Landfill) was established just to the south of Bybee Lake in 1939. The development of the sprawling Oregon Shipbuilding Corporation facility along the Willamette River south of Ramsey Lake occupied a former expanse of marsh, sloughs, and prairie. Planned development of the Willamette River shoreline to the north led to efforts during the war to drain and fill portions of Ramsey Lake. The development plans were abandoned with the end of the war, only to be revived in the 1960s and 1970s. During the latter decades, most of the Ramsey Lake area was filled with dredged sands for development of the newly designated Rivergate District. The fill was also extended to the east side of Columbia Slough, where N. Marine Drive had been extended westward to the slough. With development proposed along Marine Drive, extensive fill was placed on both sides of this road (Green 1983:Sheets 5, 6, 7, and 15; US Coast and Geodetic Survey 1947; US Geological Survey 1954).

The project location was largely bypassed by these developments as it was not readily accessible from the main transportation corridor to the north (Marine Drive and the Burlington Northern Railroad). In addition, the peninsula was low and subject to flooding until the early 1990s. A map of the project location using 1991 aerial photography (City of Portland, Office of City Engineer, Map #1621, 1991, on file, Office of City Engineer, Portland) indicates that a dike had been constructed near the southern tip of the peninsula, apparently to form a barrier between the lake and the majority of the peninsula. It appears that fill had begun to be placed over the peninsula within the diked area at the time of the aerial photography (September 19, 1991). The eastern and southern shoreline was not subject to filling and retained something of its original character. When completed, the fill was about 4.0-4.9 m (13-16') thick over native soils on the peninsula, and much thicker where the arm of the lake that once defined the western side of the peninsula was filled. Only a small portion of the western arm of the lake remains, along the southwestern edge of the peninsula.

PREVIOUS CULTURAL RESOURCE INVESTIGATIONS

The earliest information on archaeological resources in the general project area came from local artifact collectors. Strong (1959:26, 31-32) referenced two archaeological sites on Columbia Slough, both

outside the present project area. Barber (ca. 1978:24) reported that a collector who lived in St. Johns knew of "15 Indian campgrounds, hunting and fishing areas, beds of cast-off fresh water clams, along the Columbia Slough and in the nearby lakes, Bybee and Smith, where he found evidence of Indian activity." Two of these sites are located at the confluence of Columbia and North sloughs and another six around Smith and Bybee lakes. No other details on locations or site character were provided.

Based on the information provided by avocational archaeologists and plans for development of the Rivergate District, a project to locate and document the archaeological resources along lower Columbia Slough and around Smith and Bybee lakes was initiated in 1977 by Thomas M. Newman in the Department of Anthropology at Portland State University (PSU). Over the next two years, the PSU project recorded 9 archaeological sites around Smith and Bybee lakes and 8 sites along the lower three kilometers (2 miles) of Columbia Slough (see Figure 1). Of the 16 sites recorded by PSU, 8 are within one kilometer of the project location. Four of these sites (35MU44, 35MU46, 35MU51, and 35MU52) are located along the left (western or southern) bank of Columbia Slough. Sites 35MU51 and 35MU52 consisted of lenses of charcoal and fire-stained earth exposed in the bank and artifacts (fire-cracked rock [FCR] and debitage [flaking debris]) on the adjacent beaches. Site 35MU51 extended for about 35 m (115') along the bank and 35MU52 for about 100 m (330') (Portland State University ca. 1980; site forms for 35MU51 and 35MU52, on file, Oregon State Historic Preservation Office, Salem). The latter site was considered likely to represent the remains of an major campsite, given the horizontal extent and density of artifacts (Portland State University ca. 1980:28-29). Sites 35MU44 and 35MU46 will be discussed later in this section.

The other four sites recorded by PSU within one kilometer of the present project location are along the northern shoreline of Bybee Lake. Three of these sites (35MU20, 35MU21, and 35MU22) are to the east of the project location, and all are described as surface scatters of FCR, and other artifacts (projectile points, scrapers, and pestles) extending along the shoreline and into the lake (Site forms for 35MU20, 35MU21, and 35MU22, on file, Oregon State Historic Preservation Office, Salem). The fourth site (35MU15) was recorded at the southern tip of the peninsula on which the proposed corrections facility would be constructed. Site 35MU15 was described as an "area of fire-cracked rock [and one scraper] located below average water level" (Site form for 35MU15, on file, Oregon State Historic Preservation Office, Salem). The areal extent of these four sites is uncertain. The site form maps suggest that some sites extended for considerable distances along the lake shore, but no dimensions are provided.

Two sites recorded by PSU (35MU44 and 35MU46) were defined by thick midden deposits with abundant artifacts. Both of these sites had been disturbed by excavations of artifact collectors (Portland State University ca. 1980:29-31; Site forms for 35MU44 and 35MU46, on file, Oregon State Historic Preservation Office, Salem). In 1979, PSU conducted a survey and limited excavations (auger probes) at these two sites in preparation for construction of the N. Lombard pumping station. Considerable cultural debris (including a diverse artifact assemblage) was recorded, but no further studies were conducted as it was determined that construction of the pumping station would not affect the archaeological sites (Kent 1979).

Later cultural resource studies have provided more data on 35MU44/35MU46. In 1990, more extensive excavations were conducted at these sites on behalf of the Port of Portland. These excavations indicated that these two sites were actually two portions of a larger site. Although the site(s) had been disturbed by unauthorized excavations by artifact collectors, substantial cultural deposits remained intact, including midden deposits up to a meter in thickness. Site 35MU46 was interpreted as a major domestic site (a probable winter village), with 35MU44 as an associated seasonal camp. Three radiocarbon samples from 35MU46 provided radiocarbon ages of 250±50 BP, 330±50 BP, and 390±50 BP (calibrated

ages ranging from about AD 1425 to AD 1810). Woodward also found possible structural remains and other archaeological evidence of residential structures at 35MU46 (Woodward 1990).

Cultural resource investigations for proposed stormwater projects along the western bank of Columbia Slough led to some further research in the vicinity of 35MU51 and 35MU52. Survey and limited subsurface explorations in these areas encountered only beach deposits associated with 35MU51, but the 35MU52 deposits appear to extend at least 20 m (66') inland from the slough bank (Ellis 1994:20-23). Farther down the slough, Woodward (1983a, 1983b) conducted test excavations at a cluster of four sites (35MU47/35MU48/35MU49/35MU50) in preparation for construction of the N. Lombard bridge. These excavations and subsequent archaeological monitoring during construction produced evidence of seasonal occupations, some of which may have been relatively intensive (a series of five hearth features were exposed at 35MU47 during construction). A radiocarbon sample from 35MU47 yielded a radiocarbon date of 530±50 BP (a calibrated date of ca. AD 1335-1435) (John Woodward to Ken Weber, Port of Portland, letter, 13 September 1983, on file, Port of Portland).

Other studies along the lower portion of Columbia Slough have identified six additional sites along the slough (see Figure 1). Two of these sites are on the left (western) bank: 35MU60, about 215 m (700') downstream of 35MU44/35MU46 (Scott 1987); and 35MU105, about 1.6 km (1 mile) downstream of the confluence of Columbia and North sloughs (Ellis 1995). Site 35MU60 was a lens of charcoal, FCR, and tiny fragments of burnt bone and shell observed in the slough bank (Site form for 35MU60, on file, Oregon State Historic Preservation Office, Salem). Site 35MU105 was first observed as a scatter of FCR and flaking debris (debitage) on a beach along the slough. Subsequent mechanical auger probes at this site revealed the presence of deeply buried midden deposits (Ellis 1995:22-25, 1996). Radiocarbon samples from 35MU105 suggest the site was an important camp occupied between AD 1450 and AD 1800 (Ellis 1996:Table 4).

The left (southern and western) bank of lower Columbia Slough has witnessed the most extensive and intensive archaeological studies to date (the PSU survey did not examine the right bank). The first surveys of the right (eastern and northern) bank were conducted within the past year and have documented four sites (see Figure 1). A survey of the banks of Columbia and North sloughs around the St. Johns Landfill (Ellis 1998) identified three previously unrecorded archaeological sites: 35MU109, 35MU110, and 35MU111. These three sites were observed as lenses of charcoal and burned and calcined fragments of animal bone in the slough banks. The fourth site (35MU112) was identified directly across the slough from 35MU105. Analysis of the site data is on-going but it appears to have been an intermittently occupied seasonal camp, represented archaeologically by small, discrete hearth features and low densities of artifacts and faunal remains. Two radiocarbon dates establish 35MU112 as the oldest site yet known along lower Columbia Slough, occupied between about AD 680 and AD 1260 (Ellis and Zehendner 1998).

In sum, previous studies have recorded 14 precontact archaeological sites along the lowermost 3 km (2 miles) of the Columbia Slough and 8 sites around Smith and Bybee lakes. Twelve of these sites (35MU15, 35MU20, 35MU21, 35MU22, 35MU44, 35MU46, 35MU51, 35MU52, 35MU60, 35MU105, 35MU111, and 35MU112) are located within one kilometer (0.6 mile) of the proposed corrections facility. One of these sites (35MU15) may be located within the proposed project boundaries. As noted above, there is little information on this site and its boundaries are uncertain. Portions of this site may have been covered by the dredged material in the 1990s.

ARCHAEOLOGICAL MONITORING OF GEOTECHNICAL PROBES

A. Introduction

On October 7-9, 1998, AINW monitored drilling of three geological borings at the proposed project location. AINW's monitor was Senior Archaeologist Maureen M. Zehendner. Geo Tech Explorations, of Tualatin, did the drilling for Fujitani Hilts and Associates, Inc., geological engineers, Portland. Gary Sandstrom was the geologist supervising the project for Fujitani Hilts and Associates, Inc.

Three borings were completed. They were plotted to coincide with the center of the front entry of the building, and the northern and western edges of the proposed building. (A fourth boring location was originally plotted on the eastern edge but was not dug. Since this was a preliminary exploration of the area, further geological testing would be needed prior to construction.) In each coring, one-inch diameter core samples were collected at intervals of 2.5 feet for the first 20 feet below the surface and then every 5 feet to the bottom. Each of these samples was examined. No cultural materials were observed.

B. Descriptions of Boring and Results

Boring 1 (B1) was located at the southern edge of the proposed building which is the front entry area. Dredge sands were observed to approximately 3.7-4.0 m (12-13') below the surface (bs) where native soils were contacted. These soils were brown with orange mottling containing some organics. By 4.0 m (13') bs, the soil was a blue/grey saturated soil. At 7.5 m (24.5') bs the drill hit gravels. The drilling was discontinued at a depth of 16.8 m (55') bs and was still in the gravel deposits.

Boring 2 (B2) was dug on the western edge of the building site, approximately 30 m (100') from the edge of the cutbank where the dredge sand deposits drop off. This boring was dug to a depth of 33.5 m (110') bs. Native soils were contacted at approximately 7.0 m (23') bs, which is deeper than in the other two borings. A small amount of woody organic material was observed at the contact with native soils. The soil was a sandy silt which continued to about 18.3 m (60') bs where it changed to a fine-grained sand that continued for the full extent of the boring. No gravel was encountered in this boring.

Boring 3 (B3) was dug at the northern edge of the building site. At a depth of 3.8 m (12.5') bs native soils were observed and the drill brought up woody organic materials which were buried by the dredge sands. Gravel was encountered in this boring at 7.0 m bs. The hole was drilled to a depth of 10.7 m (35') bs and was still in the gravel deposits.

The gravel found in B1 and B3 is probably associated with the gravel bar noted by Gates (1994:108) beneath Smith and Bybee lakes. He interprets the gravel bar as a "depositional feature left by the catastrophic [Bretz] floods," dating to ca. 14,000-12,000 years ago.

CONCLUSIONS AND RECOMMENDATIONS

The records search and literature review for the proposed new corrections facility has indicated that studies over the past 20 years have encountered a high density of precontact archaeological sites in the project area. There are 12 known archaeological sites within one kilometer of the project location, situated along the northern shoreline of Bybee Lake and along the banks of Columbia and North (Bybee) sloughs. This frequency represents a site density of at least one site per 15-20 acres. More extensive research at four sites along Columbia Slough has produced of precontact occupation extending over the

past 1,000-1,300 years. Precontact use of the area ranged from small, ephemeral camps or limited use locations (such as at 35MU112) to more intensively occupied seasonal camps (indicated at 35MU105) to possible winter villages (35MU46). The archaeological evidence at 35MU112 indicates that occupation of the area had begun but about 1,300 years ago, but the most intensive use of the area appears to date from the 400-500 years before Euroamerican contact.

There is one previously recorded site that may extend to within the project boundaries, 35MU15. This site was recorded in 1977 and very limited data on the site are available. The site appears to have been a sparse scatter of fire-cracked rock along the beach around the tip of the peninsula on which the corrections facility would be constructed, and extending into the lake below the water line. The boundaries of the site are poorly illustrated and site dimensions are not provided. We are therefore uncertain if the 35MU15 cultural deposits actually extend to within the present project boundaries. If site deposits did extend that far north, they would have been buried by the dredged material deposited on the peninsula in the 1990s.

The areal extent of the 1977 survey of the Bybee Lake is unknown. It is therefore unknown if the entire shoreline within the current project boundaries was examined at that time. There thus remains a potential for other sites to have once been present within the project boundaries, either on the shoreline of the lake arm now buried under dredged material and/or in the inland portion of the peninsula. Although the deposition of the dredged sands in the 1990s is likely to have affected any archaeological resources that may have been present, any such deposits are likely to remain partially or completely intact under the dredged material. There is an existing, temporary outfall that extends from the dredged fill to Columbia Slough. Our inquiries indicate that no cultural resource investigations were conducted prior to construction of this outfall. It is therefore unknown if any cultural resources were affected by this construction. The high density of previously recorded archaeological sites along this stretch of the slough and the presence of a recorded site (35MU51) across the slough from the existing outfall indicates a high likelihood of such resources occurring at or in the vicinity of the existing outfall or at the location of a new proposed outfall.

As described earlier in the report, the potential project impacts to archaeological or other cultural resources may be the use of pilings to support the main building of the facility and construction of a new outfall from the facility to Columbia Slough. The building would be situated near the center of the project location but near the western edge of the pre-fill peninsula. The western portion of this building would be within 30 m (100') of the now buried shoreline of the northwestern arm of Bybee Lake (the former western shore of the peninsula). This setting along an arm of a lake, with good access to Columbia Slough (245 m [800'] to the west) and in close proximity to a known archaeological site (35MU15), indicates a high likelihood of archaeological resources. The new outfall also has a high potential of affecting archaeological resources, especially along Columbia Slough.

AINW therefore recommends that subsurface exploratory excavations be conducted to determine if there are archaeological resources present and intact in the native soils underlying the fill. These excavations would be limited to the proposed footprint of the corrections building and along the proposed alignment of the new outfall. In addition, exploratory excavations should be undertaken along the proposed outfall alignment between the dredged fill and Columbia Slough (where native soils are exposed at or near the surface). In the area of fill, conventional exploratory methods (shovel-tests or manual auger-probes) would not be practical or effective. At two nearby projects at which native soils were blanketed by dredged fill, AINW has successfully used mechanical augering to recover samples of native soils and determined the presence of archaeological deposits. This technique uses large-diameter (15 cm [6"]) split-spoon samplers to collect core samples from buried soils (no samples are collected from the

fill). The core samples are then transferred to the laboratory for processing (water-screening) through 1/4- and 1/8-inch and 1-mm mesh. This method allows for better recovery of microartifacts, fish bones, and other cultural debris that could be overlooked using standard field recovery techniques (i.e., using only 1/4- and 1/8-inch mesh).

There are several alternatives for addressing possible project effects on cultural resources. The first would be to approach the first- and second-phase facilities as separate projects. In this alternative AINW recommends that a series of 10-12 mechanical auger probes be excavated across the proposed footprint of the 225-bed facility. The distribution of the auger probes should be designed to obtain a representative sample of the native soils within the footprint. The probes should be excavated to approximately 9-10 m (29.5-32.8') bs or to the surface of the gravel stratum (which was recorded at about 7.0-7.3 m [23-24'] bs in the geotechnical probes), whichever is first encountered. For the 2,000-bed facility, we would recommend placement of 20-25 probes for the expanded facility. We recommend that the core samples be visually examined in the field and only those cores with evidence of cultural materials or deposits be transported to the lab for processing. Estimating that about one-third of the samples would be processed, the number of processing samples is reduced using this procedures from a potential maximum of 750 to 250.

A second option would be to conduct the auger probes for both the first- and second-phase buildings as one project. We would recommend excavation of 30 probes, representing a grid of probes at 30-m (100-foot) intervals across the proposed footprint, which would also include the footprint of the 225-bed facility. We recommend complete processing of only about 5-6 probes to define and refine the stratigraphic profile. For the remaining probes, we would visually examine them in the field. Only those core samples that have or are suspected to have cultural deposits or materials would be transported to the lab for processing. In this manner, we project that we would reduce the number of processing samples from about 900 (if all cores were processed) to about 400.

For the new outfall alignment, we would recommend a series of mechanical auger probes along that portion of the proposed alignment overlain by dredged fill at 20-m (65-foot) intervals. As with the proposed probes for the facility footprint, we would recommend in-field visual examination of the sample cores. Only those cores that have or appear likely to have cultural deposits or materials would be processed, with a representative sample of non-culture bearing cores being processed as a check on the visual examination. A total of 10 mechanical auger-probes would be required along the fill-covered alignment, producing approximately 100 processing samples.

For that portion of the outfall alignment that would extend through an area in which there is no blanket of dredged sand, we recommend excavation of 8 manual augers: 6 at 10-m (33-foot) intervals and an additional 2 on the top of the bank (placed judgmentally). The greater frequency of the probes in this area is based on the greater probability of encountering archaeological resources along the slough. As there is no blanket of dredged fill in this area, manual augers would be the most efficient technique for sampling the subsurface deposits. These augers would be excavated to the maximum depth of disturbance from construction of the temporary outfall (except if the new outfall were to involve deeper excavation). The maximum practicable depth of manual augers is 4 m, so if the maximum depth of disturbance is greater than 4 m, we would need to use mechanical augers. The exploratory excavations for the outfall could be treated as a separate project from the jail facility itself or could be incorporated into the jail facility study as a single investigation.

Should any archaeological resources be identified in these field studies, appropriate measures would need to be taken to determine if those resources are significant. Such measures would be

developed in consultation with the Tribes, SHPO, and (for any resources identified along the outfall alignment) the ACOE. Under ORS 358.920 and 390.235, exploratory archaeological excavations at the project location would require obtaining a State of Oregon Archaeological Permit as the land is owned by a public agency.

Oregon state law protects human remains found on public and private property in the state. In the event that human remains are encountered that appear to be Native American, state law (ORS 97.740-760) requires the following procedures be followed. Activities in the area where the human remains are found should cease. The state police, State Historic Preservation Office, appropriate Indian Tribes, and the Commission on Indian Services must be contacted. For the Rivergate location, tribal coordination would be conducted with the Confederated Tribes of the Warm Springs Reservation, Confederated Tribes of the Siletz Reservation, and the Confederated Tribes of the Grand Ronde Indian Community of Oregon. These tribes would decide how the remains, usually considered to be a burial when found during construction or as part of an archaeological excavation, will be handled. This could range from protection in-place to complete excavation, study, and reburial by a tribe. Tribal monitors during all such work should be expected. Excavation would necessitate a state archaeological permit, which can be done under the expedited permit rules. The expedited rules allow a 48-hour period from application to award of the permit, but this requires that all parties to the permit (tribes, land owner, agency) are in agreement with procedures. Typically, an archaeological permit granted as part of an archaeological excavation under the standard rules, when no burials are known for a site, would have some language outlining these procedures to address the potential of encountering a burial.

Encountering a burial during construction is not common, but is also not rare. Usually all parties are interested in finding a mutually satisfactory and conclusion for an unanticipated discovery. However, if a tribe were to decide that the burial should remain in-place and this is not practical for the design of the project, there could be delays. There is no practical method for determining with 100 percent accuracy the presence of a burial in a floodplain setting. While burials are more common in areas where known Native American villages were located, single burials or multiple burials (cemeteries) that are not associated with archaeological sites have been encountered.

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APPENDIX 4.3
PHASE 1 ENVIRONMENTAL SITE ASSESSMENT REPORT

Cascade Earth Sciences, Ltd.

L T D.

Environmental Site Assessment
Multnomah County Corrections Facility
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T2N, R1W, W.M., Section 25

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PN:8510042/November 12, 1998

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EXECUTIVE SUMMARY

CES was retained by Adolfson Associates, Inc. to conduct a Phase I Environmental Site Assessment (ESA) on the property proposed as the location for the Multnomah County Corrections Facility in North Portland, Multnomah County, Oregon. The objective of the ESA was to evaluate environmental risks associated with the Site. The ESA was performed in compliance with the scope and limitations of ASTM Standard E 1527-97 (Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process).

The property consists of one tax lot in the Rivergate Industrial District of North Portland and is currently owned by the Port of Portland. The parcel of land is located on a localized peninsula that is defined by Bybee Lake to the east and south, and the Columbia Slough to the west. The areas encompassed by these water bodies are a part of the Smith and Bybee Lakes Natural Resource Management Project.

Current access to the Site is gained by use of an unimproved dirt road from the end of North Leadbetter Road off of North Marine Drive. No public utilities or other improvements are present at the Site. Adjoining properties in the Rivergate Industrial District are either undeveloped or contain recently constructed warehouse facilities.

Fifteen to 25 feet of dredge sands from the Columbia and Willamette Rivers, placed on the property by the U.S. Army Corps of Engineers between 1970 and 1992, mask the characteristics of the native geology and soils at the property. Well logs and soil borings in the area suggest that the dredge sands are underlain by fine-grained deposits of silt and clay as well as beds of gravel deposits. Groundwater movement in the area is assumed to travel in a north-northwest direction, approximately parallel to the Columbia Slough. However, Bybee Lake and the Columbia Slough represent discharge zones for area groundwater and likely represent a hydrogeologic barrier to the movement of groundwater to the property from off-site sources.

The subject property was not identified in any federal or state databases indicating the presence or release of hazardous materials at the Site. Four properties located to the southwest and west were identified within the standard ASTM search distances. However, it was determined that the potential for impacts to the property from these off-site sources was minimal, due to the intervening presence of Bybee Lake and the Columbia Slough.

The Port or Portland has owned the property since the 1940s. The area was originally a part of an extensive network of wetlands and water bodies in the North Portland area. However, much of this wetland areas was destroyed by filling of the area with dredge sands from the Columbia and Willamette Rivers. These filling activities commenced sometime between 1970 and 1983 and continued until 1991. By 1994, the Site had acquired its current configuration. No modern structures or developments have ever been present on the property.

The potential for environmental hazards on the property originating from off-site sources is low. Although the record review identified hazardous material releases at four facility located to the southwest and west, the presence of Bybee Lake and Columbia Slough represent hydrologic discontinuities that would preclude the migration of contaminants to the Site from off-site sources.

In October 1998, CES collected two soil samples during the drilling of geotechnical borings at the Site. The samples were analyzed for petroleum hydrocarbons, VOCs, metals, and PCBs, only PCB was detected. PCB was detected at the State of Oregon soil cleanup level of 0.08 mg/kg.

A followup limited Geoprobe® investigation was conducted by CES in November 1998. A total of 28 groundwater and soil samples were analyzed from Geoprobe® sampling, in which PCBs were not detected above MRLs. The analyzed samples were collected from borings situated at locations around the Site that would eventually be excavated for construction of buildings, roadways, or utility corridors. The data suggest that the PCB-impacted soil is confined to a small area around the boring B-3, where PCBs were detected at approximately 10 feet BGS. The maximum extent of impacted soil would likely be found around boring B-3 within a radius of less than 10 feet, although the actual amount could be less. The groundwater in the vicinity of B-3 does not appear to be impacted. The DEQs general guideline for PCBs or other hazardous waste at low concentrations is that their presence should not result in a risk to human health. Based on this limited investigation, the potential for environmental hazards from on-site sources appears to be low.

Based on the investigation CES makes the following recommendations:

1. We recommend that the results of this investigation be presented to the DEQ with a request for "no further action" (NFA) related to the PCB detected at the Site. The NFA request should include notification of the desire for a timely decision.

2. In the event that the DEQ does not issue a NFA, we recommend that the soil immediately surrounding and including B-3 at the 10-15 foot depth be excavated. The soil should be temporarily stockpiled and sampled for PCBs to determine disposal options. We estimate up to 20-40 cubic yards may be impacted. Sampling and analysis should include samples form the floor and walls of the excavation.

   Assuming that the excavated soil would be considered contaminated (based on the laboratory results of the samples collected in October and November 1998), the estimated cost to excavate, dispose, and sample the excavation would range from $5,000 to $15,000, depending on volume. If the soil can be excavated and stockpiled so that it can be re-sampled prior to disposal and no PCB's are detected in the sample, the disposal cost may be less.

3. No special precautions should be necessary during excavation around the rest of the Site. The DEQ has no specific reporting requirements for PCBs at the detected levels. The detected concentration is equal to the SOCLEAN soil cleanup level of 0.08 mg/kg. Therefore, no cleanup or removal should be required.

1.0 INTRODUCTION

Cascade Earth Sciences, Ltd. (CES) was retained by Adolfson Associates, Inc. to conduct a Phase I Environmental Site Assessment (ESA) of a property (hereinafter "Site") located in the Rivergate Industrial District in Multnomah County, Portland, Oregon (Figure 1). The Phase I ESA was performed in conformance with the scope and limitations of the American Society for Testing and Materials (ASTM) Standard Practice E 1527-97: Phase I Environmental Site Assessment Process. Practice E 1527 is intended to assist in identifying recognized environmental conditions associated with commercial property.

Practice E 1527 defines recognized environmental conditions as:

> The presence or likely presence of hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of enforcement action if brought to the attention of appropriate government agencies.

All federal and state database searches were conducted within ASTM defined distances. This evaluation is based on a Site inspection and readily available information pertaining to the Site and surrounding properties. Photographs taken during the Site inspection are contained in Appendix A. This report represents the results of the Phase I ESA for the aforementioned property.

2.0 SITE DESCRIPTION

2.1 Location and Legal Description

The Site is located in the Rivergate Industrial District of North Portland (Figures 1 and 2). The Site consists of one lot, located within the Section 25, Township 2 North, Range 1 West of the Willamette Meridian (Figure 3). The Site is surrounded on three sides by water (Bybee Lake to the east and south, the Columbia Slough to the west). The topography is generally level and at an elevation of approximately 35-40 feet above mean sea level (MSL).

2.2 Site Improvements, Structures, And Current Uses

The Site is currently vacant and undeveloped. With the exception of portions of the property immediately adjacent to Bybee Lake and the Columbia Slough, the entire Site has been filled with dredge sands taken from the Columbia and Willamette Rivers. No developed roads currently access the property; however, a dirt track is present around the circumference of the Site. Access to the dirt road is from the Leadbetter Road, off of North Marine Drive. No public utilities, including electricity, water, or sewer, are currently provided at the Site. The Site is vacant of any buildings or structures.

2.3 Adjoining Property Uses

The review of adjoining property uses is primarily visual in extent and should not be construed as a comprehensive evaluation. The property is located in a relatively undeveloped industrial park (Figure 2). Specific property uses of the adjacent properties are described as follows:

The adjacent properties to the north are undeveloped. All of this area has received fill material as dredge sand. Construction of a rail bridge crossing of the Columbia Slough was in progress at the time of the site reconnaissance. The developed properties located to the northeast consist of a single-story, concrete, commercial/industrial buildings, parking areas, and loading docks. All of these structures have been constructed within the last 10-15 years and consist of large warehouses and distribution centers for regional businesses, including Valvoline, The Roomside, and Columbia Sportswear.

Immediately to the east of the Site is a portion of Bybee Lake (Figure 3). This area has been zoned as a part of the Smith and Bybee Lakes Natural Resource Management Project N.R.M.P.

Immediately to the south of the Site is Bybee Lake, which is a part of the Smith and Bybee Lakes N.R.M.P. Across the lake, approximately one half mile to the south, is the former St. Johns Landfill. The landfill has been capped and has an established vegetative cover.

A portion of the Smith and Bybee Lakes N.R.M.P. and the Columbia Slough border the property to the west. The areas adjacent to the slough to the west are zoned industrial properties that are largely undeveloped. However, some businesses are located approximately one half mile west of the slough.

3.0 PHYSICAL SETTING REVIEW

The objective of the physical setting review is to examine basic topographic, geologic, hydrogeologic, and soils information relevant to the Site to evaluate whether hazardous substances are likely to migrate in the soil and/or groundwater to the property, within the property, or from the property. CES reviewed reasonable available published geology, hydrogeology, and soils information for the Site and vicinity.

3.1 Physiography and Geology

The subject property is located on a small peninsula that is defined by Bybee Lake to the east and south and the Columbia Slough to the west (Figure 2). According to the USGS topographic map, the native elevation of the property is approximately 10 feet MSL. However, the Site has been extensively filled using dredge sands collected from the Columbia and Willamette Rivers. The depth of fill material ranges from 15 to 25 feet, as observed in three geotechnical borings completed on the property in October 1998. With the placement of fill materials on the property, the mean elevation of the property is approximately 35 feet MSL. The underlying native geology consists of alluvial deposits of Quaternary age (Figure 4). The alluvium is composed of sand, silts, and gravels that are typically less than 50 feet thick (Trimble, 1955). The borings completed on-site indicate that the

native material consists of a organic and silt deposits that are up to 42 feet thick, which are underlain by a gravel layer of undetermined thickness.

Well logs were obtained from the Oregon Department of Water Resources for the nearest quarter sections to the property (Appendix B). Most of the recently installed wells were monitoring wells or archaeological borings that typically extend to shallow depths of only 10 to 30 feet below ground surface (BGS). These wells describe the surficial geology of the Site as consisting primarily of sands and silty sands. Logs from deeper wells in the vicinity describe coarser materials consisting of sand and gravel at depths of approximately 70 feet BGS. The Troutdale formation, comprised of sandstone and conglomerate, is present at a depth of approximately 160 feet BGS. None of the wells are used as domestic drinking water sources. The City of Portland supplies drinking water in the area from the Bull Run Reservoir and a well field in East Portland.

3.2 Hydrogeology

A shallow groundwater system occurs beneath the Site at depths of approximately 15 to 20 feet BGS, as substantiated by on-site borings completed for Fujitani Hilts and Associates, Inc. by Geo-Tech Explorations, Inc. in October 1998, and monitoring wells in the vicinity. Based on topography and the nearest surface hydrologic features, groundwater in the uppermost, shallow water bearing zone is anticipated to flow in a north to northwest direction, approximately parallel to the Columbia Slough,. However, Bybee Lake and the Columbia Slough likely serve as discharge zones for shallow groundwater, suggesting a very limited hydrogeologic connection between properties located east, south, and west of the Site.

3.3 Soils

The Soil Survey of Multnomah County, Oregon (USDA, 1983) lists the native soil at the Site as the Sauvie silt loam (Fine-silty, mixed, mesic Fluvaquentic Haplaquolls; Figure 5). The Sauvie silt loam is a poorly drained soil located on the broad flood plains of the Columbia River. Permeability is moderately slow and the soil typically has a seasonally high water table, which limits development. However, the native soil at the Site is located beneath approximately 15-25 feet of dredge sands utilized at the Site as fill material. The fill material has substantially raised the surface of the property well above the seasonal high water table; the deficiency of fine-grained materials and organic matter in the fill also promotes the rapid infiltration of surface water.

4.0 ENVIRONMENTAL AGENCY RECORDS REVIEW

Federal, state, and local environmental agencies maintain lists of properties which have reported chemical releases, obtained environmental permits, or received notifications. The purpose of the regulatory records review is to obtain and review reasonable ascertainable records that will help identify recognized environmental conditions in connection with the Site. For this review, primary records were obtained from Environmental Data Resources, Inc. (EDR; Appendix C). The minimum search distances utilized were consistent with ASTM standards. EDR database searches generally contain a number of "orphan" properties. Orphan properties are not mapped due to poor or

inadequate address information. All orphan properties have been reviewed and those that can be identified within the specified search radii are included within the record review.

The Site was not listed on any federal records searched by EDR. However, this does not imply that no environmental impacts are present at the Site or on adjoining properties. Four adjacent properties were identified on state records searched by EDR. The reviewed records and the properties identified in the record review process are summarized in the following sections.

4.1 Federal Agencies File Review

The federal database review for listed facilities within the specified search area is summarized below. A summary of findings and the ASTM minimum search distances for each database are shown in Table 1.

The National Priorities List (NPL), or Superfund List, is an inventory of properties that the EPA has determined may represent a long-term threat to public health or the environment. Properties are officially deleted from the NPL after the appropriate Fund-financed response has been implemented and no further cleanup by responsible parties is appropriate. No NPL facilities were identified within the minimum 1.0 mile search radius.

The Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) is an inventory of properties that come to the EPA's attention because of a potential for releasing hazardous substances into the environment. This inventory includes: (1) properties awaiting investigation; (2) investigated properties with no further remedial action planned; and (3) investigated properties that require cleanup. No CERCLIS facilities were identified within the minimum one half mile search radius.

The Resource Conservation and Recovery Information System (RCRIS) is an inventory of facilities that generate, transport, or treat, store, and dispose (TSD) hazardous wastes. Inclusion of a facility on this list indicates that it handles hazardous wastes and does not suggest a release has occurred. The RCRIS list is subdivided into three groups: (1) the RCRIS-TSD list (one half mile search distance); (2) the RCRIS small quantity generators (RCRIS-SQG; one quarter mile search distance); and (3) the RCRIS large quantity generators (RCRIS-LQG; one quarter mile search radius). No RCRIS facilities were identified within the specified search radii.

Corrective Action Report (CORRACTS) was searched in conjunction with RCRIS. This set of records identifies waste handlers within a 1.0 mile radius which have RCRA corrective action activity. No CORRACTS listed properties were identified within the search area.

The Emergency Response Notification System (ERNS) is an inventory of spills and releases which have been reported but not verified by the EPA. The ERNS list is searched solely for the presence of the target property. The Site did not appear on this list.

A number of Federal non-ASTM databases were searched as well, including:

Delisted National Priority List (Delisted NPL)
Superfund (CERCLA) Consent Decrees (CONSENT)
Facility Index System (FINDS)
Hazardous Materials Information Reporting System (HMIRS)
Material Licensing Tracking System (MLTS)
Federal Superfund Liens (NPL LIENS)
PCB Activity Database System (PADS)
RCRA Administrative Action Tracking System (RAATS)
Records of Decision (ROD)
Toxic Chemical Release Inventory System (TRIS)
Toxic Substances Control Act (TSCA)

Neither the Site nor any adjacent properties within the ASTM search area were identified on any of these lists.

4.2 State Agencies File Review

The following state databases were searched by EDR and/or CES. These databases are maintained by the Oregon Department of Environmental Quality (DEQ). ASTM state databases reviewed for listed facilities within the specified search area are summarized below:

State Hazardous Waste Sites/Environmental Cleanup Site Information System (SHWS/ECSI) is a database that contains information about properties in Oregon that may be of environmental interest. In general, ECSI properties are facilities that have suspected environmental impacts that are awaiting investigation. Four properties were identified on the ECSI within a 1.0 miles search radius:

Beall Trans-Liner	9200 N Ramsey Boulevard
Rivergate Auto Wrecking	12104 N Columbia Boulevard
Pacific Car Crushing	12122 N Columbia Boulevard
BPA – St. John's Substation	12567 N Columbia Boulevard

The Leaking Underground Storage Tanks Site List (LUST) is a database containing the reported LUST incidents. No properties were identified within the one half mile minimum search radius.

The Underground Storage Tank (UST) database contains an inventory of registered USTs. Failure of a property to be identified on the state's UST list does not imply that tanks are not present. Nor does a property's listing in the database imply that a release of hazardous or other material has occurred. No registered USTs were identified within the one quarter mile minimum search distance.

The Solid Waste Facilities and Landfill Sites (SWF/LF) are a set of records that inventory the solid waste disposal and landfills in the State of Oregon. These properties include all active landfills within the State of Oregon. Although solid waste facilities and landfills were identified on the orphan list, none of the facilities were identified within a one half mile search radius.

In addition to the ASTM state records searched, four non-ASTM State of Oregon records were searched, which included:

Confirmed Release List and Inventory (CRL)
Hazmat/Incidents (HAZMAT)
DEQ Spill Data (SPILL)
Voluntary Cleanup Program Sites (VCS)
Coal Gasification Sites (Coal Gas)

Two properties were identified on the Oregon Confirmed Release List and Inventory (CRL) within the 1.0 mile search radius. Both of these properties were also identified in on SHWS/ECSI list:

Rivergate Auto Wrecking	12104 N Columbia Boulevard
BPA – St. John's Substation	12567 N Columbia Boulevard

A summary of the properties identified in these state databases is contained in Table 2.

4.3 Environmental Agency Records Summary

Thirty-nine properties were listed as orphan properties on the EDR database report. All of these properties were determined to either be located outside of the minimum ASTM search distances or have insufficient data to accurately locate them.

Of the properties identified in the environmental records review, the highest potential for the migration of off-site contamination to the Site are those properties located to the south-southeast of the Site, in the inferred up-gradient groundwater flow direction. Although four unique properties of environmental concern were identified within the specific search distances, none of these properties appears to be hydrologically connected to the target property. In all cases, either Bybee Lake or the Columbia Slough represented a hydrologic discontinuity that would most likely intercept off-site ground or surface water, inhibiting the migration of off-site contaminants to the Site.

A brief summary of the environmental conditions at each of the four identified properties is described as follows:

Beall Trans-Liner (EDR Page/Map ID: 9/1)

Location:	9200 N Ramsey Boulevard
Database:	SHWS/ECSI
Hazard:	Oil and fuel-related compounds
Affected Media:	Shallow soils
Status; Date:	Identified as low priority for further action; Feb. 20, 1997

Rivergate Auto Wrecking (EDR Page/Map ID: 12/A2)

Location:	12104 N Columbia Boulevard
Database:	SHWS/ECSI; CRL
Hazard:	Waste oil, ethylene glycol

Affected Media:	Soil, possible groundwater, possible releases to Columbia Slough
Status; Date:	Facility listed on CRL, listing review complete; Aug. 26, 1997

Pacific Car Crushing (EDR Page/Map ID: 15/A4)

Location:	12122 N Columbia Boulevard
Database:	SHWS/ECSI
Hazard:	Waste oil
Affected Media:	Soil, storm water holding pond sediments, possible shallow groundwater, possible Columbia Slough surface water and sediments
Status; Date:	Facility proposed for CRL; Feb. 23, 1998

BPA – St. John's Substation (EDR Page/Map ID: 18/A5)

Location:	12567 N Columbia Boulevard
Database:	SHWS/ECSI; CRL
Hazard:	Trichloroethane, Dichloroethane, Poly chlorinated biphenyls (PCBs)
Affected Media:	Soil and groundwater
Status; Date:	Facility placed on CRL. Remedial investigation and feasibility studies have not been initiated; Dec 10, 1997

4.4 Local Agency Review

CES contacted the City of Portland Fire Department for information regarding emergency responses, hazardous waste notifications, and spills on or in the vicinity of the Site. According their records, there is on record of leaks, spills or tanks at the Site

CES contacted the Multnomah County Department of Environmental Health regarding the Site. According to Mr. John Donovan, they have no record of a septic system at the Site.

CES contacted the Multnomah County Planning Department regarding the Site. According to Ms. Jean Hester, their file contained no record of complaints, code violations or permits for the Site..

5.0 HISTORICAL REVIEW

The objective of the historical review is to develop a history of the previous uses of the Site that may have contributed to current environmental conditions. ASTM E 1527-97 specifies that property use shall be identified from 1940 to the present using standard historical sources, and uses prior to 1940 (until a time when the property was not yet developed) using at least one of the standard historical sources. Standard historical sources may include aerial photographs, recorded land title records (chain-of-title reports or deed cards), United States Geological Survey (USGS) maps, city directories, zoning records, building permits, fire insurance maps, and property tax files. Interviews with credible sources may be accepted as historical sources. CES reviewed reasonable ascertainable standard historical sources as summarized in the following sections.

5.1 Historical Aerial Photographs

CES reviewed historical aerial photographs of the Site that were available from the University of Oregon Photo and Map Library and Environmental Data Resources (EDR). Aerial photographs were available from 1936 to 1994. The most recent aerial photograph, taken June 20, 1994, is presented in Figure 6; the remaining photographs are presented in Appendix D.

The historical aerial photographs clearly show that the configuration of the Site has been dominated by Bybee Lake and the Columbia Slough. The extent of the surrounding water bodies, particularly Bybee Lake, was much more extensive in the past and limited access to the property. However, the Site itself is clearly defined in all photographs back into the 1930s. Sometime between 1970 and 1982, dikes were constructed on the east, south, and west sides of the Site and filling of the property and surrounding areas with dredge sands commenced. By the mid-1980s, extensive filling of the area with dredge sands resulted in the approximate current configuration of the Site. Photographs from 1986 and 1990 suggest that some filling of the Site and surrounding areas was still occurring. By 1994, no direct evidence of filling activities is observed in the aerial photographs, and the current configuration of the property is clearly defined.

At no time in the historical record defined by the aerial photography are any permanent structures observed on the Site.

5.2 Interviews

Ms. Marilyn Leitz, a representative for the Port of Portland (the current property owner), was contacted for any additional historic information regarding the property. According to Ms. Leitz, the Site is virgin property that has not had any modern development. The Port of Portland has been the owner of the property since the 1940s. Historically, the property and surrounding areas constituted an extensive network of wetlands in the North Portland area. Filling of the area wetlands with dredge sands continued until the early 1990s (1991 or 1992). No hazardous materials or other materials have been used on the property. No illegal dumping of any kind is known to have occurred.

5.3 Historical Summary

The subject property and surrounding areas were a part of an extensive network of wetlands and water bodies that existed in the North Portland area prior to the 1980s. Beginning sometime between 1970 and 1982, dikes and levees were constructed around the property and extensive filling of those wetlands with dredge sands was commenced. Filling of the area continued until 1991 or 1992 at which time the Site acquired its current configuration. No permanent modern structures have ever existed on the property.

6.0 SITE RECONNAISSANCE

The Site reconnaissance was conducted by Ron Doughten of CES on Wednesday, October 7, 1998. A brief description of the Site is provided in Section 2.0. Site features are discussed below in greater detail where deemed appropriate. Site photographs are in Appendix A.

The Site is located in the Rivergate Industrial District of North Portland. Water bodies are present on three sides of the property; Bybee Lake to the east and south, a portion of Bybee Lake and the Columbia Slough to the west. Since the Site is located on a peninsula, access to the property is from the north or northeast, off North Leadbetter Road and North Marine Drive. At the time of the Site reconnaissance, access to the property was via a primitive dirt road accessed from the end of Leadbetter Road. The dirt road followed the perimeter of the peninsula. The entire survey area has been filled in with soft fill sands, the spoils of dredging operations in the Columbia and Willamette Rivers. Vegetation on the property consists primarily of small shrubs and grasses. Although the vegetative cover was uniform, plant density was low, suggesting poor nutrient content in the surface material to support healthy vegetative development. The surface of the property is approximately 30 feet above the elevation of the surrounding water bodies as a result of the placement of fill sands in the area. However, along the margins of Bybee Lake and the Columbia Slough, apparent native soils and vegetation were observed. Vegetative development in these areas appeared healthy and consisted of various grasses, shrubs, and trees.

No evidence of hazardous material releases was observed during the site reconnaissance. The appearance of the fill sands was uniform and without any visible signs of staining. Although there were a few pieces of isolated debris (e.g., a tire, concrete blocks, wood) on the property, no significant deposition of solid waste materials was observed. It was not possible to ascertain whether any waste materials were deposited on the property prior to or during the placement of fill material at the Site.

7.0 HAZARDOUS MATERIALS REVIEW

Hazardous materials (or substances) are interpreted by EPA regulations and the court system to include:

> (A) any substance designated pursuant to section 1321(b)(2)(A) of Title 33, (B) any element, compound, mixture, solution, or substance designated pursuant to section 9602 of this title, (C) any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act (42 USC § 6921) (but not including any waste the regulation of which under the Solid Waste Disposal Act (42 USC §6901 et seq.) has been suspended by Act of Congress), (D) any toxic pollutant listed under section 1317(a) of Title 33, (E) any hazardous air pollutant listed under section 112 of the Clean Air Act (42 USC § 7412), and (F) any imminently hazardous chemical substance or mixture with respect to which the Administrator (of EPA) has taken action pursuant to section 2606 of Title 15. The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (a)

through (f) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).

The objective of the hazardous materials review is to evaluate the potential use and/or disposal of hazardous materials on the Site. The use of hazardous materials on the Site does not imply improper or illegal disposal, or that the Site has been impacted by the use of such materials.

7.1 Hazardous Materials in Connection with Identified Uses

The property is currently vacant and no hazardous materials are being used or stored on the property.

7.2 Storage Tanks

The property is currently vacant. No storage tanks or past evidence of storage tanks is evident at the Site. No USTs or LUSTs were identified on any of the adjacent properties in the record review. A number of above ground storage tanks were located off-site outside the warehouse building located to the north and northeast of the property. These tanks appeared to have been recently constructed, are located down-gradient of the subject property, and therefore represent a minimal potential for impacts to the Site.

7.3 Polychlorinated Biphenyls (PCBs)

No electrical equipment, overhead lines, or other PCB-containing items are present on the property and no record of them being present was identified. A substation which had reported releases of PCBs to soil and groundwater was identified to the SSW of the property. However, this property is located to south and west of Bybee Lake and the Columbia Slough and therefore represents a low potential for off-site impacts to the subject property. Additional discussions of PCBs at the Site is presented in Section 8.3.4.

7.4 Solid Waste Disposal

Solid waste disposal is not a permitted activity on the Site. Other than the placement of dredge sands from the Columbia and Willamette Rivers on the property by the U.S. Army Corps of Engineers, no substantial quantities of debris were observed on the Site during site reconnaissance.

7.5 Radon

Radon (Rn) gas is a radioactive substance that is suspected of causing cancer when inhaled over long periods of time. The EDR report (Appendix C) includes area radon information. Based on four tested properties, the EPA zoned Multnomah County as Zone 2. Zone 2 areas have average indoor radon concentrations of greater than or equal to 2 picocuries per litre (pCi/L) and less than or equal to 4 pCi/L; this is the intermediate EPA radon zoning. In general, basements contain higher levels or radon gas and consequently are of greater concern. Since no buildings are currently present on the property, radon gas is not of concern at the Site.

8.0 INITIAL SITE SOIL SAMPLING

Three borings (B-1, B-2, and B-3) were drilled by Geo-Tech Explorations, Inc. on October 8, 1998, as part of a geotechnical investigation of the Site. A piezometer was constructed in boring B-3.

8.1 Sampling Method

During the drilling, CES collected soil samples from two of the borings to initially screen the Site for potential contamination of the Site. One composite soil sample was collected from the depth interval 10-15 feet BGS in borings B-2 and B-3. Sample locations are shown in Figure 4.

8.2 Laboratory Analysis

The samples were submitted under chain-of-custody protocol to Oregon Analytical Lab (OAL) of Beaverton, Oregon for analysis. The two soil samples were analyzed using the following Environmental Protection Agency (EPA) methodologies:

PCBs by EPA Methods 3540/8081
Total Metals by EPA Methods 200/6010
(including Mercury by EPA Method 245.6/7471A)
Volatile Organic Compounds (VOCs) by EPA Method 8260
Hydrocarbon Identification (HCID) by NWTPH-HCID

8.3 Analytical Results

Analysis of the two soil samples indicated low concentrations or none detected above laboratory method reporting limits (MRLs) of the target compounds. The results are summarized in Table 3. The original lab reports from OAL are included in Appendix E.

8.3.1 Priority Pollutant Metals

The two soil samples were analyzed for the 13 metals on the Priority Pollutants list (antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, thallium, zinc). Beryllium, chromium, copper, lead, nickel, and zinc were detected in samples B2-10 and B3-10. All other metal were not detected MRLs.

The total metals concentrations were divided by a dilution factor of 200 to estimate for leaching potential. All detected metals appeared to be below the soil cleanup levels specified in the Oregon Soil Cleanup (SOCLEAN) Table 1 (OAR 340-122-045). However, The beryllium concentration in B3-10 was 0.16 mg/kg (0.0008 mg/kg after dilution factor applied). Which was close enough to the SOCLEAN value of 0.002 mg/kg that the sample was re-tested using the Toxic Characteristic Leaching Procedure (TCLP). The result was none detected above the MRL for beryllium.

8.3.2 Volatile Organic Compounds (VOCs)

Both soil samples were analyzed for the VOCs specified under the EPA Method 8240 list. No VOCs were detected above MRLs.

8.3.3 Hydrocarbon Identification

Both soil samples were analyzed for the presence petroleum hydrocarbons. No hydrocarbons in the gasoline, diesel, or oil ranges were detected above MRLs.

8.3.4 Polychlorinated Biphenyls

No PCBs were detected above the MRLs in soil sample B2-10. However, PCBs were detected at 0.08 milligrams per kilogram (mg/kg) in soil sample B3-10. A soil cleanup level of 0.08 mg/kg is specified in the Oregon SOCLEAN Table 1. Because the concentration detected in B3-10 was the same as the cleanup level, OAL was asked to re-confirm the presence of PCBs. Another portion of the sample was extracted and the subsequent analysis indicated a concentration of 0.07 mg/kg, thereby corroborating the initial result.

9.0 PHASE II LIMITED ENVIRONMENTAL SITE ASSESSMENT

9.1 Objectives of Limited Soil Probe Investigation

Analytical results from the soil sampling conducted during the geotechnical drilling program in October 1998 indicated the presence of PCBs in one of the borings (B-3; Figure 7. PCBs were detected in sample B3-10 at 0.08 milligrams per kilogram (mg/kg). The sample was collected from the 10-15 foot BGS interval in boring B-3. CES recommended a limited subsurface investigation to determine whether PCB contamination was a significant problem at the Site.

The soil sampling program was devised to roughly identify the extent of PCB-impacted soil that may be present at the Site. A series of temporary borings would be drilled around the Site using hydraulic push technology. The benefit of this technology is that soil samples can be collected continuously, numerous borings can be drilled in a relatively short time, and generation of potentially-contaminated soil cuttings is kept to a minimum. Borings would be situated around the location of the original PCB detection, within the footprint of probable construction excavation, in presumed roadway/utility corridors, and at several locations chosen for geographical representation across the Site. A shallow and a deep soil sample from each boring would be analyzed for PCBs, with intermediate samples to be held by the laboratory in case additional analyses were needed. In addition, one sample of groundwater would be obtained from a boring near B-3.

9.2 Sampling Procedures

The soil sampling investigation was conducted at the Site on November 2, 1998. Geo-Tech Explorations of Tualatin, Oregon installed the soil borings using Geoprobe® sampling equipment. A CES geologist, registered in the state of Oregon, supervised the soil probe sampling.

The sampling equipment was decontaminated before each boring was initiated. All soil samples to be retained for analysis were retrieved from the subsurface in new plastic sleeves four feet in length, covered with new rubberized caps, and labeled. After the target depth was reached, the Geoprobe® equipment was retracted and the hole backfilled with bentonite chips to inhibit migration in the subsurface between horizons.

9.2.1 Borings SB1-SB4

The initial boring was situated within five feet of the piezometer at boring B-3 (Figure 7). Boring SB1 was advanced to approximately 22 feet before refusal occurred. No groundwater sample could be collected from this boring, as had originally been intended. A second boring was attempted 10 feet to the west of B-3 to obtain a groundwater sample, with refusal occurring at approximately the same depth. The driller speculated that there may have been logs or blocks of wood at this depth that prevented further progress.

Three additional borings were situated around B-3 (SB2, SB3, and SB4). The borings were situated approximately 20 feet from the original boring, and evenly spaced from one another. Boring SB2 was advanced until refusal occurred at 25 feet BGS. Static water level was approximately 20.5 feet BGS. A groundwater sample was obtained from the screened interval of 23-25 feet BGS, using a vacuum pump. Due to the high transmissivity of the sand, there was little difficulty in filling the laboratory-supplied, one-liter glass bottle. Borings SB3 and SB4 were advanced to 16 feet BGS and 12 feet BGS, respectively.

9.2.2 Borings SB5-SB13

Besides SB1-SB4, an additional three borings (SB5, SB7, and SB8) were situated within areas where excavation is likely to occur for the proposed first phase of the correctional facility (Figure 7). SB5 was placed within the roadway/utility corridor along the northeast side of the Site. SB7 and SB8 were situated within the building footprint. SB6 and SB9-SB13 were collected at various locations around the Site, mostly within areas in which excavation may occur for the second phase of facility construction (such as buildings, parking lots, or roads). Borings SB5-SB13 were all advanced to a depth of 12 feet BGS (the approximate depth at which PCB was originally detected).

9.2.3 Sample Description

The lithology was observed to be homogeneous at all borings installed at the Site. The sand was described as brownish-black and fine- to medium-grained. Minor silt was present, and some wood fragments were encountered. The boring log from SB2, which was typical for the Site, is included in Appendix F.

9.3 Laboratory Analysis

The soil samples were picked up by courier at the Site after completion of drilling and taken directly to the laboratory under chain-of-custody protocol. One water and 42 soil samples were delivered to Oregon Analytical Lab of Beaverton, Oregon. The samples were analyzed using the Environmental Protection Agency (EPA) Methods 3540/8081 for analysis of PCBs. Rush (24-hour turnaround) processing was specified.

Initially, two soil samples from each boring were analyzed by OAL. In all borings, the soil sample from the surface interval was analyzed (0-4 feet BGS). In borings SB1 and SB2, a deep soil sample was analyzed (12-16 feet BGS). A groundwater sample from SB2 was also analyzed. In all the remaining borings, the soil sample selected for analysis (8-12 feet BGS) was from the same interval in which PCBs were detected in boring B-3 (10 feet BGS).

The samples selected were analyzed for PCBs by EPA Methods 3540 and 8081. Based on earlier results from the soil samples collected from borings B-2 and B-3, analysis of VOCs and total metals was not deemed necessary (see Section 1.0)

The intermediate soil samples from all borings were held pending initial analytical results. If preliminary results indicate the presence of PCBs in the shallow or deep samples, follow-up analysis to further define the vertical extent of impacted soil could be requested.

9.4 Analytical Results

A total of 28 samples were analyzed for PCBs. The analytical results from the rush processing were received on November 4, 1998. No PCBs were detected above MRLs in any of the groundwater or soil samples. After reviewing the results, one additional sample, on hold from boring SB1, was requested to be analyzed. The soil sample from 8-12 feet BGS was selected to compare with the PCB results from boring B-3. The result from this follow-up analysis was also none detected above MRLs. The original laboratory analytical report is included in Appendix G.

10.0 SUMMARY AND CONCLUSIONS

CES was retained by the Adolfson Associates, Inc. to conduct a Phase I Environmental Site Assessment on the property proposed as the location for the Multnomah County Corrections Facility in North Portland, Multnomah County, Oregon. The objective of the ESA was to evaluate environmental risks associated with the Site. The ESA was performed in compliance with the scope and limitations of ASTM Standard E 1527-97 (Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process).

The property consists of one tax lot in the Rivergate Industrial District of North Portland and is currently owned by the Port of Portland. The parcel of land is located on a peninsula that is defined by Bybee Lake to the east and south and the Columbia Slough to the west. The areas encompassed

by these water bodies are a part of the Smith and Bybee Lakes Natural Resource Management Project.

Current access to the Site is gained by use of an unimproved dirt road from the end of North Leadbetter Road off North Marine Drive. No public utilities or other improvements are present at the Site. Adjoining properties in the Rivergate Industrial District are either undeveloped or contain recently constructed warehouse facilities.

Dredge sand, 15-25 feet thick, removed from the Columbia and Willamette Rivers, placed on the property by the U.S. Army Corps of Engineers between 1970 and 1992, mask the characteristics of the native geology and soils at the property. Well logs and soil borings in the area suggest that the dredge sands are underlain by fine-grained deposits of silt and clay as well as beds of gravel deposits. Groundwater movement in the area is assumed to travel in a north-northwest direction, approximately parallel to the Columbia Slough. However, Bybee Lake and the Columbia Slough represent discharge zones for area groundwater and likely represent a hydrogeologic barrier to the movement of groundwater to the property from off-site sources.

The subject property was not identified in any federal or state databases indicating the presence of release of hazardous materials at the Site. Four properties located to the southwest and west were identified within the standard ASTM search distances. However, it was determined that the potential for impacts to the property from these off-site sources was minimal, due to the intervening presence of Bybee Lake and the Columbia Slough.

The Port or Portland has owned the property since the 1940s. The area was originally a part of an extensive network of wetlands and water bodies in the North Portland area. However, many of these wetland areas were destroyed by filling of the area with dredge sands from the Columbia and Willamette Rivers. These filling activities commenced sometime between 1970 and 1983 and continued until 1991. By 1994, the Site had acquired its current configuration. No modern structures or developments have ever been present on the property.

The potential for environmental hazards on the property originating from off-site sources is low. Although the record review identified hazardous material releases at four facility located to the southwest and west, the presence of Bybee Lake and Columbia Slough represent hydrologic discontinuities that would preclude the migration of contaminants to the Site from off-site sources.

In October 1998, CES collected two soil samples during the drilling of geotechnical borings at the Site. The samples were analyzed for petroleum hydrocarbons, VOCs, metals, and PCBs, only PCB was detected. PCB was detected at the State of Oregon soil cleanup level of 0.08 mg/kg.

A followup limited Geoprobe® investigation was conducted by CES in November 1998. A total of 28 groundwater and soil samples were analyzed from Geoprobe® sampling, in which PCBs were not detected above MRLs in any of the samples. The analyzed samples were collected from borings situated at locations around the Site that would eventually be excavated for construction of buildings, roadways, or utility corridors. The data suggest that the PCB-impacted soil is confined to a small area around the boring B-3, where PCBs were detected at approximately 12 feet BGS. The maximum extent of impacted soil would likely be found around boring B-3 within a radius of less than 10-12 feet, although the actual amount could be less. The groundwater in the vicinity of B-3

does not appear to be impacted by PCBs. The DEQs general guideline for PCBs or other hazardous waste at low concentrations is that their presence should not result in a risk to human health. Based on this limited investigation, the potential for environmental hazards from on-site sources appears to be low.

11.0 RECOMMENDATIONS

CES makes the following recommendations:

1. We recommend that the results of this investigation be presented to the DEQ with a request for "no further action" (NFA) related to the PCB detected at the Site. The NFA request should include notification of the desire for a timely decision.

2. In the event that the DEQ does not issue a NFA, we recommend that the soil immediately surrounding and including B-3 at the 10-15 foot depth be excavated. The soil should be temporarily stockpiled and sampled for PCBs to determine disposal options. We estimate up to 20-40 cubic yards may be impacted. Sampling and analysis should include samples form the floor and walls of the excavation.

   Assuming that the excavated soil would be considered contaminated (based on the laboratory results of the samples collected in October and November 1998), the estimated cost to excavate, dispose, and sample the excavation would range from $5,000 to $15,000, depending on volume. If the soil can be excavated and stockpiled so that it can be re-sampled prior to disposal and no PCB's are detected in the sample, the disposal cost may be less.

3. No special precautions should be necessary during excavation around the rest of the Site. The DEQ has no specific reporting requirements for PCBs at the detected levels. The detected concentration is equal to the SOCLEAN soil cleanup level of 0.08 mg/kg. Therefore, no cleanup or removal should be required.

12.0 LIMITATIONS

The conclusions presented in this report are professional opinions based on data described in this report. They are intended only for the purpose, Site, location, and project indicated. The conclusions presented in this report are based on the assumption that Site conditions do not change from those observed during our investigation and as described in this report. This report is not a definitive study of contamination and should not be interpreted as such.

The report was prepared for Adolfson Associates, Inc., Multnomah County Oregon, Multnomah County Sheriff's Office, and Kitchell pursuant to an agreement between Mr. Wallace Leake of Adolfson Associates, Inc. and CES in October 1998, and is accurate to the best of CES knowledge and belief. This report is based, in part, on unverified information supplied to CES by third-party sources. While efforts have been made to substantiate this third party information, CES cannot

guarantee its completeness or accuracy. CES staff participating in this ESA are engineers and scientists, not attorneys. Therefore, it must be clear to all parties that this report does not offer any legal opinion, representation, or interpretation of environmental laws, rules, regulations, or policies of federal, state, or local government agencies. This report and the findings contained herein shall not, in whole or in part, be disseminated or conveyed to another part, nor used by any other party in whole or in part, without the prior written consent of CES.

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Ms. Marlyn Leitz, Port of Portland

TABLES

Table 1. Federal Agency Database Listed Facilities within ASTM Search Distances

List[1]	Specified Search Distance (miles)	Is Site on this List?	Listed Facilities within Specified Search Distance.	Distance (miles)	Direction From Site	Status	Total Number
ASTM Databases							
NPL	1.0	No	None	N/A	N/A	N/A	0
CERCLIS	0.5	No	None	N/A	N/A	N/A	0
RCRIS-TSD	0.5	No	None	N/A	N/A	N/A	0
RCRIS-SQG	0.25	No	None	N/A	N/A	N/A	0
RCRIS-LQG	0.25	No	None	N/A	N/A	N/A	0
CORRACTS	1.0	No	None	N/A	N/A	N/A	0
ERNS	TP	No	None	N/A	N/A	N/A	0
Non-ASTM Databases							
CONSENT	1.0	No	None	N/A	N/A	N/A	0
FINDS	TP	No	None	N/A	N/A	N/A	0
HMIRS	TP	No	None	N/A	N/A	N/A	0
MLTS	TP	No	None	N/A	N/A	N/A	0
NPL LIENS	TP	No	None	N/A	N/A	N/A	0
PADS	TP	No	None	N/A	N/A	N/A	0
RAATS	TP	No	None	N/A	N/A	N/A	0
ROD	1.0	No	None	N/A	N/A	N/A	0
TRIS	TP	No	None	N/A	N/A	N/A	0
TSCA	TP	No	None	N/A	N/A	N/A	0

Notes

TP = Target Property

NPL = National Priorities List

CERCLIS = Comprehensive Environmental Response Compensation and Liability Information System

RCRIS-TSD = Resource Conservation and Recovery Information System - Treat, Store, and Disposal

RCRIS-SQG = Resource Conservation and Recovery Information System - Small Quantity Generator

RCRIS-LQG = Resource Conservation and Recovery Information System - Large Quantity Generator

CORRACTS = Corrective Action Report

ERNS = Emergency response Notification System

CONSENT - Superfund (CERCLA) Consent Decrees

FINDS = Facility Index System

HMIRS = hazardous Materials Information Reporting System

MLTS = Material Licensing Tracking System

NPL LIENS = National Priority List Liens

PADS = PCB Activity Database System

RAATS = RCRA Administrative Action Tracking System

ROD = ROD

TRIS = Toxic Chemical Release Inventory System

TSCA = Toxic Substance Control Act

Table 2. State Agency Database Listed Facilities within ASTM Search Distances

List[1]	Specified Search Distance (miles)	Is Site on this List?	Listed Facilities within Specified Search Distance.	Distance (miles)	Direction From Site	Status	Total Number
ASTM Databases							
ECSI	1.0	No	Beall Trans-Liner	1/2-1	W	Evaluation	
			Rivergate Auto Wrecking	1/2-1	SSW	Listed	
			Pacific Car Crushing	1/2-1	SSW	Listing Action	
			BPA - St. John's Substation	1/2-1	SSW	RI/FS	4
LUST	0.5	No	None	N/A	N/A	N/A	0
UST	0.25	No	None	N/A	N/A	N/A	0
SWF/LF	0.50	No	None	N/A	N/A	N/A	0
Non-ASTM Databases							
CRL	1.0	No	Rivergate Auto Wrecking	1/2-1	SSW	RI/FS	
			BPA - St. John's Substation	1/2-1	SSW	RI/FS	2
HAZMAT	TP	No	None	N/A	N/A	N/A	0
SPILLS	TP	No	None	N/A	N/A	N/A	0
Coal Gas	1.0	No	None	N/A	N/A	N/A	0
VCS	0.5	No	None	N/A	N/A	N/A	0

Notes:

TP = Target Property

ECSI = Environmental Cleanup Site Information System

UST = Underground Storage Tank

LUST = Leaking Underground Storage Tank

SWF/LF = Solid Waste Facility List

CRL = Confirmed Release List

HAZMAT = Hazardous Material

VCS = Voluntary Cleanup Program Sites

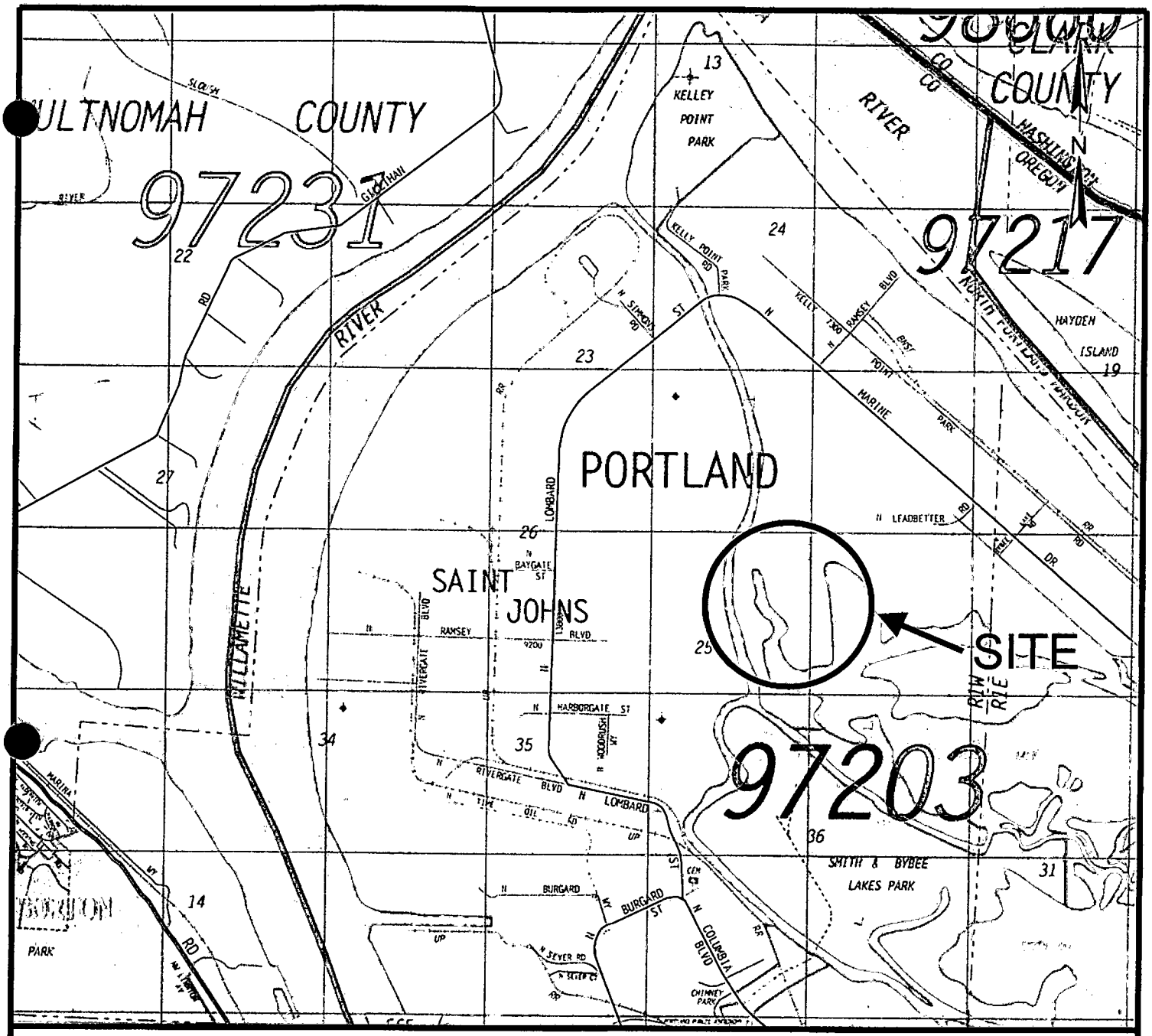
Table 3. Soil Sampling Results from Borings B-2 and B-3

	B2-10	B3-10
Total Metals		
Antimony	ND[1]	ND
Arsenic	ND	ND
Beryllium	0.14	0.16
Cadmium	ND	ND
Chromium	11.3	10
Copper	7.10	6.98
Lead	3.9	4.9
Mercury	ND	ND
Nickel	9.9	9.6
Selenium	ND	ND
Silver	ND	ND
Thallium	ND	ND
Zinc	39.2	49.3
Volatile Organic Compounds (VOCs)	ND	ND
Hydrocarbon Identification (HCID)	ND	ND
Polychlorinated Biphenyls (PCBs)	ND	0.08

Notes:

[1] None Detected above laboratory method reporting limits.

All results in milligrams per kilogram



1 inch to 2,400 feet

0 0.25 0.5 0.75 1.0 Miles

0 0.5 1.0 Kilometers

Figure 1. Site Vicinity Map

(SOURCE: 1997. THE THOMAS GUIDE, PORTLAND METRO AREA, 1998 EDITION. THOMAS BROTHERS MAPS AND BOOKS, LOS ANGELES CA.)

PROJECT NUMBER: 8520030	Multnomah County Corrections Facility
DATE: 6 October 1998	
DWG: RAD / DWG NO: Site map.ppt	Portland, Oregon
PROJECT MANAGER: CRH	
REVISED:	CASCADE EARTH SCIENCES, LTD Oregon - Washington - Idaho

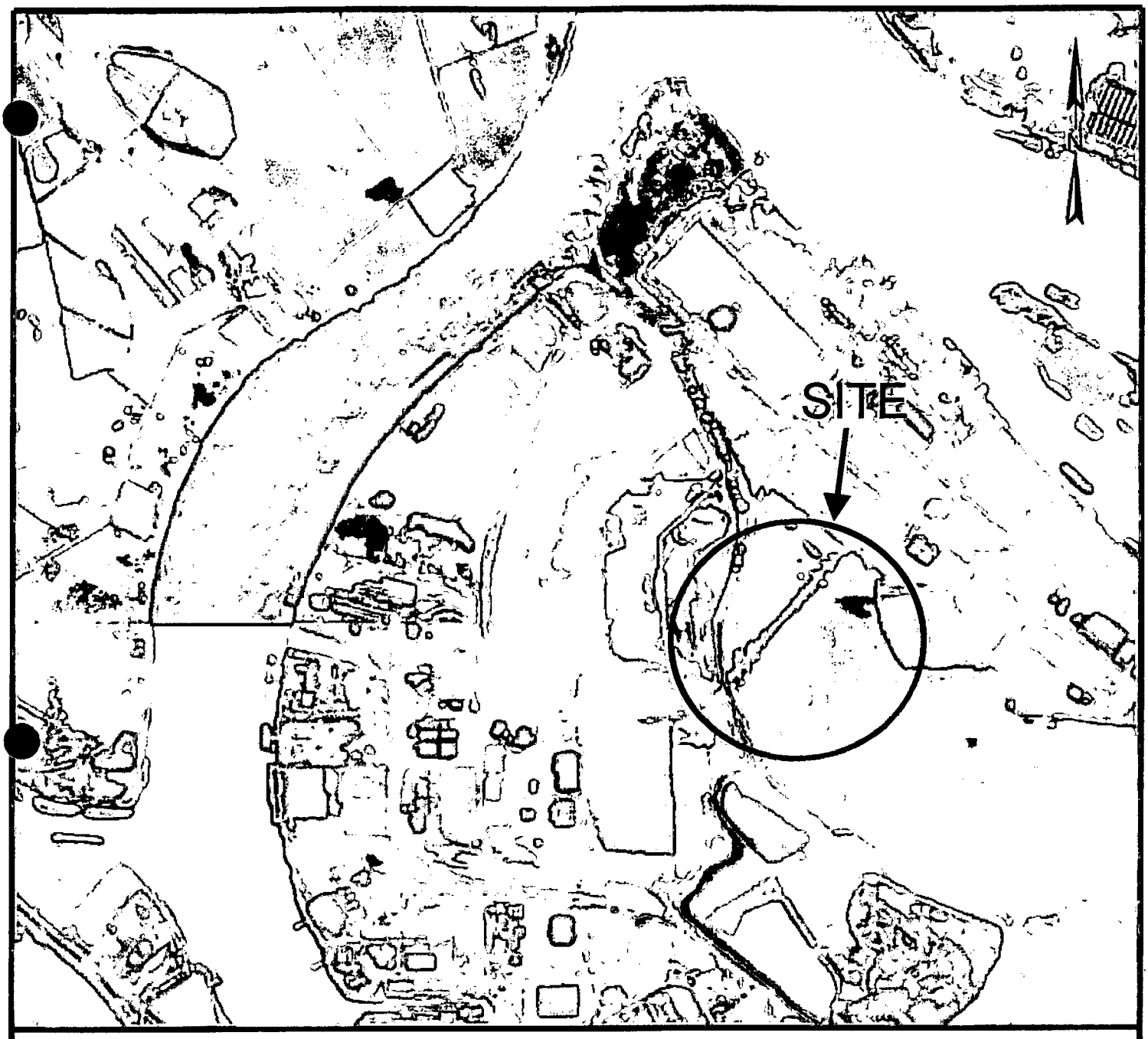


Figure 2. Aerial Photo, Vicinity

(SOURCE: USGS. PHOTO DATE 15 JULY 1990.
USGS TERRA SERVER.
http://www.terraserver.microsoft.com/)

PROJECT NUMBER: 8520030	Multnomah County Corrections Facility
DATE: 7 October 1998	
DWG: RAD / DWG NO: Aerial photo.ppt	Portland, Oregon
PROJECT MANAGER: CRH	
REVISED:	CASCADE EARTH SCIENCES, LTD Oregon - Washington - Idaho

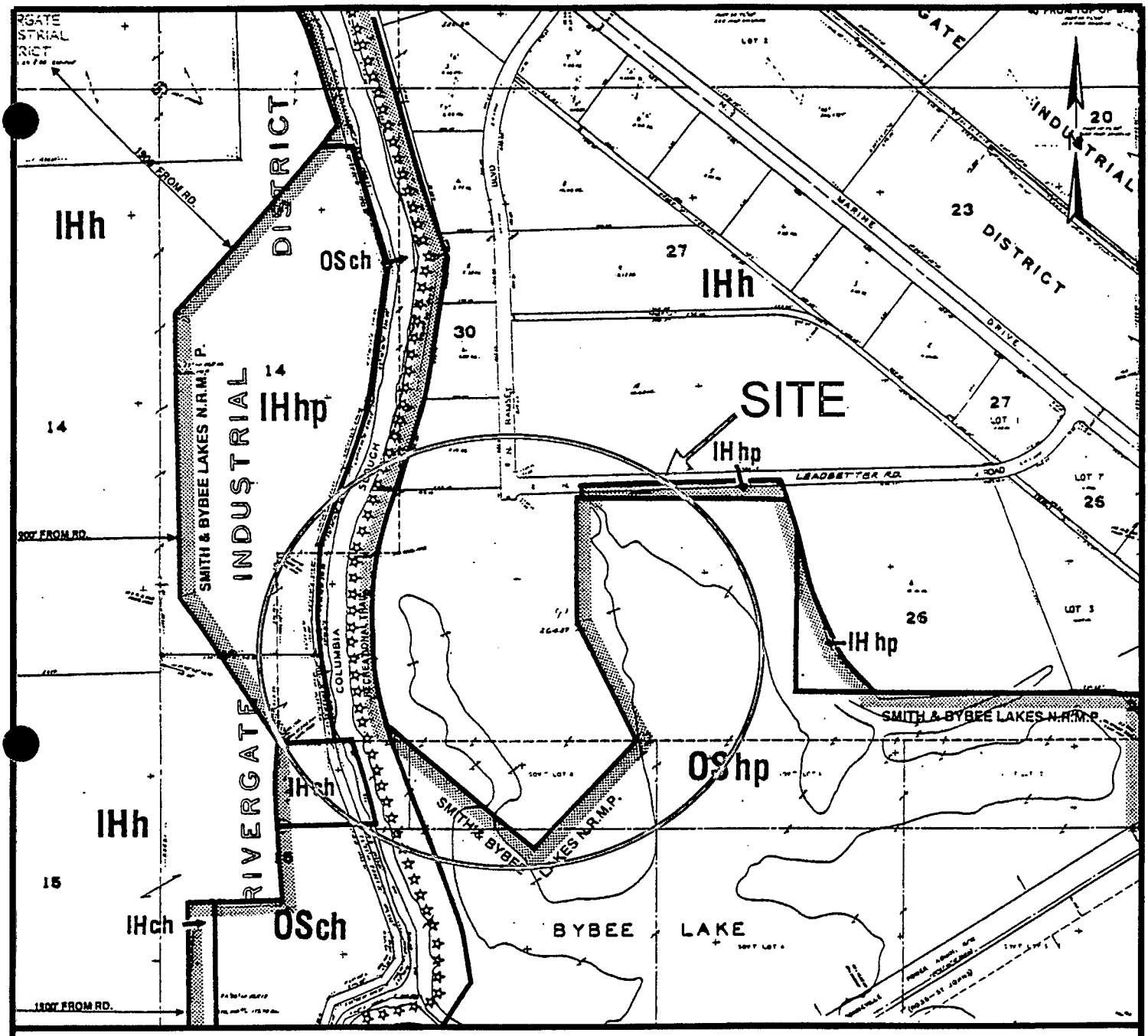
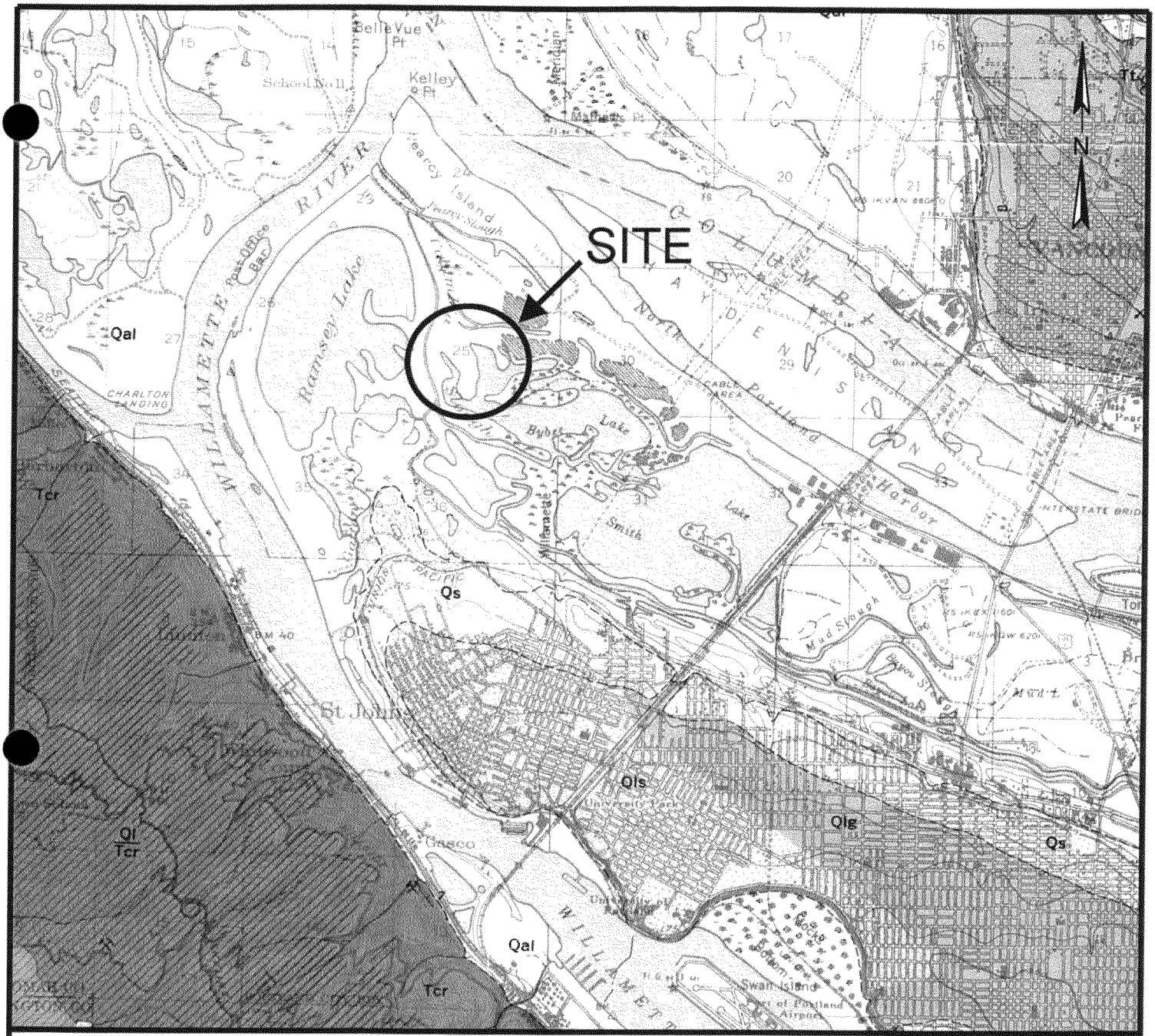


Figure 3. Tax Lot Map

(SOURCE: CITY OF PORTLAND BUREAU OF PLANNING.)

PROJECT NUMBER: 8520030	Multnomah County Corrections Facility
DATE: 7 October 1998	
DWG. RAD / DWG NO: Tax Lot map.ppt	Portland, Oregon
PROJECT MANAGER: CRH	
REVISED:	CASCADE EARTH SCIENCES, LTD Oregon - Washington - Idaho



SCALE 1:62 500

1 ½ 0 1 2 3 MILES

CONTOUR INTERVALS 25 AND 40 FEET

DATUM IS MEAN SEA LEVEL

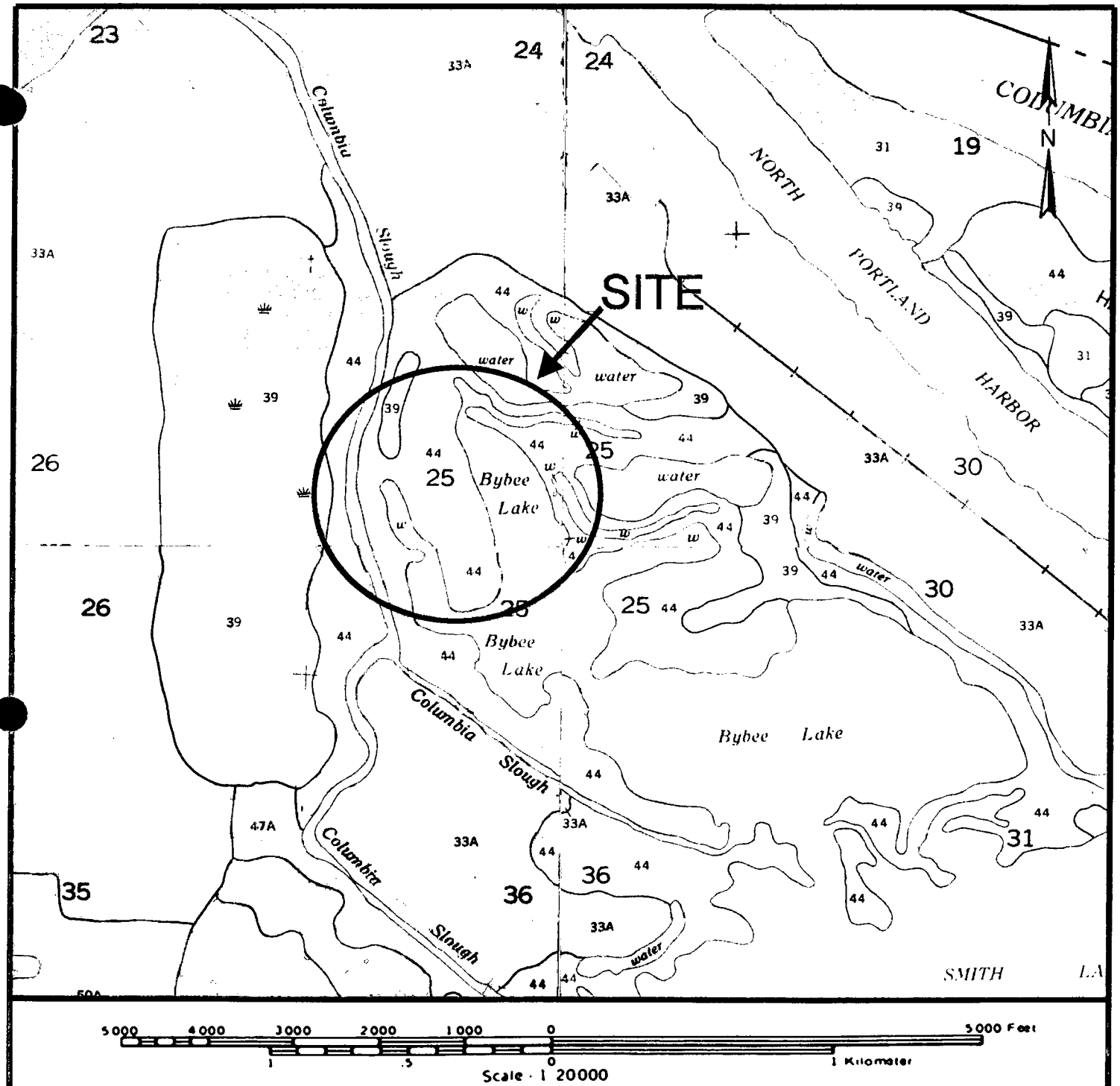
Key to Geologic Map Units

- Qal Alluvium
- Qs Sand and silt deposits
- Qls Lacustrine desposits
- Qlg Lacustrine desposits
- Tcr Columbia River basalt

(SOURCE: TRIMBLE. 1955. GEOLOGY OF THE PORTLAND, OREGON AND ADJACENT AREAS.)

Figure 4. Site Geologic Map

PROJECT NUMBER: 8520030	Multnomah County Corrections Facility
DATE: 5 October 1998	
DWG: RAD / DWG NO: Geologic map.ppt	Portland, Oregon
PROJECT MANAGER: CRH	
REVISED:	CASCADE EARTH SCIENCES, LTD Oregon - Washington - Idaho



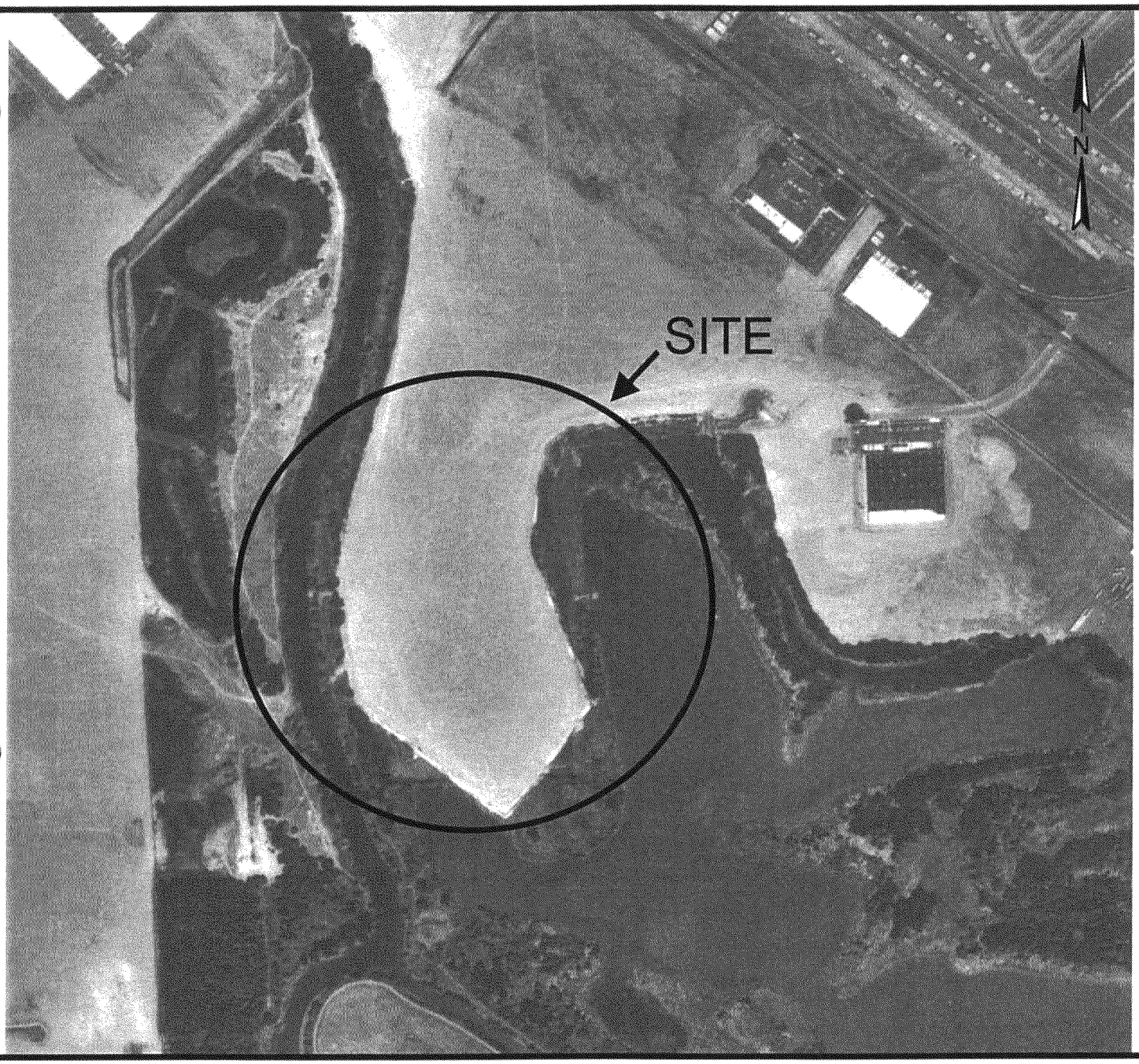
Key to Soil Types

- 31 Pilchuck sand
- 33a Pilchuck-Urban land complex, 0 to 3 percent slopes
- 39 Rafton silt loam
- 44 Sauvie silt loam

(SOURCE: USDA. 1983. SOIL SURVEY OF MULTNOMAH COUNTY, OREGON.)

Figure 5. Site Soils Map

PROJECT NUMBER: 8520030	Multnomah County Corrections Facility
DATE: 5 October 1998	
DWG: RAD / DWG NO: Soils map.ppt	Portland, Oregon
PROJECT MANAGER: CRH	
REVISED:	CASCADE EARTH SCIENCES, LTD Oregon - Washington - Idaho

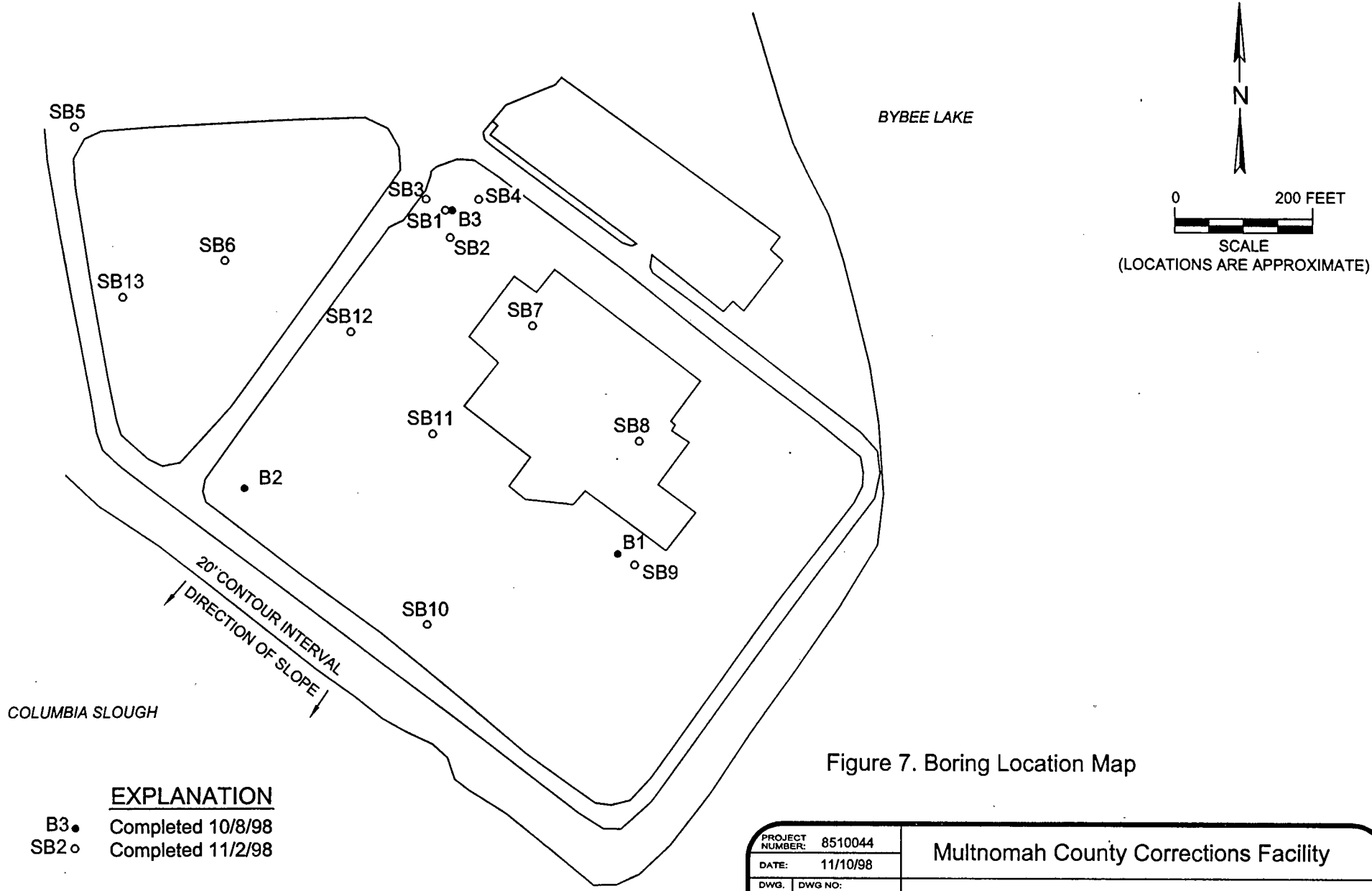


SCALE: 1 INCH = 750 FEET

Figure 6. Aerial Photo, Site

PROJECT NUMBER: 8520030	Multnomah County Corrections Facility
DATE: 7 October 1998	
DWG: RAD / DWG NO: Aerial photo2.ppt	Portland, Oregon
PROJECT MANAGER: CRH	
REVISED:	CASCADE EARTH SCIENCES, LTD Oregon - Washington - Idaho

(SOURCE: EDR. PHOTO DATE 20 JUNE 1994.)



EXPLANATION

B3 ● Completed 10/8/98
SB2 ○ Completed 11/2/98

Figure 7. Boring Location Map

PROJECT NUMBER: 8510044	Multnomah County Corrections Facility
DATE: 11/10/98	
DWG. DJM / DWG NO: 85A044F1	PORTLAND, OREGON
PROJECT MANAGER: JM	
REVISED:	CASCADE EARTH SCIENCES, LTD Oregon - Washington - Idaho

Appendix A.
Site Photographs

Photo 1. View to the NE of the proposed Multnomah Co. Correctional Facility location. The Site has been extensively filled with dredge sands from the Willamette and Columbia Rivers.

Photo 2. View to the west of the Site showing the Columbia Slough and a portion of Bybee Lake.

Photo 3. View to the south of the Site, showing the low-lying areas adjacent to Bybee Lake.

Photo 4. View to the NNE of the Site. Note the extensive filling of dredge sands. The warehouses and loading docks are located along N Leadbetter Road and N Marine Drive.

Appendix B.
Well Logs

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

RECEIVED NOV 14 1978 WATER RESOURCES DEPT. SALEM, OREGON

WATER WELL REPORT
STATE OF OREGON
(Please type or print)
(Do not write above this line)

MULT 002016

State Well No. 2N/1E-31
State Permit No.

(1) OWNER:
Name ALBINA TRANSFER CO.
Address 705 N COOK
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 ☐ Driven ☐
Cable ☒ Jetted ☐
Bored ☐

(4) PROPOSED USE (check):
Domestic ☐ Industrial ☒ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(5) CASING INSTALLED: Threaded ☐ Welded ☒
6" Diam. from +1 ft. to 130 ft. Gage .250"
" Diam. from ft. to ft. Gage
" Diam. from ft. to ft. Gage

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

(7) SCREENS: Well screen installed? ☒ Yes ☐ No
Manufacturer's Name JOHNSON
Type TELESCOPING Model No.
Diam. 5 Slot size 30 Set from 130 ft. to 135 ft.
Diam. Slot size Set from ft. to ft.

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

(9) CONSTRUCTION:
Well seal—Material used CEMENT
Well sealed from land surface to 21 ft.
Diameter of well bore to bottom of seal 10 in.
Diameter of well bore below seal 6 in.
Number of sacks of cement used in well seal 10 sacks
How was cement grout placed?
10" PIPE PLACED THROUGH LOOSE SAND AND INTO CLAY. CASING REMOVED AS CEMENT WAS PUMPED
Was a drive shoe used? ☒ Yes ☐ No Plugs Size: location ft.
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? depth of strata
Method of sealing strata off
Was well gravel packed? ☐ Yes ☒ No Size of gravel:
Gravel placed from ft. to ft.

(10) LOCATION OF WELL:
County MULTNOMAH Driller's well number 429
¼ ¼ Section 31 T. 2N R. 1E W.M.
Bearing and distance from section or subdivision corner

(11) WATER LEVEL: Completed well.
Depth at which water was first found 129 ft.
Static level 18 ft. below land surface. Date 11/7/78
Artesian pressure lbs. per square inch. Date

(12) WELL LOG: Diameter of well below casing
Depth drilled 135 ft. Depth of completed well 135 ft.
Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
LOOSE SAND	0	11	
BLUE CLAY	11	40	
SANDY BLUE CLAY	40	91	
CEMENTED GRAVEL	91	112	
CEMENTED GRAVEL AND BOULDERS	112	125	
CEMENTED GRAVEL	125	129	
LOOSE SAND AND GRAVEL	129	135	18

Work started 10/31 19 78 Completed 11/7 19 78
Date well drilling machine moved off of well 11/7 19 78

Drilling Machine Operator's Certification:
This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.
[Signed] O. Keller (Drilling Machine Operator) Date 11/11, 19 78
Drilling Machine Operator's License No. 329

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 KELLER WELL DRILLING CO. (Person, firm or corporation) (Type or print)
Address 6350 SE BROWNLEE, MILWAUKIE
[Signed] O. Keller (Water Well Contractor)
Contractor's License No. 462 Date 11/11, 19 78

(USE ADDITIONAL SHEETS IF NECESSARY)

SP*45656-1M

MULT 53959

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

WELL I.D.# 12948 (START CARD) # 103181

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

(1) OWNER: Well Number

Name PORT OF PORTLAND/LAND MANAGEMENT DIV.

Address 700 NE MULTNOMAH, PO BOX 3529

City PORTLAND State OR Zip 97208

(2) TYPE OF WORK

[X] New Well [ ] Deepening [ ] Alteration (repair/recondition) [ ] Abandonment

(3) DRILL METHOD:

[ ] Rotary Air [X] Rotary Mud [ ] Cable [ ] Auger

[ ] Other

(4) PROPOSED USE:

[ ] Domestic [ ] Community [ ] Industrial [X] Irrigation

[ ] Thermal [ ] Injection [ ] Livestock [ ] Other

(5) BORE HOLE CONSTRUCTION:

Special Construction approval [ ] Yes [X] No Depth of Completed Well 185 ft.

Explosives used [ ] Yes [X] No Type Amount

HOLE Diameter	From	To	SEAL Material	From	To	Sacks or pounds
~~10"~~	~~0~~	~~185~~	~~Hole Plug~~	~~0~~	~~20~~	~~12 SKS~~
			Cement	20	50	11 SKS
			Drill gel	50	110	14 SKS
			Cement	110	140	11 SKS

How was seal placed: Method [ ] A [ ] B [X] C [ ] D [ ] E

[X] Other Poured into annular

Backfill placed from ft. to ft. Material

Gravel placed from 140 ft. to 185 ft. Size of gravel pea gravel & 1-C Sand

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	6"	+1	171	250	[X]	[ ]	[X]	[ ]
	6"	181	185	250	[X]	[ ]	[X]	[ ]
					[ ]	[ ]	[ ]	[ ]
					[ ]	[ ]	[ ]	[ ]
Liner:					[ ]	[ ]	[ ]	[ ]
					[ ]	[ ]	[ ]	[ ]

Final location of shoe(s)

(7) PERFORATIONS/SCREENS:

[ ] Perforations Method

[X] Screens Type V-Wire Material Steel wire

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
171	181	.020		6"	pipe	[X]	[ ]
						[ ]	[ ]
						[ ]	[ ]
						[ ]	[ ]
						[ ]	[ ]

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

[ ] Pump [ ] Bailer [X] Air [ ] Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
50		40	1 hr.
100		60	"

Temperature of water 57°F Depth Artesian Flow Found

Was a water analysis done? [ ] Yes By whom

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

[ ] Salty [ ] Muddy [ ] Odor [ ] Colored [ ] Other

Depth of strata:

(9) LOCATION OF WELL by legal description:

County MULTNOMAH Latitude Longitude

Township 2N N or S Range 1W E or W. WM.

Section 35 NW 1/4 NE 1/4

Tax Lot 49 Lot Block Subdivision

Street Address of Well (or nearest address) INDUSTRIAL PARK @ RIVERGATE, PORTLAND, OR

(10) STATIC WATER LEVEL:

21 ft. below land surface. Date 07/14/97

Artesian pressure lb. per square inch. Date

(11) WATER BEARING ZONES:

Depth at which water was first found 171

From	To	Estimated Flow Rate	SWL
171	181	50 GPM	21

(12) WELL LOG:

Ground Elevation

Material	From	To	SWL
Fine brown sand	0	24	
Soft silty gray clay	24	27	
Soft brown silty clay	27	34	
Soft gray silty/sandy clay	34	47	
Fine gray-black sand	47	61	
Soft gray silty/sandy clay	61	82	
Fine to medium gray-black sand w/wood	82	147	
Black sand & fine [redacted] gravel	147	152	
Fine to medium black sand	152	164	
Medium black sand w/fine to medium fine gravel	164	185	21

RECEIVED
JUL 24 1997
WATER RESOURCES DEPT.
SALEM, OREGON

Date started 07/10/97 Completed 07/14/97

(unbonded) Water Well Constructor Certification:

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

WWC Number

Signed Date

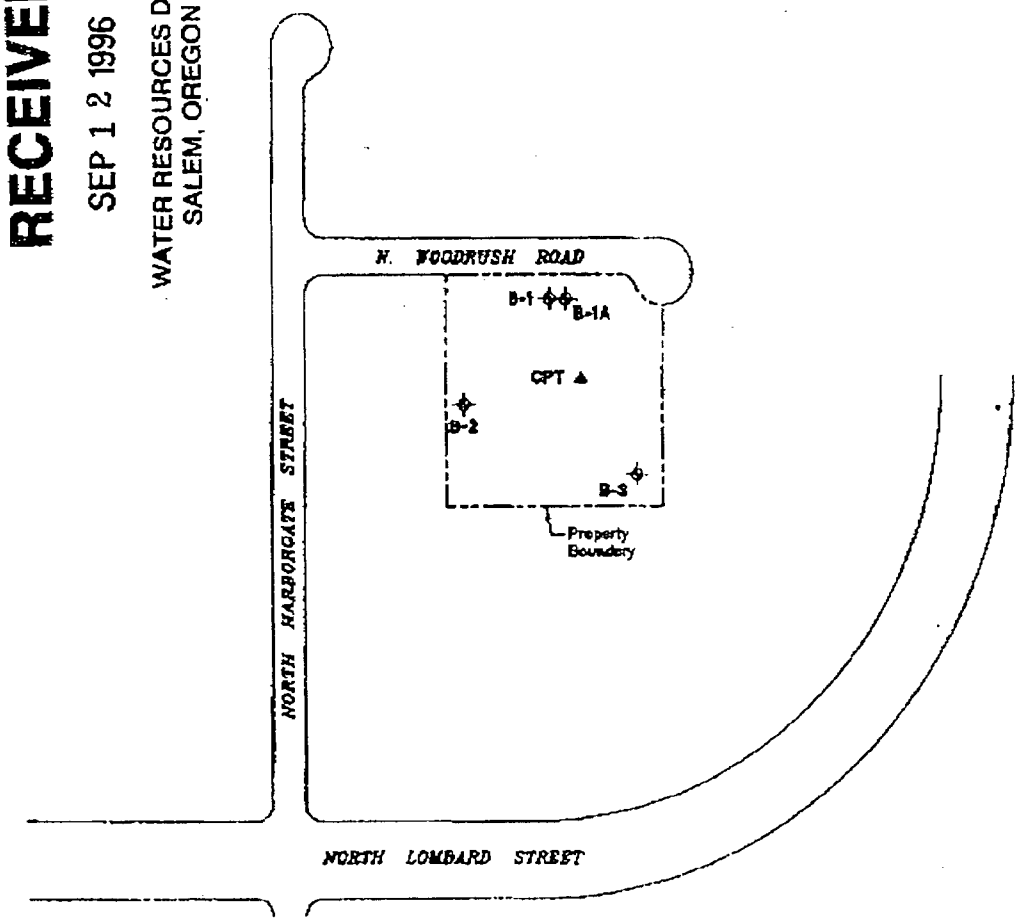
(bonded) Water Well Constructor Certification:

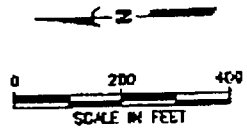
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge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

WWC Number 1266

Signed Date 07/18/97

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





EXPLANATION:

B-1 BORING

CPT CONE PENETROMETER

Note: The locations of all features shown are approximate.

Reference: Untitled and undated drawing provided by Neil Morrill.

GeoEngineers

SITE PLAN

FIGURE 2

5892-001-30 JMN:MAD 08/04/96

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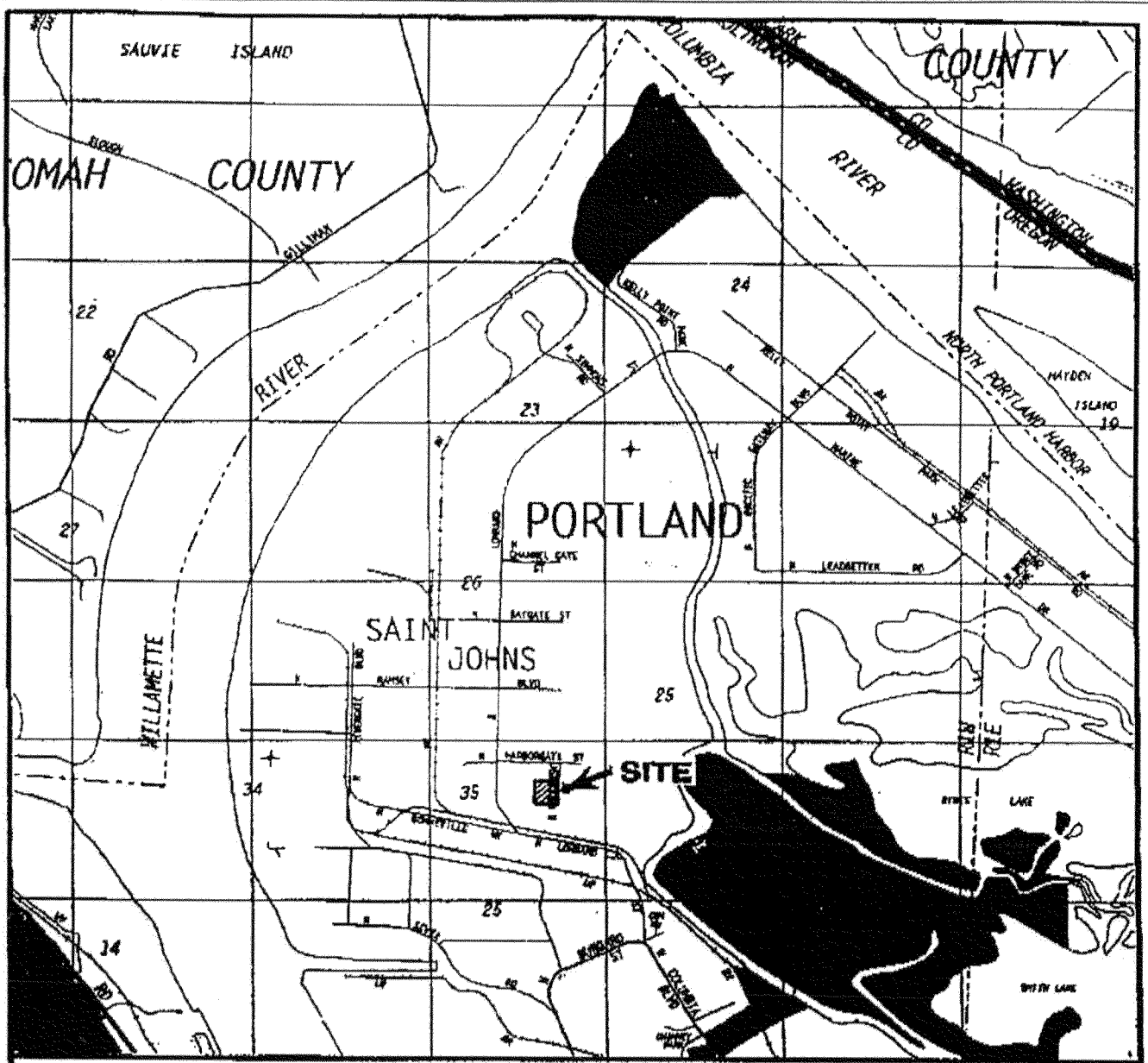

0 2400 4800
SCALE IN FEET

N

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5292-001-98 JWR3MAP 09/08/98

Geo Engineers

VICINITY MAP

FIGURE 1

RECEIVED
SEP 12 1996
WATER RESOURCES DEPT.
SALEM, OREGON

RECEIVED

SEP 1 2 1996

WATER RESOURCES DEPT.
SALEM, OREGON

WELL ID #

MULT 5/8 27

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

(1) OWNER/PROJECT: Hole Number B-1A

Name RA Gray Purcell
Address P.O. Box 23516
City Portland State OR Zip 97281

(2) TYPE OF WORK

X New ☐ Deepening ☐ Alteration (repair/recondition) X Abandonment

(3) CONSTRUCTION:

☐ Rotary Air ☐ Hand Auger X Hollow Stem Auger
☐ Rotary Mud ☐ Cable Tool ☐ Push Probe ☐ Other

(4) TYPE OF HOLE:

X Uncased Temporary ☐ Cased Permanent
☐ Uncased Permanent ☐ Slope Stability ☐ Other

(5) USE OF HOLE:

Geotechnical & Environmental

(6) BORE HOLE CONSTRUCTION:

Special Construction approval ☐ Yes ☐ No Depth of Completed Hole ____ ft.

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

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

(7) CASING/SCREEN:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
			N/A		☐	☐	☐	☐
Screen:					☐	☐	☐	☐
					☐	☐	☐	☐

Slot size ____

(8) WELL TEST:

☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian
Permeability ____ Yield ____ GPM ____
Conductivity ____ PH ____
Temperature of water N/A °F/C Depth artesian flow found ____ ft.
Was water analysis done? ☐ Yes ☐ No
By whom? ____
Depth of strata analyzed. From ____ ft. to ____ ft.
Remarks: Geo Engineers #1514

(9) LOCATION OF HOLE by legal description:

County Multnomah Latitude ____ Longitude ____
Township 2N N or S Range 1W E or W. WM.
Section 35 NW 1/4 NE 1/4
Tax Lot 3 Lot ____ Block ____ Subdivision ____
Street Address of Well (or nearest address) N. Harborgate St. & N. Woodrush Way Portland, OR

Map with location identified must be attached

(10) STATIC WATER LEVEL:

8.5 ft. below land surface. Date 8/01/96
Artesian pressure ____ lb. per square inch. Date ____

(11) SUBSURFACE LOG:

Ground Elevation ____

Material Description	From	To	SWL
Brownish gray fine to medium sand. (dry)	0'	8'	
Brownish gray and yellowish brown mottled fine to medium sand w/organics and trace silt.(wet)	8'	11'	
Becomes dark bluish gray. occassional organics.	11'	15'	

Date Started 8/01/96 Date Completed 8/01/96

(12) ABANDONMENT LOG:

Material Description	From	To	Sacks or Pounds
Bentonite chips and native.	0'	15'	3 sacks

Date started 8/01/96 Date Completed 8/01/96

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

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

License or Registration Number 10013

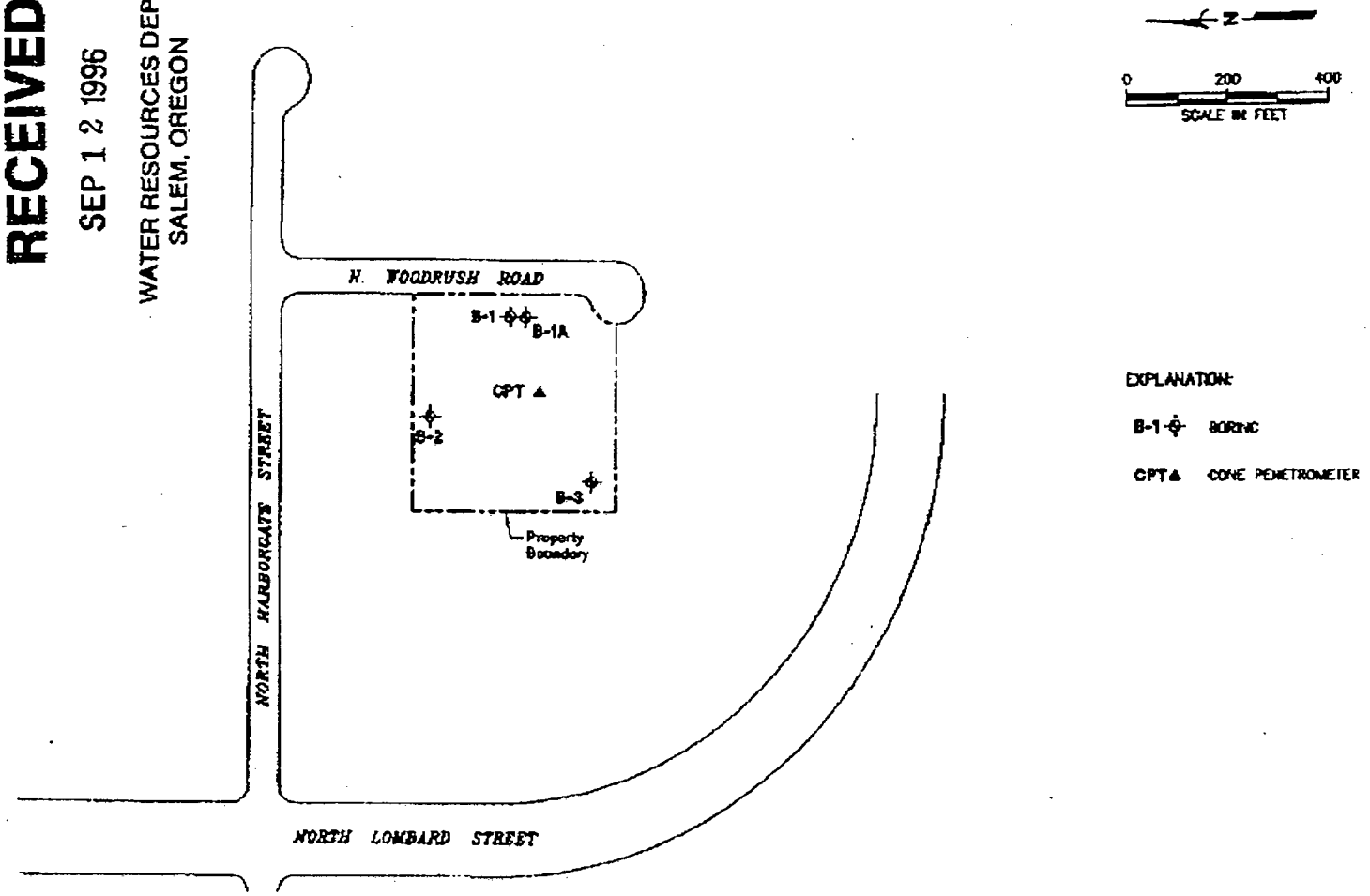
Signed Randy L. Crisman Date 9/05/96

Affiliation Crisman Drilling, Inc.

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

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

P:\5292001\CAD\GEO_SP



Note: The locations of all features shown are approximate.

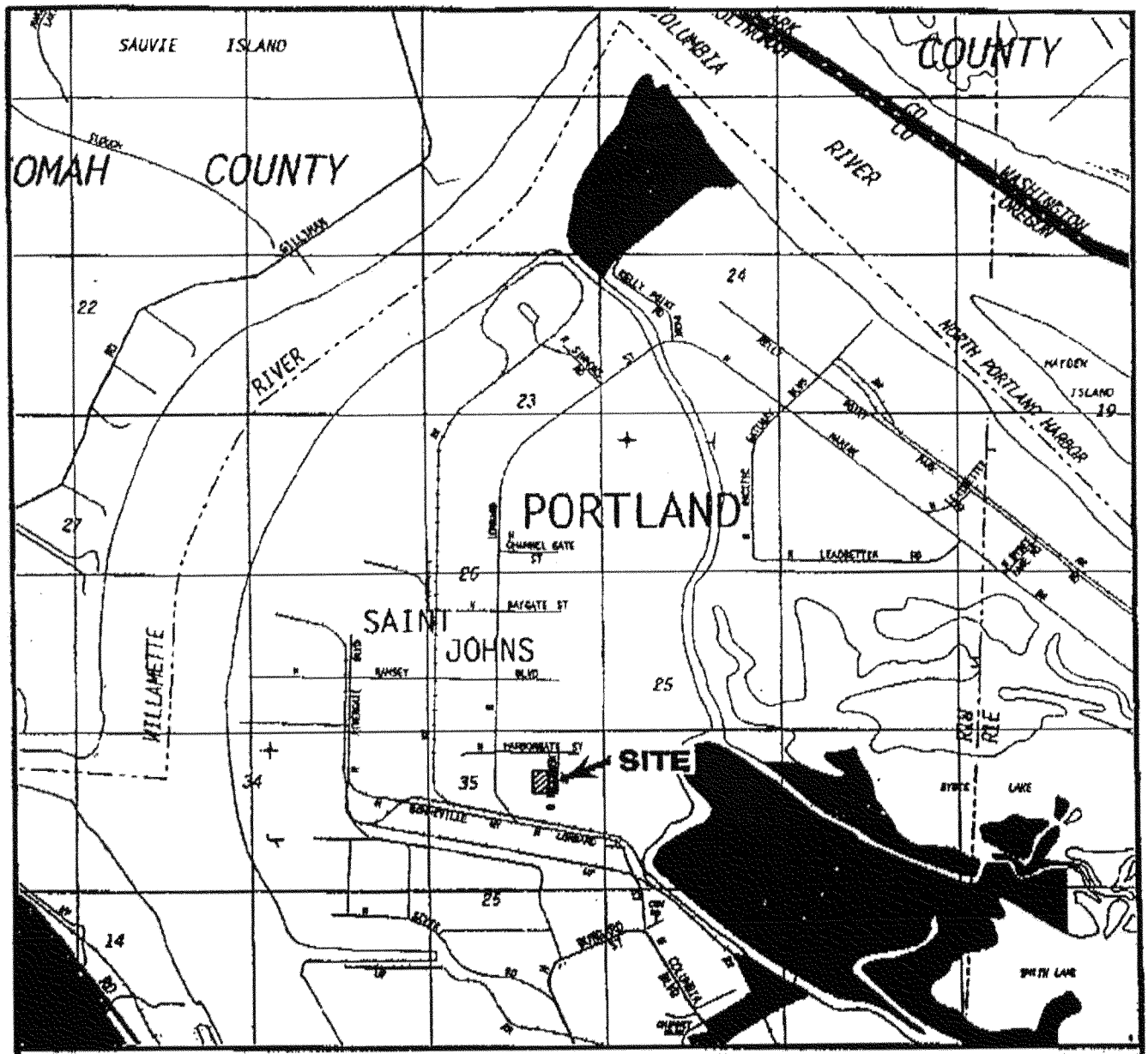
Reference: Untitled and undated drawing provided by Neil Wardlit.

5242-001-36 JMK:MAD 08/06/96

GeoEngineers

SITE PLAN

FIGURE 2



0 2400 4800
SCALE IN FEET

N

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5282-001-98 JWH/AND 09/08/96

Geo Engineers

VICINITY MAP

FIGURE 1

RECEIVED

SEP 12 1996

WATER RESOURCES DEPT
SALEM, OREGON

Mult 51929

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

(1) OWNER/PROJECT: Hole Number B-2

Name RA Gray Purcell
Address P.O. Box 23516
City Portland State OR Zip 97281

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

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

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

(5) USE OF HOLE:
Geotechnical

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

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

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

(7) CASING/SCREEN:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:					[ ]	[ ]	[ ]	[ ]
					[ ]	[ ]	[ ]	[ ]
					[ ]	[ ]	[ ]	[ ]
			N/A		[ ]	[ ]	[ ]	[ ]
Screen:					[ ]	[ ]	[ ]	[ ]
					[ ]	[ ]	[ ]	[ ]

Slot size ____

(8) WELL TEST:
[ ] Pump [ ] Bailer [ ] Air [ ] Flowing Artesian
Permeability ____ Yield ____ GPM ____
Conductivity ____ PH ____
Temperature of water N/A °F/C Depth artesian flow found ____ ft.
Was water analysis done? [ ] Yes [ ] No
By whom? ____
Depth of strata analyzed. From ____ ft. to ____ ft.
Remarks: Geo Engineers #1514

(9) LOCATION OF HOLE by legal description:
County Multnomah Latitude ____ Longitude ____
Township 2N N or S Range 1W E or W. WM.
Section 35 NW 1/4 NE 1/4
Tax Lot 3 Lot ____ Block ____ Subdivision ____
Street Address of Well (or nearest address) N. Harborgate St. & N. Woodrush Way Portland, OR
Map with location indentified must be attached

(10) STATIC WATER LEVEL:
8.5 ft. below land surface. Date 8/01/96
Artesian pressure ____ lb. per square inch. Date ____

(11) SUBSURFACE LOG:
Ground Elevation ____

Material Description	From	To	SWL
Gray fine to medium sand w/organics.	0'	5'	
Brownish gray fine to medium sand w/trace organics.	5'	10'	
Dark gray f. to med.sand	10'	25	
Olive-gray silt w/organics.	25'	30'	
Olive-gray clayey silt w/trace organics.	30'	31.5'	

Date Started 8/01/96 Date Completed 8/01/96

(12) ABANDONMENT LOG:

Material Description	From	To	Sacks or Pounds
Bentonite chips and native.	0'	31.5'	3 sacks

Date started 8/01/96 Date Completed 8/01/96

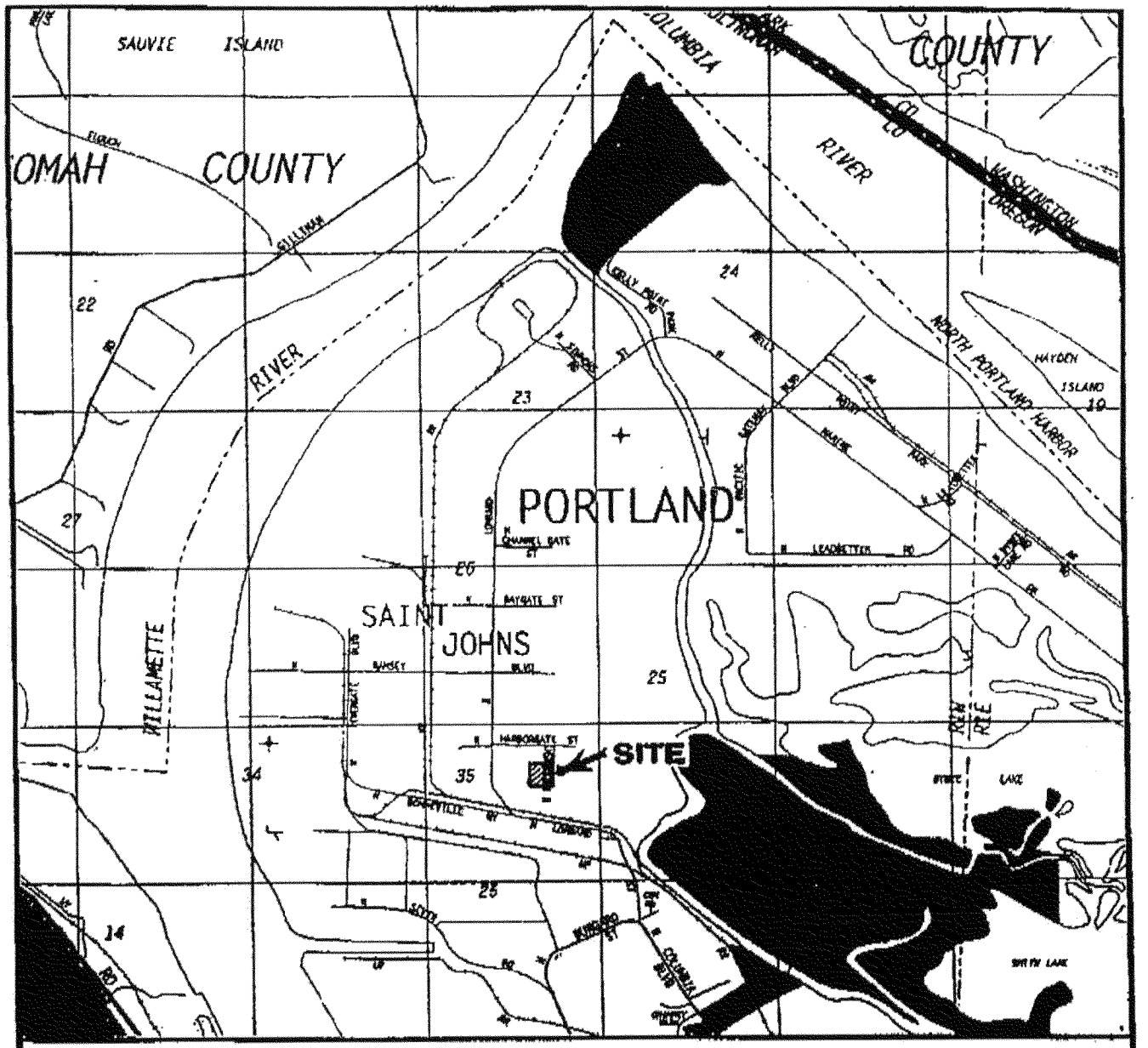
Professional Certification
(to be signed by a licensed water supply or monitoring well constructor, or registered geologist or civil engineer).

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

License or Registration Number 10013
Signed Randy L. Crisman Date 9/05/96
Affiliation Crisman Drilling, Inc.

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

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



0 2400 4800
SCALE IN FEET

N

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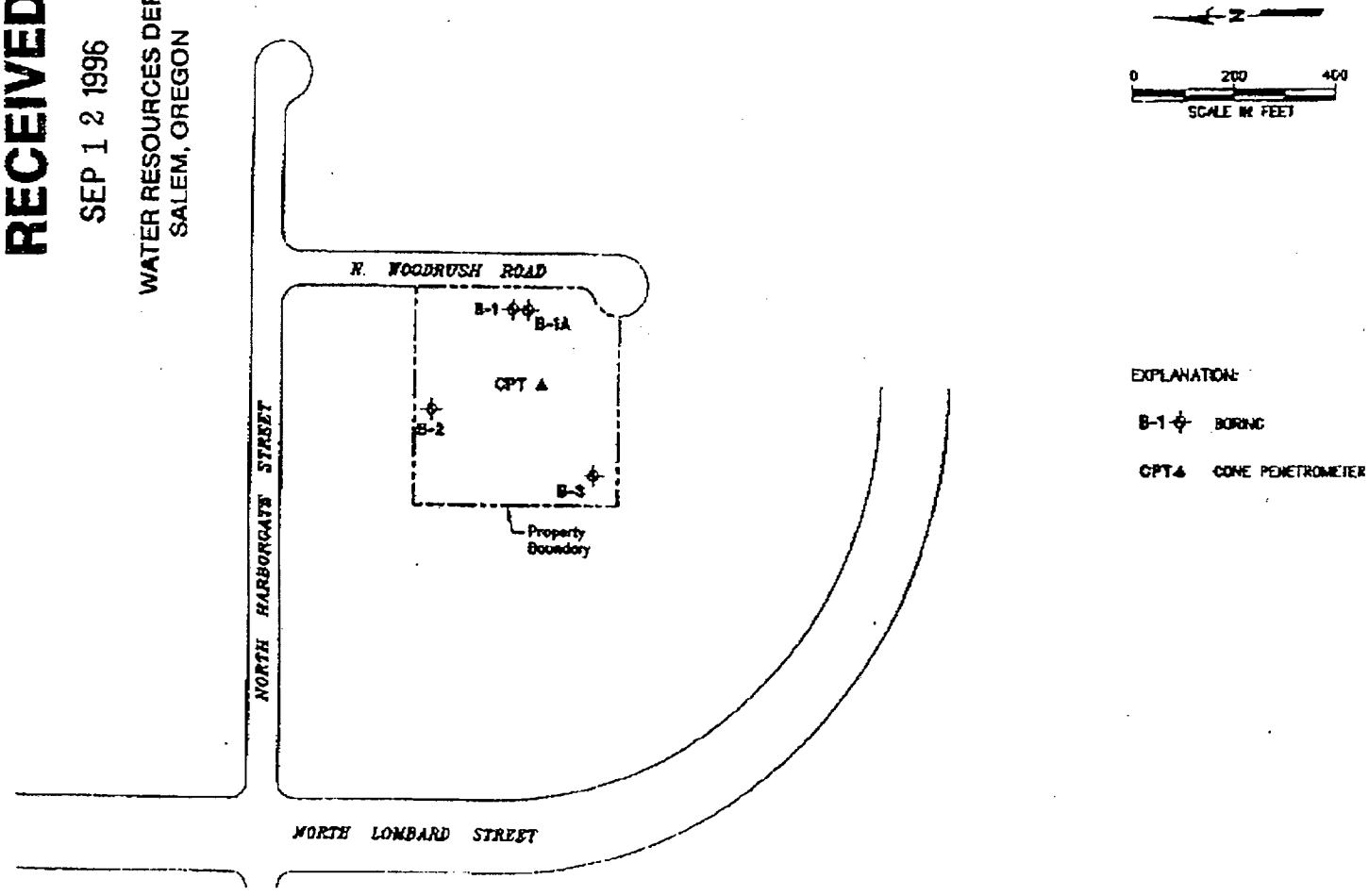
5282-001-06 JMR/MRD 08/06/96

GeoEngineers

VICINITY MAP

FIGURE 1



Note: The locations of all features shown are approximate.

Reference: Untitled and undated drawing provided by Neil Morrill.

GeoEngineers

SITE PLAN

FIGURE 2

5292-001-30 dwn:MAO 08/04/98

P:\5292001\CAD\REO_SP

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SEP 1 2 1996

WATER RESOURCES DEPT.
SALEM, OREGON

Mult 58628

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

(1) OWNER/PROJECT: Hole Number B-1

Name RA Gray Purcell
Address P.O. Box 23516
City Portland State OR Zip 97281

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

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

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

(5) USE OF HOLE:
Geotechnical

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

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

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

(7) CASING/SCREEN:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
			N/A		☐	☐	☐	☐
Screen:					☐	☐	☐	☐
					☐	☐	☐	☐

Slot size ____

(8) WELL TEST:
☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian
Permeability ____ Yield ____ GPM ____
Conductivity ____ PH ____
Temperature of water N/A °F/C Depth artesian flow found ____ ft.
Was water analysis done? ☐ Yes ☐ No
By whom? ____
Depth of strata analyzed. From ____ ft. to ____ ft.
Remarks: Geo Engineers #1514

(9) LOCATION OF HOLE by legal description:
County Multnomah Latitude ____ Longitude ____
Township 2N N or S Range 1W E or W. WM.
Section 35 NW 1/4 NE 1/4
Tax Lot 3 Lot ____ Block ____ Subdivision ____
Street Address of Well (or nearest address) N. Harborgate St. & N. Woodrush Way Portland, OR

Map with location indentified must be attached

(10) STATIC WATER LEVEL:
8.5 ft. below land surface. Date 8/01/96
Artesian pressure ____ lb. per square inch. Date ____

(11) SUBSURFACE LOG:
Ground Elevation ____

Material Description	From	To	SWL
Brownish gray fine to medium sand w/organics.	0'	8'	
Brownish gray and yellowish brown mottled fine to medium sand.	8'	13'	
Becomes bluish gray.	13'	18'	
Dark gray f.to med. sand w/trace silt (wet)	18'	25'	
Olive-gray silt w/f.sand	25'	34'	

Date Started 8/01/96 Date Completed 8/01/96

(12) ABANDONMENT LOG:

Material Description	From	To	Sacks or Pounds
Bentonite chips and native.	0'	34.0'	3 sacks

Date started 8/01/96 Date Completed 8/01/96

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

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

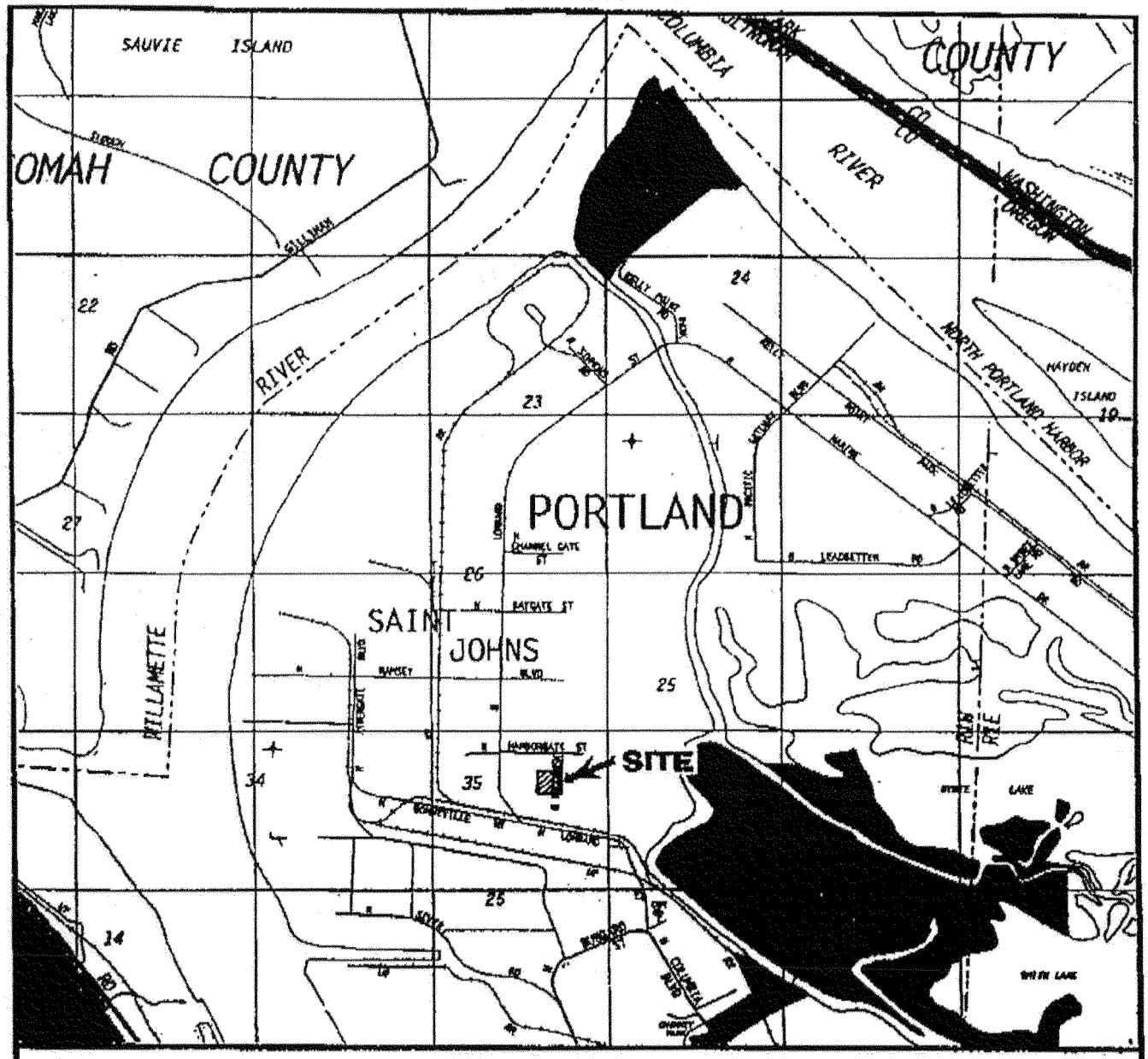
License or Registration Number 10013

Signed Randy L. Crisman Date 9/05/96

Affiliation Crisman Drilling, Inc.

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

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



0 2400 4800
SCALE IN FEET

N

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52292-001-06 JMR:KH/KD 08/08/96

Geo Engineers

VICINITY MAP

FIGURE 1

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SEP 1 2 1996
WATER RESOURCES DEPT.
SALEM, OREGON

5292-001-36 JWN:MAD 08/06/98

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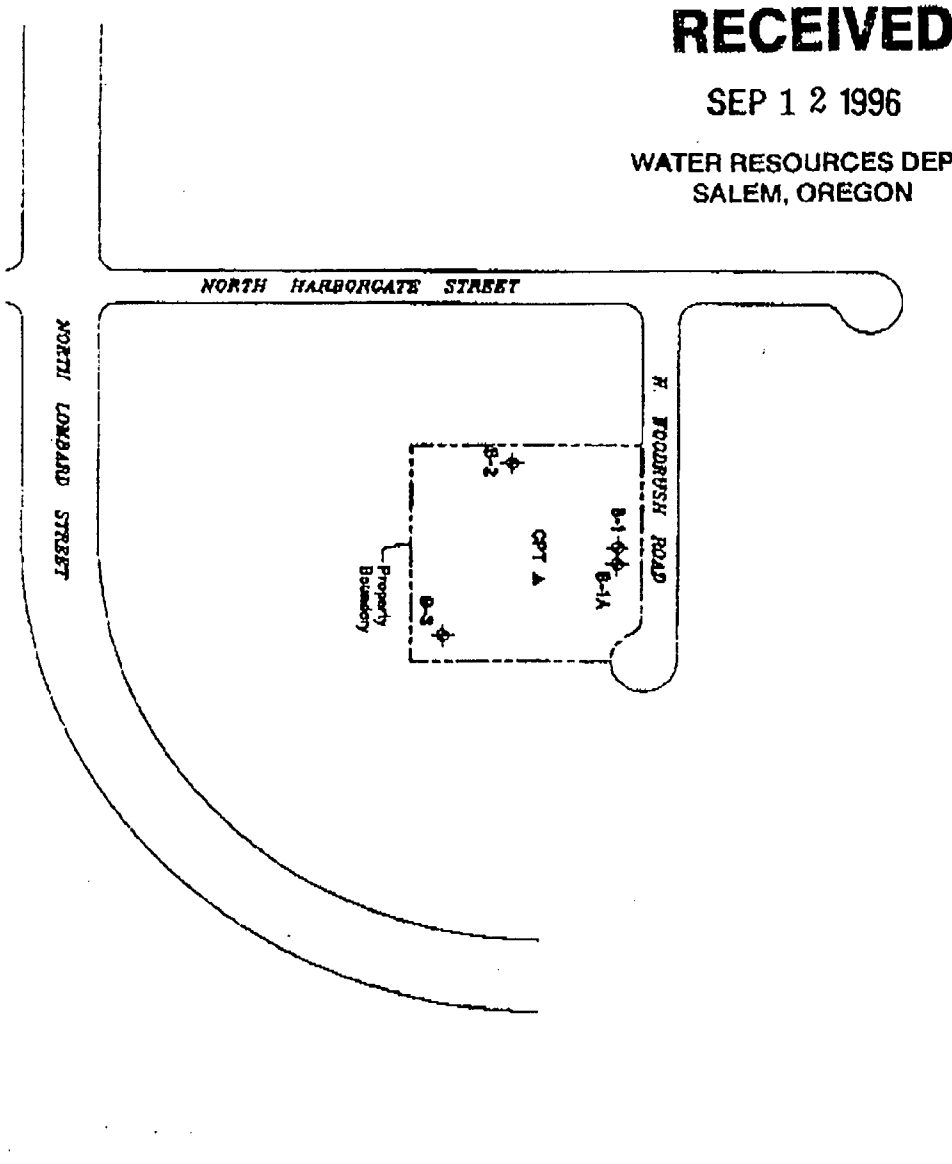
RECEIVED
SEP 1 2 1996
WATER RESOURCES DEPT.
SALEM, OREGON



Reference: Untitled and undated drawing provided by Neil Morfill.

Note: The locations of all features shown are approximate.

Geo Engineers

SITE PLAN

FIGURE 2

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

MULT 51930

(1) OWNER/PROJECT: Hole Number B-3

Name RA Gray Purcell
Address P.O. Box 23516
City Portland State OR Zip 97281

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

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

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

(5) USE OF HOLE:
Geotechnical

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

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

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

(7) CASING/SCREEN:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
			N/A		☐	☐	☐	☐
Screen:					☐	☐	☐	☐
					☐	☐	☐	☐

Slot size ____

(8) WELL TEST:
☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian
Permeability ____ Yield ____ GPM ____
Conductivity ____ PH ____
Temperature of water N/A °F/C Depth artesian flow found ____ ft.
Was water analysis done? ☐ Yes ☐ No
By whom? ____
Depth of strata analyzed. From ____ ft. to ____ ft.
Remarks: Geo Engineers #1514

(9) LOCATION OF HOLE by legal description:
County Multnomah Latitude ____ Longitude ____
Township 2N N or S Range 1W E or W. WM.
Section 35 NW 1/4 NE 1/4
Tax Lot 3 Lot ____ Block ____ Subdivision ____
Street Address of Well (or nearest address) N. Harborgate St. & N. Woodrush Way Portland, OR
Map with location indentified must be attached

(10) STATIC WATER LEVEL:
8.5 ft. below land surface. Date 8/01/96
Artesian pressure ____ lb. per square inch. Date ____

(11) SUBSURFACE LOG:
Ground Elevation ____

Material Description	From	To	SWL
Brownish gray fine to medium sand w/organics.	0'	5'	
Brown f. to med. sand.	5'	10'	
Dark gray fine to med. sand (med. dense, wet)	10'	20'	
Dark bluish gray fine to medium sand w/trace organics.	20'	25'	
Olive-gray silt w/t.org.	25'	30'	
Olive-gray-brown silt.	30'	31.5'	

Date Started 8/01/96 Date Completed 8/01/96

(12) ABANDONMENT LOG:

Material Description	From	To	Sacks or Pounds
Bentonite chips and native.	0'	31.5'	3 sacks

Date started 8/01/96 Date Completed 8/01/96

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

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

License or Registration Number 10013
Signed Randy L. Crisman Date 9/05/96
Affiliation Crisman Drilling, Inc.

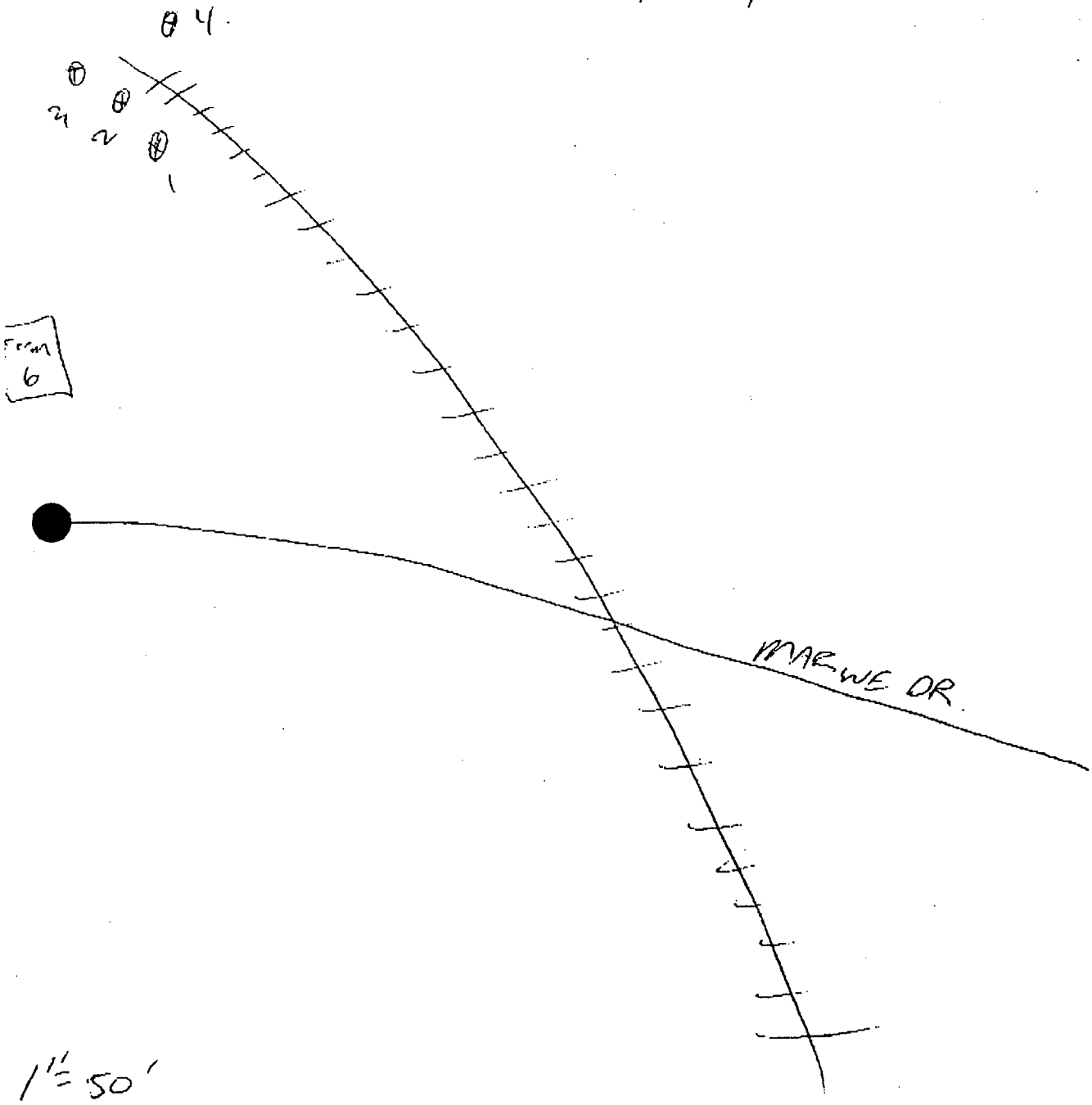
THIS REPORT MUST BE SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK

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

NT

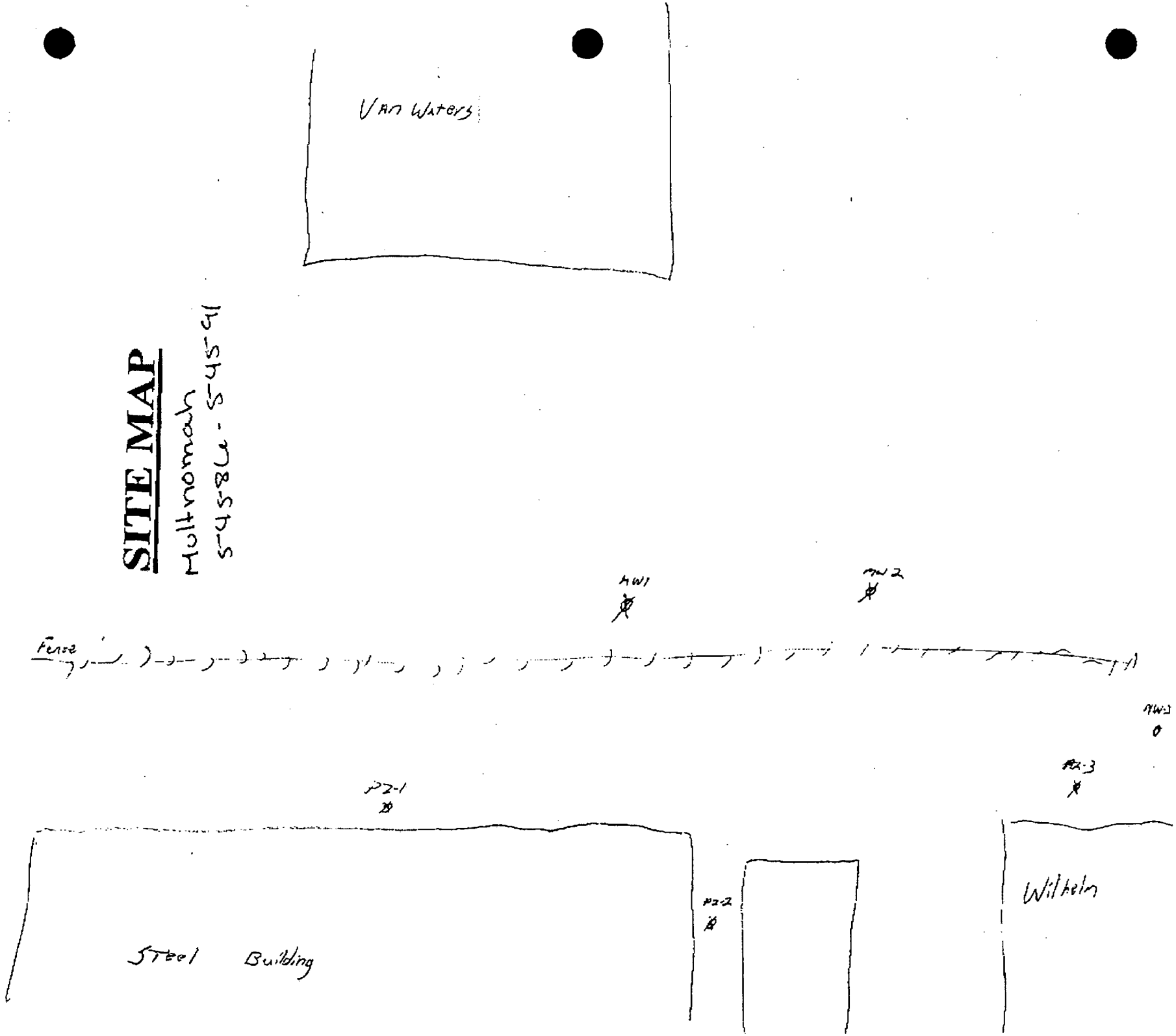
SITE MAP

Multnomah.
S-45-99, S-46005 - S-46007



SITE MAP

Multnomah
5S4S8E - 5S4S9



RECEIVED

STATE OF OREGON

WATER WELL REPORT
(as required by ORS 537.765)

MULT 5048

2N/1W-26dd

(1) OWNER: Owner's Well Number 13993

Name OREGON DEQ

Address 811 SW 6th

City PORTLAND State OR Zip

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

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

(4) PROPOSED USE:
☐ Domestic ☐ Community ☐ Industrial ☐ Irrigation
☐ Thermal ☐ Injection ☒ Other PIEZOMETER / ~~Monitoring~~

(5) BORE HOLE CONSTRUCTION:

Depth of Completed Well ____ ft.

Special Standards date of approval ____

HOLE Diameter	From	To	SEAL Material	From	To	Amount sacks or pounds
	see	well log				

How was seal placed? Method ☐ A ☐ B ☐ C ☐ D ☐ E
☐ Other ____

Backfill placed from ____ ft. to ____ ft. Material ____

Gravel placed from ____ ft. to ____ ft. Size of gravel ____

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	see log				☐	☒	☐	☐
Liner:								

Final location of shoe(s) ____

(7) PERFORATIONS/SCREENS:

☐ Perforations Method ____
☒ Screens Type ____ Material ____

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
see	log					☐	☐

(8) WELL TESTS: Minimum testing time is 1 hour NO

☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal/min	Pumping level	Drill stem at	Time
			½ hr
			1 hr

Temperature of water ____ Depth Artesian Flow Found ____

Water analysis done? NO ☐ Yes By whom ____

Did any strata contain water not suitable for intended use? ☐ Too little
☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other ____

Depth of strata: ____

(9) LOCATION OF WELL by legal description:

County Multnomah Latitude ____ ' ____ " Longitude ____ ' ____ "

Township 2 (N) or S. Range 1 E or (W) WM.

Section 26 SE ¼ SE ¼

Tax Lot ____ Lot ____ Block ____ Subdivision ____

Street Address of Well (or nearest address) ____

(10) STATIC WATER LEVEL:

____ ft. below land surface. Date ____

Artesian pressure ____ lb. per square inch. Date ____

(11) WELL LOG: Ground elevation ~33

Material	From	To	WB?	SWL
See attached well log				

Date started ____ Completed ____

(unbonded) Water Well Constructor Certification:

I constructed this well in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.

Signed ____ Date ____

(bonded) Water Well Constructor Certification:

I accept responsibility for construction of this well and its compliance with all Oregon water well standards. This report is true to the best of my knowledge and belief.

Signed Stephen Hensler Date 2-10-87

Company SWEET EDWARDS & ASSOC. Co. Job No. 8069.02

3509C 10/86

2N/1W-26ll

Sweet, Edwards & Associates, Inc.

BORING LOG

PROJECT SUPERSITING - RAMSEY LAKE (M-5) **Page** 1 **of** 2

Location SOUTHWEST END OF SITE **Boring No.** B-3

Surface Elevation ~30.0' **Drilling Method** 8.25-inch Hollow Stem Auger

Total Depth 51 feet **Drilled By** Geo-Tech Explorations

Date Completed 12/6/86 **Logged By** S. Henshaw

WELL DETAILS	PENETRATION TIME/RATE	DEPTH (FEET)	SAMPLE NO.	SAMPLE TYPE	PERMEABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
Security Casing with Lock; Cement; Volclay Grout; 1.25" Sch. 40 PVC Riser		0					0- : SAND, dark gray (N3), fine to medium grained, relatively clean, satuated at 3.0' "Dredge Spoils"	
		5						
		10						
		15						
		20					Attempted Shelby Tube, no return.	
		25		Shelby tube			25-27': CLAYEY SILT, olive black (5y 2/1), common organic matter, organic odor, some heave in top of Shelby tube, approx. depth of SAND/SILT contact: 22'	
		30		Shelby tube			30-32: As above, some heave in top of Shelby tube.	
		35						

SEA-300-02a

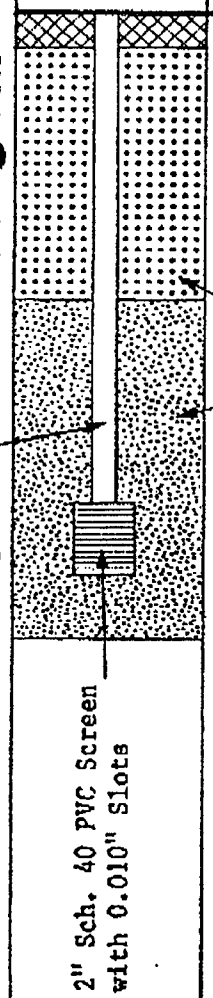
2N/1W

Sweet, Edwards & Associates, Inc.

BORING LOG

PROJECT SUPERSITING - RAMSEY LAKE (M-5)

Boring No. B-3

WELL DETAILS	PENE-TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE NO.	SAMPLE TYPE	PERME-ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
		35	1	Split spoon			35-36.5: SILT, olive black (5Y2/1), some mica, organic odor, saturated 4/4/6	
		40	2	Split spoon			40-41.5: SILT, as above (5/4/6	
		45		Shelby tube			45-47: As above	
		50	3	Split spoon			50-51.5: As above (4/5/4	

SEA-300-02b

STATE OF OREGON

MONITORING WELL REPORT

(as required by ORS 537.765 & OAR 690-240-095)

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

MULT H966

02N/01W/26 DB

Start Card # 72740

(1) OWNER/PROJECT: WELL NO. MW #1

Name McCormick Pacific

Address 7192 SW Sandburg St.

City Tigard State OR Zip 97223

(2) TYPE OF WORK:

☑ New construction ☐ Alteration (Repair/Recondition)

☐ Conversion ☐ Deepening ☐ Abandonment

(3) DRILLING METHOD

☐ Rotary Air ☐ Rotary Mud ☐ Cable

☑ Hollow Stem Auger ☐ Other

(6) LOCATION OF WELL By legal description

Well Location: County Multnomah

Township 2 (N or S) Range 1 (E or W) Section 26

1. NW 1/4 of SE 1/4 of above section.

2. Either Street address of well location 14546 N. Lombard

or Tax lot number of well location

3. ATTACH MAP WITH LOCATION IDENTIFIED. Map shall include approximate scale and north arrow.

(7) STATIC WATER LEVEL:

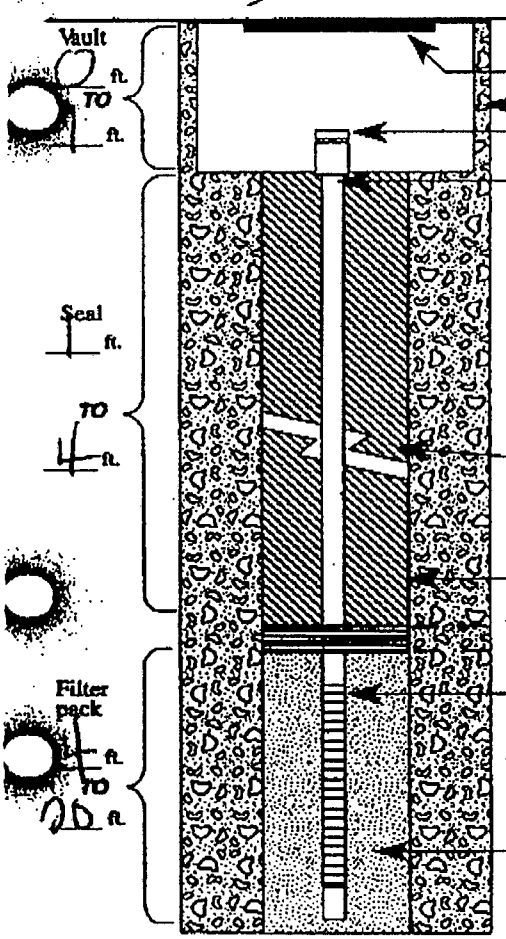
6 Ft. below land surface. Date 11/12/94

Artesian Pressure lb/sq. in. Date

(4) BORE HOLE CONSTRUCTION

Special Standards Yes ☐ No ☑ Depth of completed well 20 ft.

Land surface



Water-tight cover

Surface flush vault

Locking cap

Casing diameter 2 in.

material P.V.C.

Welded ☐ Threaded ☑ Glued ☐

Liner diameter in.

material

Welded ☐ Threaded ☐ Glued ☐

Well seal:

Material Bentonite

Amount 2-50 lb bags

Grout weight

Borehole diameter 10 in.

Bentonite plug at least 3 ft. thick

Screen material P.V.C.

interval(s): From 5 To 20

From To

Slot size .020 in.

Filter pack:

Material Silica sand

Size 10/20 in.

(8) WATER BEARING ZONES:

Depth at which water was first found

From	To	Est. Flow Rate	SWL

(9) WELL LOG: Ground elevation

Material	From	To	SWL
Dredged sand fill medium	0'	10'	
Brown gray sand, fine to medium grained, clean to trace silt			
Black organic silt	10'	20'	
Sort gray silt, trace to some clay & fine-grained sand	20'	30'	

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SEP - 6 1995

WATER RESOURCES DEPT.

SALEM, OREGON

Date started 11/12/94 Completed 11/12/94

(5) WELL TEST:

☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Permeability Yield GPM

Conductivity PH

Temperature of water 14 °F/C Depth artesian flow found ft.

Was water analysis done? ☐ Yes ☐ No

By whom?

Depth of strata to be analyzed. From ft. to ft.

Remarks:

Name of supervising Geologist/Engineer LWT #958

(unbonded) Monitor Well Constructor Certification:

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

MWC Number

Signed Date

(bonded) Monitor Well Constructor Certification:

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

MWC Number

Signed Randy L. Crouman Date 12/20/94

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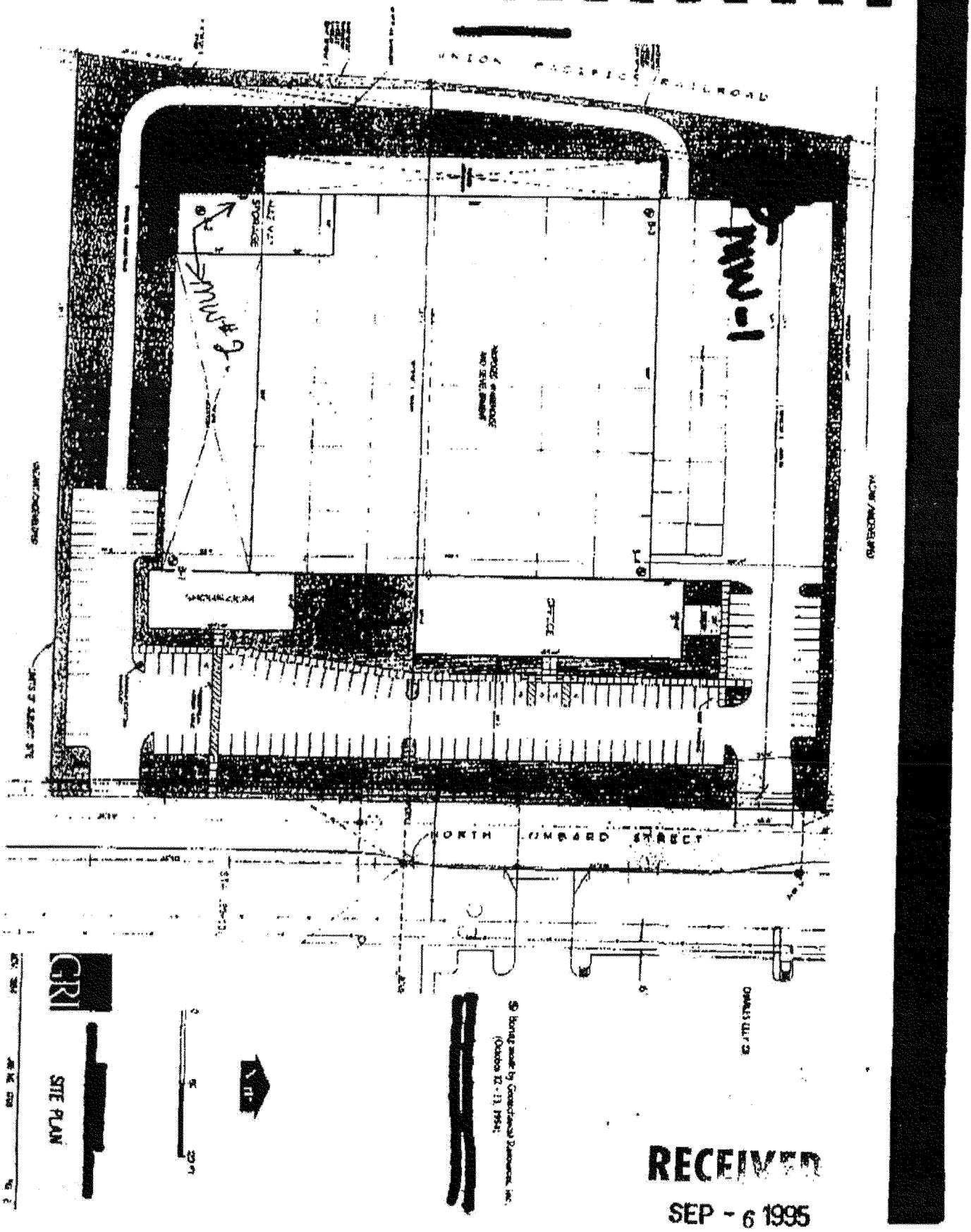
DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL SURFACE ELEVATION	DEPTH, FT	GROUND WATER
		DREDGED SAND FILL: Medium dense, gray SAND; fine to medium grained, clean to trace silt		
5				
10		trace to some silt below 10 ft		
		loose below 12.5 ft		
15				
			18.5	
20		Soft, gray SILT; trace to some clay and fine-grained sand		

GRI

BORING B-1

NOV. 1994 JOB NO. 1703 FIG. 1A



STATE OF OREGON
MONITORING WELL REPORT
(as required by ORS 537.765 & OAR 690-240-095)
Instructions for completing this report are on the last page of this form.

(Mult 4802)

RECEIVED JUN 2 2 1995

2N/1W/26 da

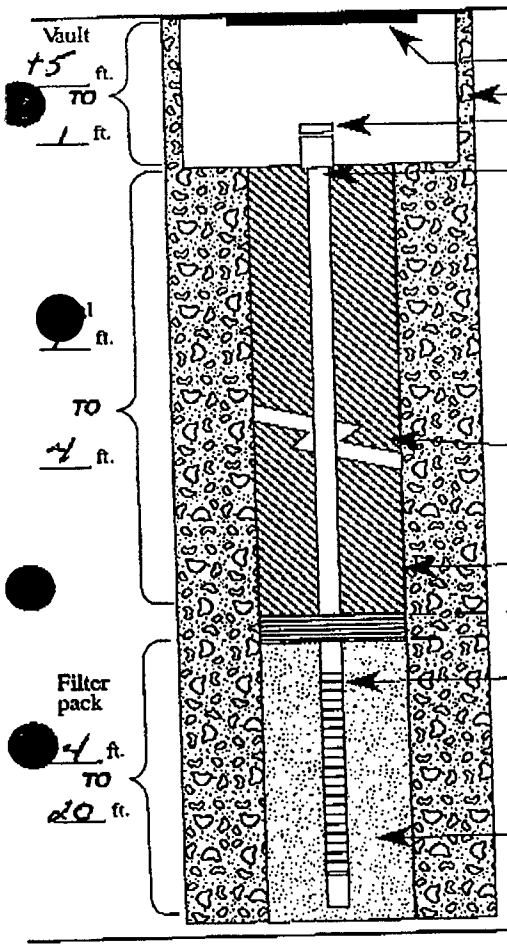
Start Card # 79295

(1) OWNER/PROJECT:
WELL NO. MWHX
Name Oregon Steel Mills
Address 14400 N Rivergate
City Port State OR Zip 97203

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

(3) DRILLING METHOD
☐ Rotary Air ☐ Rotary Mud ☐ Cable
☒ Hollow Stem Auger ☐ Other

(4) BORE HOLE CONSTRUCTION
Special Standards Yes ☒ No ☐ Depth of completed well 20' ft.



Casing diameter 2" in.
material Sch40 pvc
Welded ☐ Threaded ☒ Glued ☐
Liner diameter ____ in.
material ____
Welded ☐ Threaded ☐ Glued ☐
Well seal:
Material bent
Amount 4 Bags
Grout weight ____
Borehole diameter 10" in.
Bentonite plug at least 3 ft. thick
Screen
material Sch40 pvc
interval(s):
From 5 To 20
From ____ To ____
Slot size .010 in.
Filter pack:
Material sand
Size 10/20 in.

(5) WELL TEST:
☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian
Permeability ____ Yield ____ GPM
Conductivity ____ PH ____
Temperature of water 57 °F/C Depth artesian flow found ____ ft.
Was water analysis done? ☐ Yes ☐ No
By whom? ____
Depth of strata to be analyzed. From ____ ft. to ____ ft.
Remarks: ____

Name of supervising Geologist/Engineer ____

(6) LOCATION OF WELL By legal description
Well Location: County Mult
Township 2N (N or S) Range 1W (E or W) Section 26
1. NE 1/4 of SE 1/4 of above section.
2. Either Street address of well location 14400 N Rivergate Port OR 97203
or Tax lot number of well location ____
3. ATTACH MAP WITH LOCATION IDENTIFIED. Map shall include approximate scale and north arrow.

(7) STATIC WATER LEVEL:
6' Ft. below land surface. Date 31 May
Artesian Pressure ____ lb/sq. in. Date ____

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

From	To	Est. Flow Rate	SWL

(9) WELL LOG:
Ground elevation ____

Material	From	To	SWL
silt	0	5	
silt sand wet	5	20	
silt dry	20		

Date started 31 May 95 Completed 31 May 95

(unbonded) Monitor Well Constructor Certification:
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to the best knowledge and belief.
MWC Number 1096
Signed ____ Date 12 June 95

(bonded) Monitor Well Constructor Certification:
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.
MWC Number ____
Signed ____ Date 6/20/95

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

STATE OF OREGON MONITORING WELL REPORT
(as required by ORS 537.765 & OAR 690-240-096)

Muc 3313

RECEIVED JAN 19 1993 WATER RESOURCES DEPT. SALEM, OREGON

2N/ 1W/ 26dc

Start Card # 43611

(1) OWNER/PROJECT:

WELL NO. MW-2

Name Ash Grove Cement Co.

Address 13939 Rivergate Blvd.

City Portland State Oregon Zip 97283

(2) TYPE OF WORK:

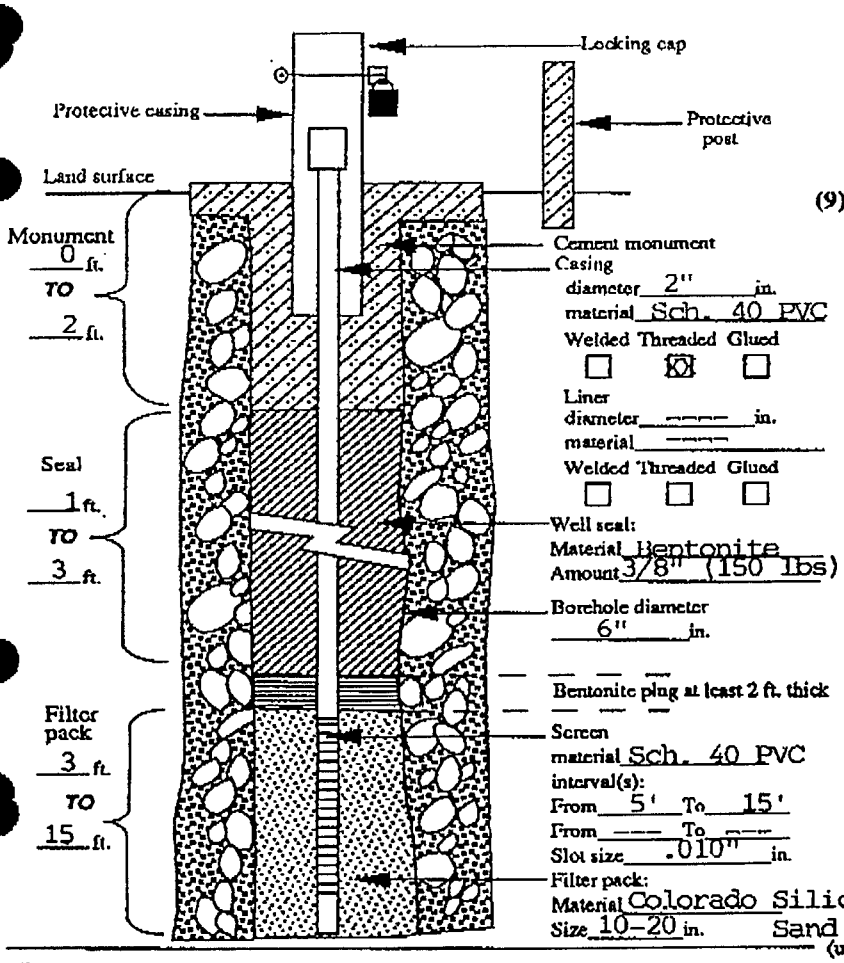
[X] New construction [ ] Repair [ ] Recondition
[ ] Conversion [ ] Deepening [ ] Abandonment

(3) DRILLING METHOD

[ ] Rotary Air [ ] Rotary Mud [ ] Cable
[X] Hollow Stem Auger [ ] Other

(4) BORE HOLE CONSTRUCTION

Special Standards Yes [ ] No [X] Depth of completed well 15' ft.



(5) WELL TEST:

[ ] Pump [ ] Bailer [ ] Air [ ] Flowing Artesian

Permeability – Yield – GPM

Conductivity – PH –

Temperature of water 55 °F/C Depth artesian flow found ft.

Was water analysis done? [X] Yes [ ] No

By whom? not known

Depth of strata to be analyzed. From 10' ft. to 15' ft.

Remarks: PBS Environmental

Name of supervising Geologist/Engineer Erik Anderson

(6) LOCATION OF WELL By legal description

Well Location: County Multnomah

Township T2N (N or S) Range R1W (E or W) Section 26

1. SW 1/4 of SE 1/4 of above section.
2. Street address of well location 1339 N. Rivergate Blvd. Portland, Oregon 97203
3. Tax lot number of well location N/A
4. ATTACH MAP WITH LOCATION IDENTIFIED.

(7) STATIC WATER LEVEL:

10' Ft. below land surface. Date 12-22-92

Artesian Pressure ---- lb/sq. in. Date ----

(8) WATER BEARING ZONES:

Depth at which water was first found 10'

From	To	Est. Flow Rate	SWL
10'	15'	> 1 gpm	---

(9) WELL LOG:

Ground elevation ≈ 30'

Material	From	To	SWL
Sand, Wet, Grading into Silty Clay	0'	10'	
Sand, Black, Wet	10'	15'	
Sand, Black, Grading into silt, black, with wood and plant fragments	15'	16.5'	

Date started 12/22/92 Completed 12/22/92

(unbonded) Monitor Well Constructor Certification:

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

MWC Number –

Signed – Date –

(bonded) Monitor Well Constructor Certification:

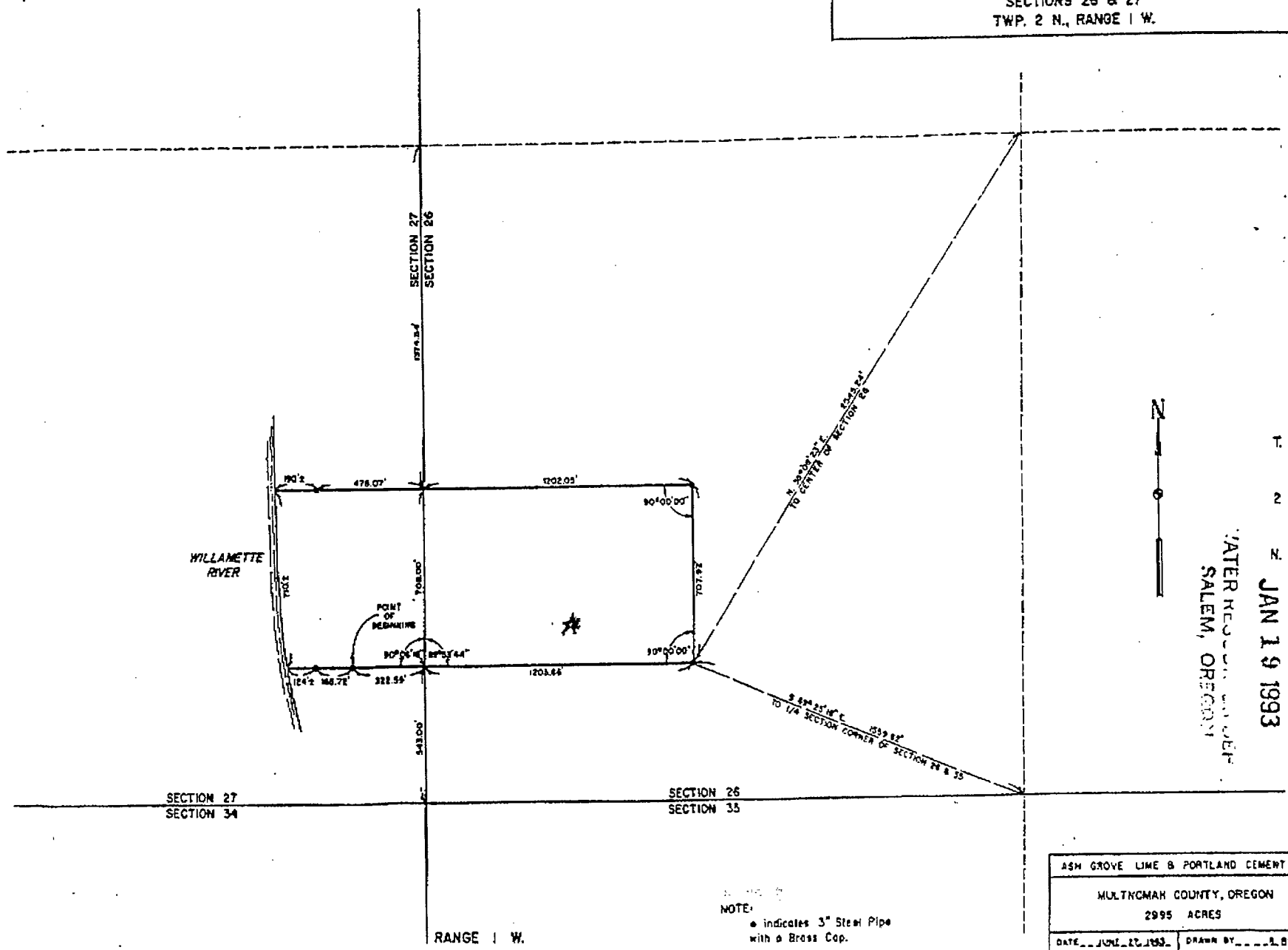
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

MWC Number 10[illegible]8

Signed Robert L. Boese Date 1-12-93

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

MULTNOMAH COUNTY, OREGON
SECTIONS 26 & 27
TWP. 2 N., RANGE 1 W.



NOTE:
● indicates 3" Steel Pipe with a Brass Cap.

ASH GROVE LIME & PORTLAND CEMENT CO.

MULTNOMAH COUNTY, OREGON
2995 ACRES

DATE JUNE 22, 1993
SCALE 1" = 100'
DRAWN BY R. BAILS
TRACED BY R. BAILS

STATE OF OREGON
MONITORING WELL REPORT
(as required by ORS 537.765 & OAR 690-240-095)

MULT 3314

RECEIVED JAN 15 1993 WATER RESOURCES SALEM, OR

2N/1W/26dc

Start Card # 43612

(1) OWNER/PROJECT: WELL NO. MW-3

Name Ash Grove Cement Co.
Address 13939 Rivergate Blvd.
City Portland State OR Zip 97283

(6) LOCATION OF WELL By legal description

Well Location: County Multnomah
Township T2N (N or S) Range R1W (E or W) Section 26
1. SW 1/4 of SE 1/4 of above section.
2. Street address of well location 1339 N. Rivergate Blvd. Portland, OR 97203
3. Tax lot number of well location N/A
4. ATTACH MAP WITH LOCATION IDENTIFIED.

(2) TYPE OF WORK:

[X] New construction [ ] Repair [ ] Recondition
[ ] Conversion [ ] Deepening [ ] Abandonment

(3) DRILLING METHOD

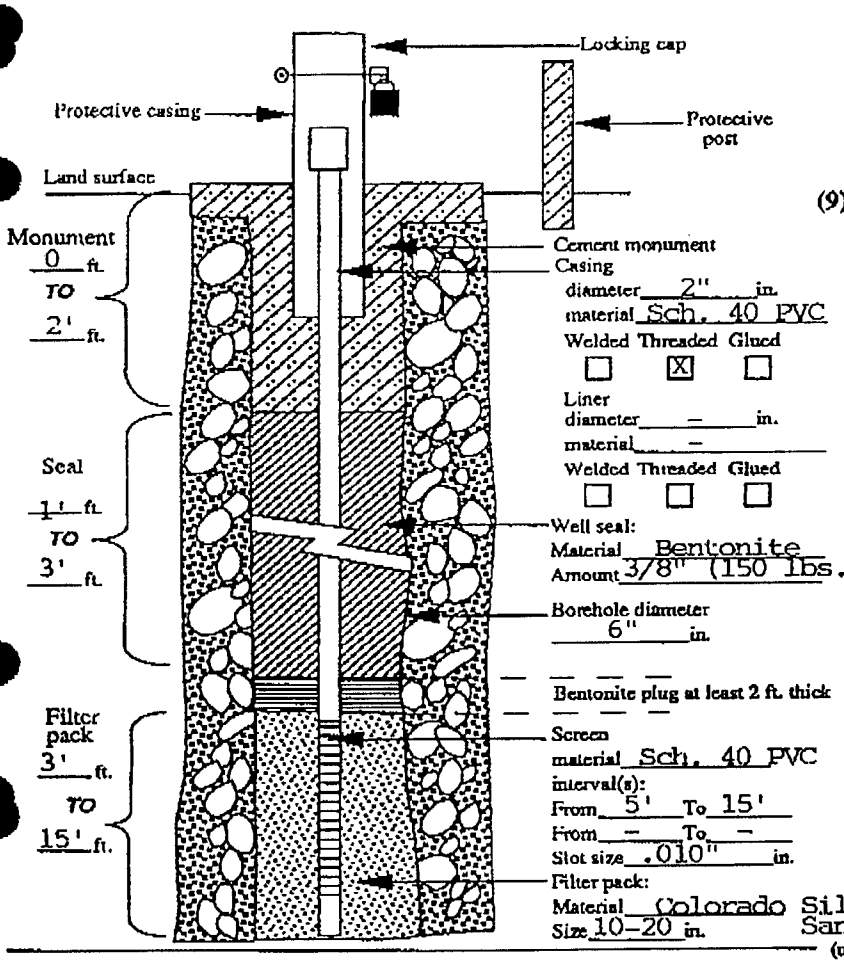
[ ] Rotary Air [ ] Rotary Mud [ ] Cable
[X] Hollow Stem Auger [ ] Other

(7) STATIC WATER LEVEL:

10' Ft. below land surface. Date 12-22-92
Artesian Pressure — lb/sq. in. Date

(4) BORE HOLE CONSTRUCTION

Special Standards Yes [ ] No [X] Depth of completed well 15' ft.



(8) WATER BEARING ZONES:
Depth at which water was first found 10'

From	To	Est. Flow Rate	SWL
10'	15'	>1 gpm	—

(9) WELL LOG: Ground elevation ~~30~~ 30

Material	From	To	SWL
Sand, Brown, Wet	0	10'	
Grading into Silty Clay			
Silt, Dark Grey, Grading into sand, black, wet	10'	15'	
Sand, Dark Gray, wet with plant and wood fragments	15'	16.5'	

Date started 12/22/92 Completed 12/22/92

(5) WELL TEST:

[ ] Pump [ ] Bailer [ ] Air [ ] Flowing Artesian
Permeability — Yield — GPM
Conductivity — PH —
Temperature of water 55 °F/C Depth artesian flow found — ft.
Was water analysis done? [X] Yes [ ] No
By whom? not known
Depth of strata to be analyzed. From 10' ft. to 15' ft.
Remarks: PBS Environmental

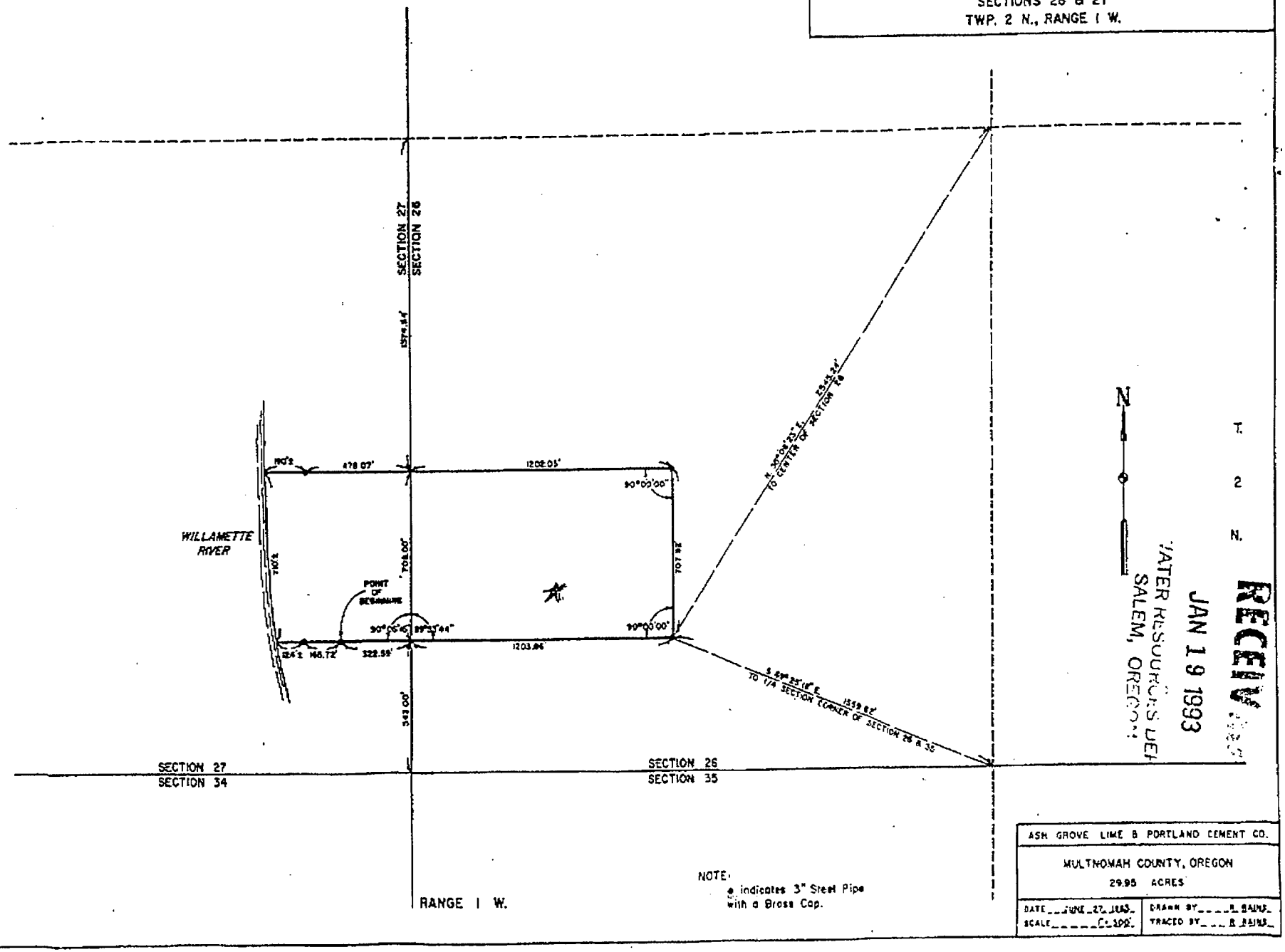
Name of supervising Geologist/Engineer Erik Anderson

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

(bonded) Monitor Well Constructor Certification:
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.
MWC Number [illegible]88
Signed Robert L. Bowen Date 1-12-93

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

MULTNOMAH COUNTY, OREGON
SECTIONS 26 & 27
TWP. 2 N., RANGE 1 W.



STATE OF OREGON
MONITORING WELL REPORT
(as required by ORS 537.765 & OAR 690-240-095)

Mult 3312

RECEIVED JAN 19 1993 WATER RESOURCES SALEM, OREGON

2N/1W/26dcc

Start Card # 43610

(1) OWNER/PROJECT: WELL NO. MW-1

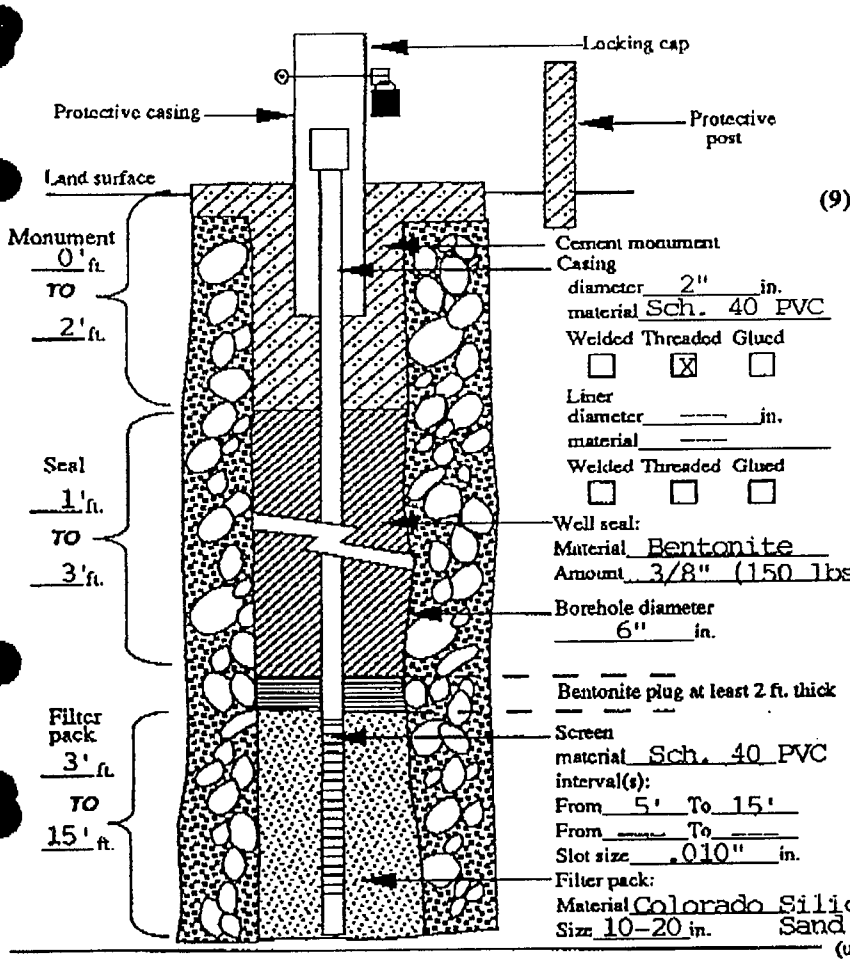
Name Ash Grove Cement Co.
Address 13939 Rivergate Blvd.
City Portland State Oregon Zip 97283

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

(3) DRILLING METHOD
[ ] Rotary Air [ ] Rotary Mud [ ] Cable
[X] Hollow Stem Auger [ ] Other

(4) BORE HOLE CONSTRUCTION

Special Standards Yes [ ] No [X] Depth of completed well 15' ft.



(5) WELL TEST:
[ ] Pump [ ] Bailer [ ] Air [ ] Flowing Artesian
Permeability --- Yield --- GPM
Conductivity --- PH ---
Temperature of water 55 °F/C Depth artesian flow found --- ft.
Was water analysis done? [X] Yes [ ] No
By whom? not known
Depth of strata to be analyzed. From 10' ft. to 15' ft.
Remarks: PBS Environmental

Name of supervising Geologist/Engineer Erik Anderson

(6) LOCATION OF WELL By legal description
Well Location: County Multnomah
Township T2N (N or X) Range R1W (E X or W) Section 26
1. SW 1/4 of SE 1/4 of above section.
2. Street address of well location 1339 N. Rivergate Blvd. Portland, Oregon 97203
3. Tax lot number of well location N/A
4. ATTACH MAP WITH LOCATION IDENTIFIED.

(7) STATIC WATER LEVEL:
10' ft. below land surface. Date 12-22-92
Artesian Pressure --- lb/sq. in. Date ---

(8) WATER BEARING ZONES:
Depth at which water was first found 10'

From	To	Est. Flow Rate	SWL
10'	15'	>1gpm	---

(9) WELL LOG: Ground elevation ≈ 30'

Material	From	To	SWL
Sand, Brown, Wet Grading into Silty Clay	0'	10'	
Sand, Black, Wet	10'	15'	
Sand, Black Grading into Silt, Black with wood and plant fragments	15'	16.5'	

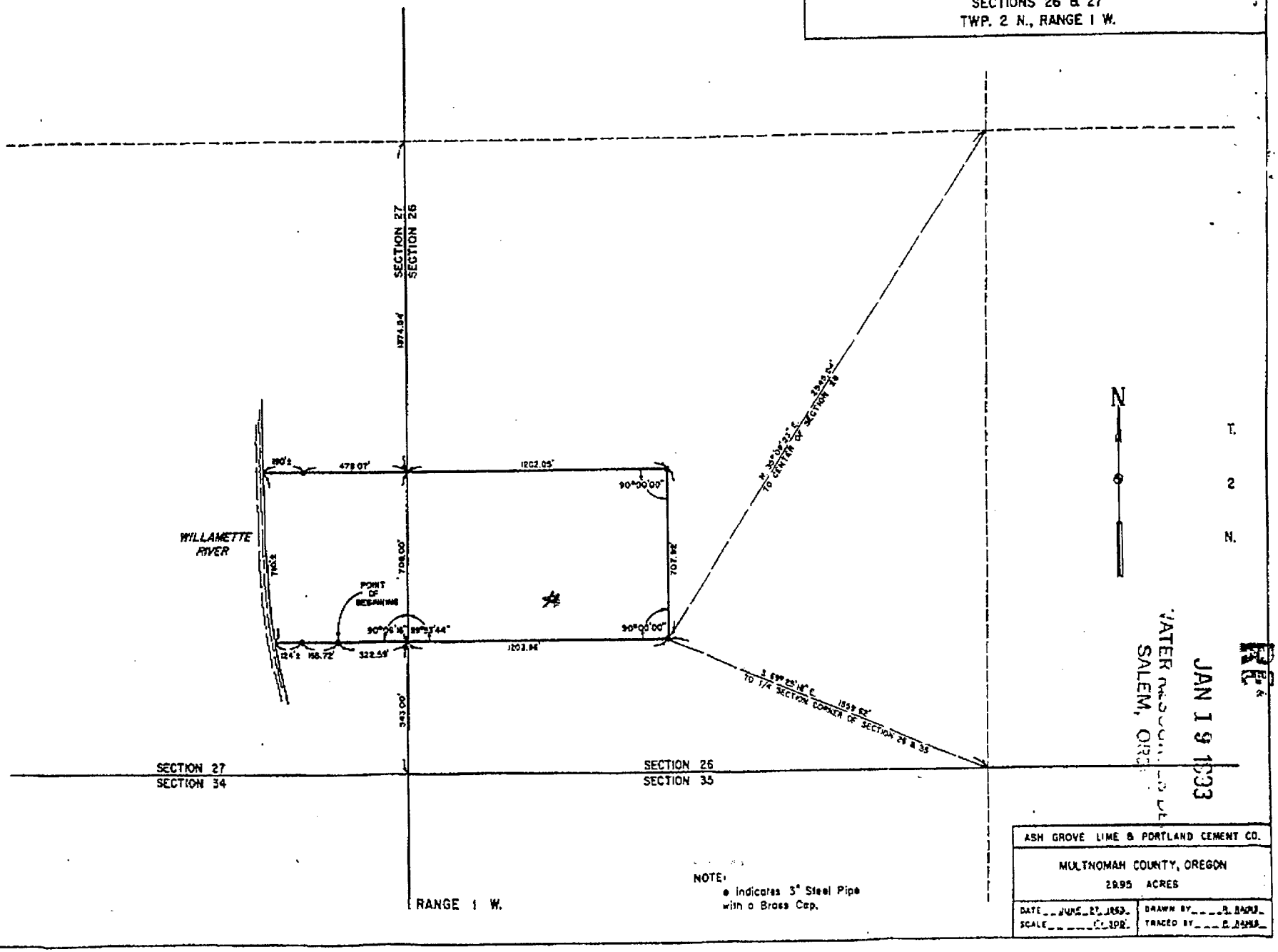
Date started 12/22/92 Completed 12/22/92

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

(bonded) Monitor Well Constructor Certification:
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.
MWC Number [illegible]88
Signed [signature] Date 1-12-93

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

MULTNOMAH COUNTY, OREGON
SECTIONS 26 & 27
TWP. 2 N., RANGE 1 W.



MULT 5051

2N/1W-26dd

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

(1) OWNER:
Well Number: AP-3
Name: OREGON DEQ
Address: 811 SW 6th
City: PORTLAND State: OR Zip:

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

(3) DRILL METHOD
☒ Rotary Air ☐ Rotary Mud ☐ Cable
☐ Other

(4) PROPOSED USE:
☐ Domestic ☐ Community ☐ Industrial ☐ Irrigation
☐ Thermal ☐ Injection ☒ Other PIEZO / MONITORING

(5) BORE HOLE CONSTRUCTION:
Special Construction approval Yes ☐ No ☒ Depth of Completed Well 129 ft.
Explosives used Yes ☐ No ☐ Type Amount

HOLE Diameter	From	To	SEAL Material	From	To	Amount sacks or pounds
10	0	20	CEMENT	0	20	4.5 SACKS
6	20	129				gallon/foot

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

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	6"	0	106		☒	☐	☒	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
Liner:	2"	0	129	sch. 80	☐	☒	☐	☒
					☐	☐	☐	☐

Final location of shoe(s) 106

PERFORATIONS/SCREENS:
☐ Perforations Method
☒ Screens Type Hydrophyllic Material PVC

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
29	119	0.010		2"	—	☐	☒
						☐	☐
						☐	☐
						☐	☐
						☐	☐
						☐	☐

(8) WELL TESTS: Minimum testing time is 1 hour
☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
			1 hr.
NO	TEST		

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

(9) LOCATION OF WELL by legal description:
County Multn. Latitude Longitude
Township 2 (N) or S. Range 1 E or (W) WM.
Section 26 SE ¼ SE ¼
Tax Lot Lot Block Subdivision
Street Address of Well (or nearest address)

(10) STATIC WATER LEVEL:
17.73 ft. below ~~land surface~~ CASING Date 2-10-87
Artesian pressure lb. per square inch. Date

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

From	To	Estimated Flow Rate	SWL
0	25	?	3
25	129	<5 - 5gpm	12-17

(12) WELL LOG:
Ground elevation

Material	From	To	SWL
See attached well log			

Date started 1-6-87 Completed 1-6-87

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

(bonded) Water Well Constructor Certification:
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. all work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.
WWC Number 1439
Signed S P Henshaw Date 2-10-87

WHITE COPIES - WATER RESOURCES DEPARTMENT YELLOW COPY - CONSTRUCTOR PINK COPY - CUSTOMER

2N/1W-26dd

Sweet, Edwards & Associates, Inc.

BORING LOG

PROJECT DEQ SUPERSITING

Location Ramsey Lake

Boring No. AR-3

Surface Elevation ~30 feet

Drilling Method Air Rotary

Total Depth 129 feet

Drilled By McGee and Sons

Date Completed 1/6/87

Logged By S.R. Henshaw

WELL DETAILS	PENETRATION TIME/RATE	DEPTH (FEET)	SAMPLE NO.	SAMPLE TYPE	PERMEABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
Security Casing w/ Lock; Cement Surface Seal; 2" Sch. 80 PVC Riser; 6" Steel Casing		0					See B-3 for details up to 50 feet.	
		10						
		20						
		30						
		40						
		50						
		60					65' SILT, olive gray (5 yr 3/2), abundant organic matter, moderately stiff.	
		70						

SEA-300-02a

2W/1W-26dd

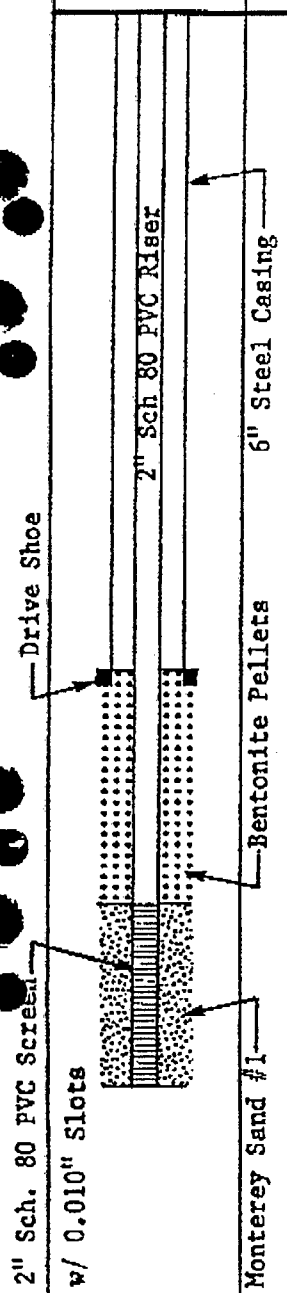
Sweet, Edwards & Associates, Inc.

RECEIVED FEB 12 1987 WATER RESOURCES DEPT. SALEM, OREGON

BORING LOG

PROJECT SUPERSITING - RAMSEY LAKE **Page** 2 **of** 2

Boring No. AR-3

WELL DETAILS	PENETRATION TIME/RATE	DEPTH (FEET)	SAMPLE NO.	SAMPLE TYPE	PERMEABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
		70						
		80					75' Shelby tube attempted 20% retention, did not save. SAND, dark gray (N3), fine grained, moderately dense, some silt.	
		90					88' SILTY SAND, dark gray (N3), fine sand with abundant organic silt.	
		100					100' SILT, olive gray (5 yr 3/2), abundant organic matter, some silty sand interbeds.	
		110		Shelby Tube	Silty Sand Interbed			
		120					114' SLIGHTLY SANDY SILT, dark gray (N3), very fine grained. 121' SILTY SAND, dark gray (N3), very fine grained.	
		130						

SEA-300-02b

STATE OF OREGON

MONITORING WELL REPORT

(as required by ORS 537.765 & OAR 690-240-095)

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

MULT 4967

Start Card # 72741

(1) OWNER/PROJECT:

WELL NO. MW #2

Name McCormick Pacific

Address 1120 SW Sandburg St.

City Tigard State OR Zip 97223

(2) TYPE OF WORK:

☒ New construction ☐ Alteration (Repair/Recondition)

☐ Conversion ☐ Deepening ☐ Abandonment

(3) DRILLING METHOD

☐ Rotary Air ☐ Rotary Mud ☐ Cable

☒ Hollow Stem Auger ☐ Other

(4) BORE HOLE CONSTRUCTION

Special Standards Yes ☐ No ☒ Depth of completed well 20 ft.

Land surface

Vault 0 ft. TO 1 ft.

Water-tight cover

Surface flush vault

Locking cap

Casing diameter 2 in.

material P.V.C.

Welded ☐ Threaded ☒ Glued ☐

Liner diameter in.

material

Welded ☐ Threaded ☐ Glued ☐

1 ft. TO 4 ft.

Well seal: Bentonite

Material Pellets

Amount 2-50lb bags

Grout weight

Borehole diameter 10 in.

Bentonite plug at least 3 ft. thick

Screen material P.V.C.

Interval(s): From 5 To 20'

From To

Slot size .020 in.

Filter pack: Material silica sand

Size 10/20 in.

Filter pack 1 ft. TO 20 ft.

(5) WELL TEST:

☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Permeability Yield GPM

Conductivity PH

Temperature of water 14 °F/C Depth artesian flow found ft.

Was water analysis done? ☐ Yes ☐ No

By whom?

Depth of strata to be analyzed. From ft. to ft.

Remarks:

Name of supervising Geologist/Engineer

(6) LOCATION OF WELL By legal description

Well Location: County Multnomah

Township 2 (N or S) Range 1 (E or W) Section 26

1. NW 1/4 of SE 1/4 of above section.

2. Either Street address of well location 14546 N. Lombard St

or Tax lot number of well location

3. ATTACH MAP WITH LOCATION IDENTIFIED. Map shall include approximate scale and north arrow.

(7) STATIC WATER LEVEL:

0 ft. below land surface. Date 11/12/94

Artesian Pressure lb/sq. in. Date

(8) WATER BEARING ZONES:

Depth at which water was first found

From	To	Est. Flow Rate	SWL

(9) WELL LOG:

Ground elevation

Material	From	To	SWL
Dirty sand fill & Dense, Gray sandy silt w/ medium gravel & clay-to trace silt	0'	12'	
Loose to medium dense, large, trace to some silt	12'	20'	
Silt, gray silt, some fine sand, gravel, trace to some clay	20'	20'	

RECEIVED SEP - 6 1995 WATER RESOURCES DEPT SALEM, OREGON

Date started 11/12/94 Completed 11/12/94

(unbonded) Monitor Well Constructor Certification:

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

MWC Number

Signed Date

(bonded) Monitor Well Constructor Certification:

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

MWC Number

Signed Randy L. Cisman Date 12/21/94

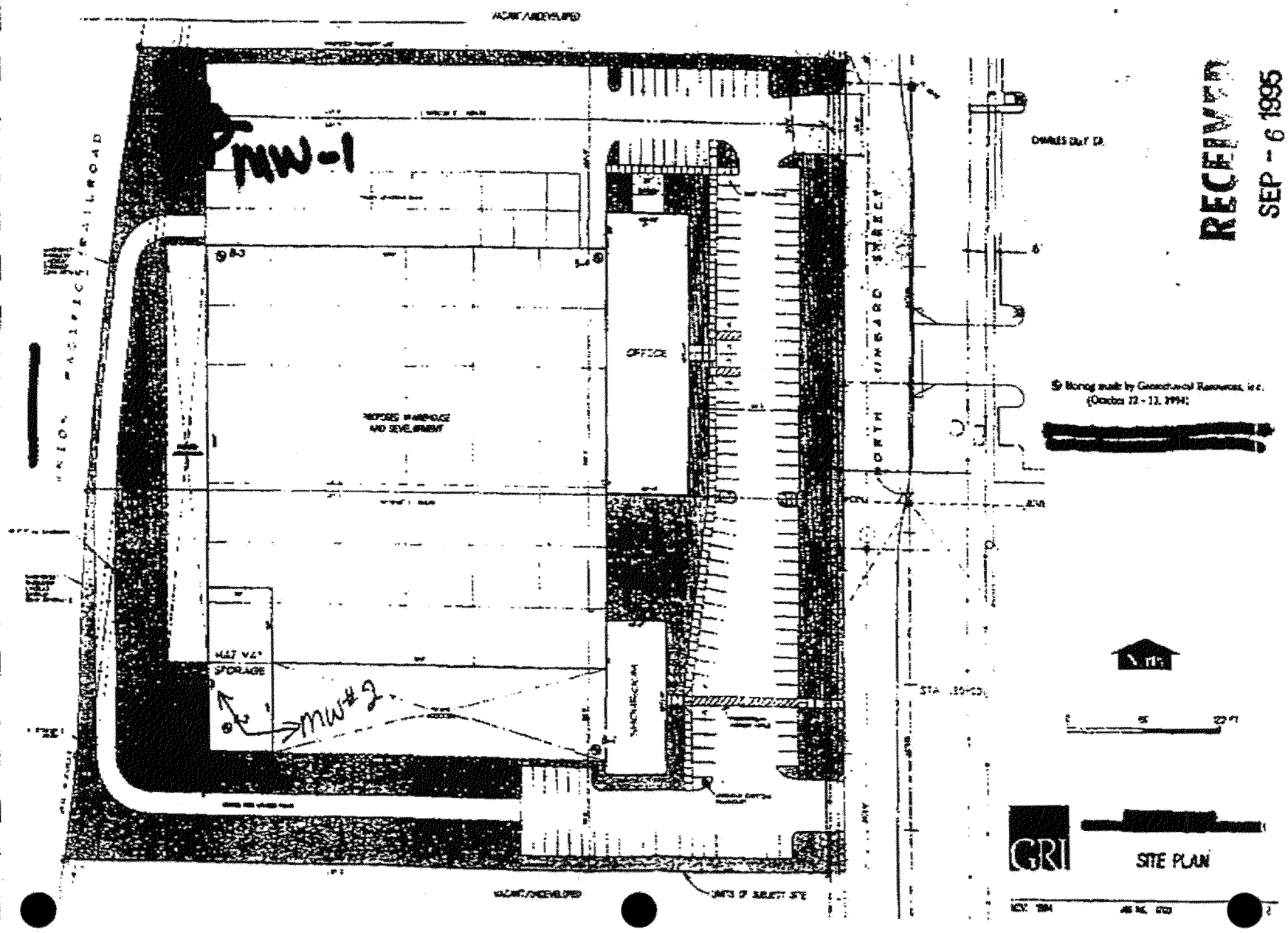
ORIGINAL & FIRST COPY-WATER RESOURCES DEPARTMENT SECOND COPY-CONSTRUCTOR THIRD COPY-CUSTOMER

DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL SURFACE ELEVATION	DEPTH, FT	GROUND WATER
		DREDGED SAND FILL: Dense gray SAND; fine to medium grained, clean to trace silt		
5				
		medium dense below 7.5 ft		
10				
		loose to medium dense, trace to some silt below 12.5 ft		
15				
20			20.5	
		Soft, gray SILT; some fine-grained sand to sandy, trace to some clay		

GRI

BORING B-2

NOV. 1994 JOB NO. 1703 FIG. 2A



RECEIVED FEB 12 1987 WATER RESOURCES DEPT. SALEM, OREGON

MUH 5052

2n/1W-26 aa

STATE OF OREGON

WATER WELL REPORT
(as required by ORS 537.765)

(1) OWNER:
Well Number: AP-2

Name: OREGON DEPT. OF TRANSPORTATION

Address: 511 SW 6th

City: PORTLAND, OR State: Zip:

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

(3) DRILL METHOD
☒ Rotary Air ☐ Rotary Mud ☐ Cable

☐ Other

(4) PROPOSED USE:
☐ Domestic ☐ Community ☐ Industrial ☐ Irrigation

☐ Thermal ☐ Injection ☒ Other PIEZO/MONITORING

(5) BORE HOLE CONSTRUCTION:
Special Construction approval Yes ☐ No ☒ Depth of Completed Well 137 ft.

Explosives used Yes ☐ No ☒ Type Amount

HOLE Diameter	From	To	SEAL Material	From	To	Amount sacks or pounds
10	0	20	CEMENT	0	20	4½ SACKS
6	20	141				1 gallon of water

How was seal placed: Method ☐ A ☐ B ☒ C ☐ D ☐ E

☐ Other

Backfill placed from ft. to ft. Material

Gravel placed from ft. to ft. Size of gravel

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	10				☐	☐	☐	☐
	6	0	122		☒	☐	☒	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
Liner:					☐	☐	☐	☐
					☐	☐	☐	☐

Final location of shoe(s) 122

PERFORATIONS/SCREENS:
☐ Perforations Method

☒ Screens Type PVC hydraphull Material PVC

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
86	126	0.10		5½		☐	☐
						☐	☐
	packer used					☐	☐
						☐	☐
						☐	☐
						☐	☐

(8) WELL TESTS: Minimum testing time is 1 hour
☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
			1 hr.
+ 50 gpm w/ little drawdown			

Temperature of water — Depth Artesian Flow Found —

Was a water analysis done? ☐ Yes By whom —

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

☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other

Depth of strata:

(9) LOCATION OF WELL by legal description:
County Multn. Latitude Longitude

Township 2 (N) or S, Range 1 E or (W) WM.

Section 26 ~~NW~~ NE ¼ ~~NW~~ NE ¼

Tax Lot Lot Block Subdivision

Street Address of Well (or nearest address)

(10) STATIC WATER LEVEL:
23.34 ~~33.0~~ ft. below ~~land surface~~ CASING Date 1-27-87

Artesian pressure lb. per square inch. Date

(11) WATER BEARING ZONES:
Depth at which water was first found 3'

From	To	Estimated Flow Rate	SWL
0	25	?	4'
25	~~50~~ 117?	25-5	13
117	137	+ 50	22'

(12) WELL LOG:
Ground elevation

Material	From	To	SWL
See attached log			

Date started 1-8-87 Completed 1-9-87

(unbonded) Water Well Constructor Certification:

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

WWC Number

Signed Date

(bonded) Water Well Constructor Certification:

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

WWC Number 1439

Signed S T Henshaw Date 2-10-87

WHITE COPIES - WATER RESOURCES DEPARTMENT YELLOW COPY - CONSTRUCTOR PINK COPY - CUSTOMER 9809C 10/86

2N/1W-26aa

RECEIVED

Sweet, Edwards & Associates, Inc.

BORING LOG

WATER RESOURCES DEPT. SALEM, OREGON

PROJECT DEQ SUPERSITING **Page** 1 **of** 2

Location Ramsey Lake **Boring No.** AR-2

Surface Elevation ~33 feet **Drilling Method** Air Rotary

Total Depth 141 feet **Drilled By** McGee and Sons

Date Completed 1/9/87 **Logged By** S.R. Henshaw

WELL DETAILS	PENETRATION TIME/ RATE	DEPTH (FEET)	SAMPLE NO.	SAMPLE TYPE	PERMEABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
Security Casing w/ Lock; 6" Steel Casing; Dredge Spoils; Cement Surface Seal; Silt		0					See B-2 for details up to 50 feet.	Drilling water conductivity 430 um/cm 1/7/87
		10						
		20						
		30						
		40						
		50						
		60					55' SILT, medium dark gray (N4), abundant organic matter, sandy interbed from 72-73 feet, saturated.	750 um/cm
		70						696 um/cm

SEA-300-02a

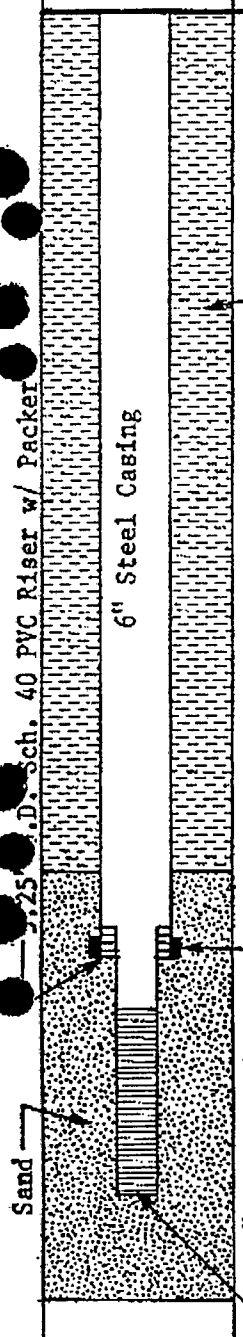
2N/1W-26aa

Sweet, Edwards & Associates, Inc.

BORING LOG

PROJECT SUPERSITING - RAMSEY LAKE

Boring No. AR-2



WELL DETAILS	PENETRATION TIME/RATE	DEPTH (FEET)	SAMPLE NO.	SAMPLE TYPE	PERMEABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
		70						Drilling water 286 um/cm 1/8/87
							Sand interbed	
							77' SILTY SAND to SANDY SILT, brownish gray (5 yr 4/1), some organic matter, saturated.	271 um/cm
		80			Shelby Tube			
							83' CLAYEY SILT, brownish gray (5 yr 4/1), abundant organic matter.	360 um/cm
		90						340 um/cm
		100						326 um/cm
							108' As above, less organic matter.	
		110						248 um/cm
							117' SAND, brownish gray (5 yr 4/1) to brownish black (5 yr 2/1), medium to fine grained, common woody material, dense, loosing drilling water circulation, some silt, interbeds up to 0.5 ft. thick.	Drilling water 360 um/cm 1/9/87
		120			Silty interbed			
		130						240 um/cm
					Silty interbed			
							137' As above, decrease in organic matter.	
		140						

SEA-300-02b

RECEIVED FEB 12 1987 WATER RESOURCES DEPT. SALEM, OREGON B-2

MULT 5049

2N/1W-26aa

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

PLEASE TYPE or PRINT IN INK

(for official use only)

(1) OWNER:
Name Oregon DEQ
Address 811 SW 6th
City PORTLAND State OR

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

(3) TYPE OF WELL:
Rotary Air ☐ Driven ☐
Rotary Mud ☐ Dug ☐
Cable ☐ Bored ☒

(4) PROPOSED USE (check):
Domestic ☐ Industrial ☐ Municipal ☐
Irrigation ☐ Thermal: Withdrawal ☐ Reinjection ☐
Other: Piezometric ☐ Grounding ☐ Test ☐

(5) CASING INSTALLED: Steel Threaded ☐ Plastic Welded ☒ (see log)
" Diam. from ft. to ft. Gauge
" Diam. from ft. to ft. Gauge

LINER INSTALLED: Steel Threaded ☐ Plastic Welded ☐
" Diam. from ft. to ft. Gauge

(6) PERFORATIONS: Perforated? ☐ Yes ☒ No
Size of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

(7) SCREENS: Well screen installed? ☒ Yes ☐ No
Manufacturer's Name see attached log
Type Model No.
Diam. Slot Size Set from ft. to ft.
Diam. Slot Size Set from ft. to ft.

(8) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☐ No If yes, by whom? NOT APPLICABLE
Yield: gal./min. with ft. drawdown after hrs.
" " "
Air test gal./min. with drill stem at ft. hrs.
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m.
Temperature of water Depth artesian flow encountered ft.

(9) CONSTRUCTION: Special standards: Yes ☒ No ☐
Well seal—Material used Volclay GROUT
Well sealed from land surface to ft.
Diameter of well bore to bottom of seal see log in.
Diameter of well bore below seal in.
Amount of sealing material sacks ☐ pounds ☐
How was cement grout placed? TREMIED

Was pump installed? NO Type HP Depth ft.
Was a drive shoe used? ☐ Yes ☒ No Plugs Size: location ft.
Did any strata contain unusable water? ☐ Yes ☐ No HIGH POND.
Type of Water? depth of strata
Method of sealing strata off Bentonite / Volclay grout
Was well gravel packed? ☒ Yes ☐ No Size of gravel:
Gravel placed from see log ft. to ft.

(10) LOCATION OF WELL by legal description:
County Multnomah NE ¼ NE ¼ of Section 26 of
Township 2N (Township is North or South), Range 1W (Range is East or West), WM.
Tax Lot Lot Block Subdivision
MAILING ADDRESS OF WELL (or nearest address)

(11) WATER LEVEL of COMPLETED WELL:
Depth at which water was first found ft.
Static level ft. below land surface. Date
Artesian pressure lbs. per square inch. Date

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

MATERIAL	From	To	SWL
see attached log			

Date work started /completed 12/2/86
Date well drilling machine moved off of well 12/2 1986

(unbonded) Water Well Constructor Certification (if applicable):
This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.
[Signed] Date , 19

(bonded) Water Well Constructor Certification:
Bond 97-84-0614-9 Issued by: State Farm (Surety Company Name)
On behalf of Stephen R. HENSHAW (type or print name of Water Well Constructor)
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief:
(Signed) S R Henshaw (Water Well Constructor)
(Dated) 2-10-87

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

SP*46866-690

RECEIVED

2N/1W-2cma

Sweet, Edwards & Associates, Inc.

BORING LOG

PROJECT SUPERSITING - RAMSEY LAKE (M-5)

Location WEST END OF SITE

Boring No. B-2

Surface Elevation 32.0'

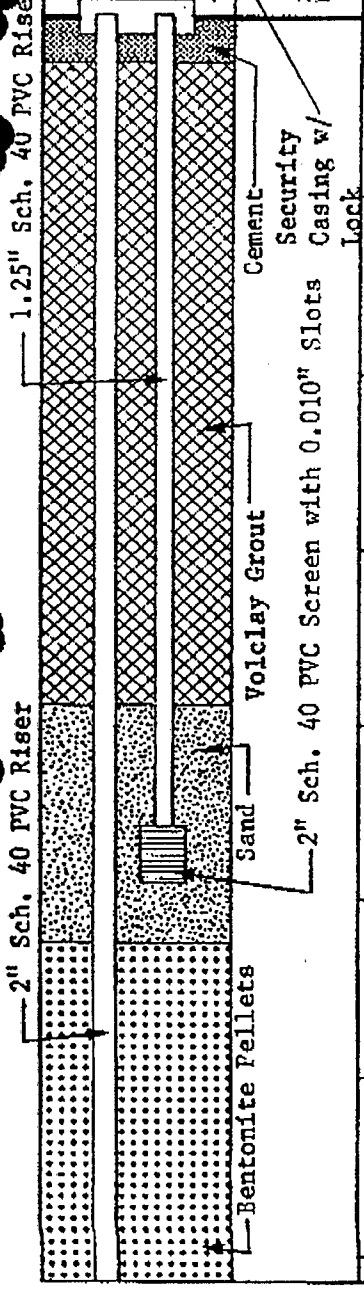
Drilling Method 6.25-inch Hollow Stem Auger

Total Depth ~51 feet

Drilled By Geo-Tech M. Bryant

Date Completed 12/2/86

Logged By S. Henshaw/ G.S. Mack



WELL DETAILS	PENETRATION TIME/ RATE	DEPTH (FEET)	SAMPLE NO.	SAMPLE TYPE	PERMEABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
		0					SAND, dark gray (N3), fine to medium grained, moderately clean, saturated at ~3.0' "Dredge Spoils," no samples	
		5						
		10					20.5-21': SAND, grayish black (N2), medium to fine grained, some silt, loose, "Dredge Spoils," saturated.	
		15						
		20	1	SS			20.5-21': SAND, grayish black (N2), medium to fine grained, some silt, loose, "Dredge Spoils," saturated.	
		25		Shelby tube			21.0-21.5': SILT TO SILTY SAND, grayish black (N2), abundant organic matter, alternating beds from silt to silty sand to silt, saturated. Probable contact of dredge spoils and native material.	
		30		SS			30.0-32': CLAYEY SILT, a lot of heave, olive black (5y 2/1), saturated.	
		35						

SEA-300-02a

RECEIVED FEB 13 1997

2N/1W-26AA

Sweet, Edwards & Associates, Inc.

BORING LOG

PROJECT SUPERSITING - RAMSEY LAKE (M-5)

Boring No. B-2

WELL DETAILS	PENE-TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE NO.	SAMPLE TYPE	PERME-ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
2" Sch. 40 PVC Riser; Bentonite Pellets; Sand; 2" Sch. 40 PVC Screen with 0.010" Slots		35	2	SS			35-36.5: CLAYEY SILT, olive gray (5Y4/1) to olive black (5Y2/1), clay fine sand layer 2" thick streaks of greenish gray (5G4/1)	
		40		SS			42-44: CLAYEY SILT, olive gray to olive black (5Y4/1 to 5Y2/1) some fine sand.	
		45		SS			45-47: CLAYEY SILT, olive gray (5Y4/1) streaks of dark greenish gray (5GY4/1) some organic material.	
		50		SS			50-51.5': CLAYEY SILT, olive gray (5Y4/1) to olive black (5Y2/1), some organic material (rootlets), trace fine sand.	

SEA-300-02b

RECEIVED

FEB 12 1987

WATER RESOURCES DEPT.

STATE OF OREGON

WATER WELL REPORT

(as required by ORS 537.765)

MULT 5050

2N/1W-26aa monitoring

(1) OWNER: Well Number: MW-1

Name OREGON DEQ SALEM, OREGON

Address 811 SW 6th

City PORTLAND State OR Zip 97204

(2) TYPE OF WORK:

☒ New Well ☐ Deepen ☐ Recondition ☐ Abandon

(3) DRILL METHOD

☒ Rotary Air ☐ Rotary Mud ☐ Cable

☐ Other

(4) PROPOSED USE:

☐ Domestic ☐ Community ☐ Industrial ☐ Irrigation

☐ Thermal ☐ Injection ☒ Other PIEZOMETRIC/MONITORING

(5) BORE HOLE CONSTRUCTION:

Special Construction approval Yes ☐ No ☒ Depth of Completed Well 181 ft.

Explosives used Yes ☐ No ☒ Type Amount

HOLE Diameter	From	To	SEAL Material	From	To	Amount sacks or pounds
10"	0	20	CEMENT	0	20	4.5 gallon/sack
6"	20	181				

How was seal placed: Method ☐ A ☐ B ☒ C ☐ D ☐ E

☐ Other

Backfill placed from ft. to ft. Material

Gravel placed from ft. to ft. Size of gravel

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	6"	0	181		☒	☐	☒	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
Liner:					☐	☐	☐	☐
					☐	☐	☐	☐

Final location of shoe(s) 181

PERFORATIONS/SCREENS:

☐ Perforations Method

☒ Screens Type Material

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
NONE						☐	☐
						☐	☐
						☐	☐
						☐	☐
						☐	☐
						☐	☐

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

☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
NO			1 hr.

produced + 100 gpm w/ little drawdown

Temperature of water Depth Artesian Flow Found

Was a water analysis done? ☐ Yes By whom

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

☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other

Depth of strata:

(9) LOCATION OF WELL by legal description:

County Multnomah Latitude ° ' Longitude ° '

Township 2 N or S. Range 1 E or W WM.

Section 26 ~~NW~~ NE ¼ ~~NW~~ NE ¼

Tax Lot Lot Block Subdivision

Street Address of Well (or nearest address)

(10) STATIC WATER LEVEL:

24.39 ft. below ~~land surface~~ CASING TOP. Date 1-20-87

Artesian pressure lb. per square inch. Date

(11) WATER BEARING ZONES:

Depth at which water was first found 3'

From	To	Estimated Flow Rate	SWL
0	25	?	3
25	50	<3 gpm?	10
50	160		?
160	181	+ 100 gpm	24

(12) WELL LOG: Ground elevation ~33.0'

Material	From	To	SWL
See attached well log			

Date started 1-14-87 Completed 1-14-87

(unbonded) Water Well Constructor Certification:

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

WWC Number

Signed Date

(bonded) Water Well Constructor Certification:

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

WWC Number 1439

Signed S.E. Hensler Date 2-10-87

WHITE COPIES - WATER RESOURCES DEPARTMENT YELLOW COPY - CONSTRUCTOR PINK COPY - CUSTOMER

2n/1W-26aa

Sweet, Edwards & Associates, Inc.

BORING LOG

PROJECT DEQ SUPERSITING

Location Ramsey Lake

Boring No. AR-1

Surface Elevation ~33 feet

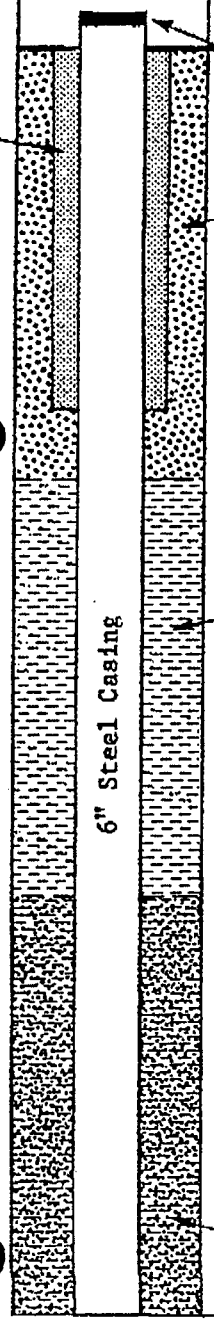
Drilling Method Air Rotary

Total Depth 181 feet

Drilled By McGee and Sons

Date Completed 1/14/87

Logged By S.R. Henshaw

WELL DETAILS	PENETRATION TIME/RATE	DEPTH (FEET)	SAMPLE NO.	SAMPLE TYPE	PERMEABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
		0					See B-1 for details up to 50 feet.	Drilling water conductivity 270um/cm
		10						
		20						
		30						
		40						
		50						
		60					SILTY to SLIGHTLY SILTY SAND, dark gray (N3) to olive gray (5 yr 6/1), fine to medium grained, moderately clean, some wood, saturated.	
		70						

SEA-300-02a

2N/1W-26aa

Sweet, Edwards & Associates, Inc.

BORING LOG

PROJECT SUPERSITING - RAMSEY LAKE

Boring No. AR-1

WELL DETAILS	PENE-TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE NO.	SAMPLE TYPE	PERME-ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
6" Steel Casing	Slightly Silty to Silty Sand	70						
		80			Shelby Tube			
		90						
		100			Shelby Tube			
							105' As above, grading to fine grained, saturated.	
		110						
							115' As above, very fine grained, saturated.	
		120						
							125' As above, grading to medium grained, saturated.	
	Micaceous Sand	130						
							134' SAND, brownish gray (5 yr 4/1) to dusky yellowish brown (10 yr 2/2), minor amounts of silt, micaceous, saturated	
		140						

SEA-300-02b

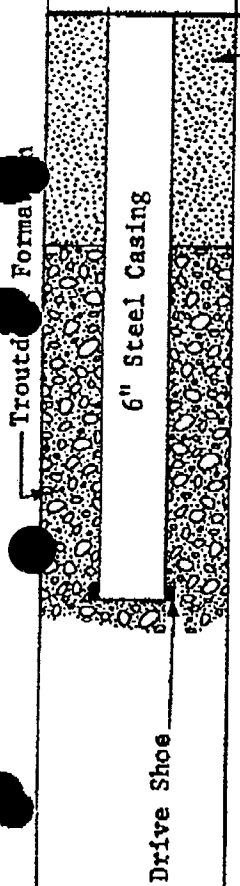
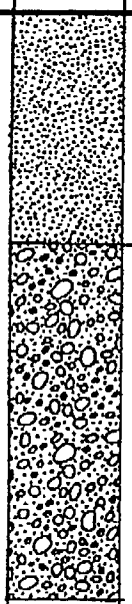
2N/1W-26AA

Sweet, Edwards & Associates, Inc.

BORING LOG

PROJECT SUPERSITING - RAMSEY LAKE

Boring No. AR-1

WELL DETAILS	PENE-TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE NO.	SAMPLE TYPE	PERME-ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
		150					161' CONGLOMERATE, multi varied rock clasts, well cemented, producing water at 150 gpm, "Troutdale Formation", saturated.	360 um/cm
		160						
		170						
		180						
		190						

SEA-300-02b

MULT 655 2N/1W/25bc

STATE OF OREGON MONITORING WELL REPORT
(as required by ORS 537.765 & OAR 690-240-095)

DEC 30 1992
WATER RESOURCES DEPT.
SALEM, OREGON

Start Card # 37445

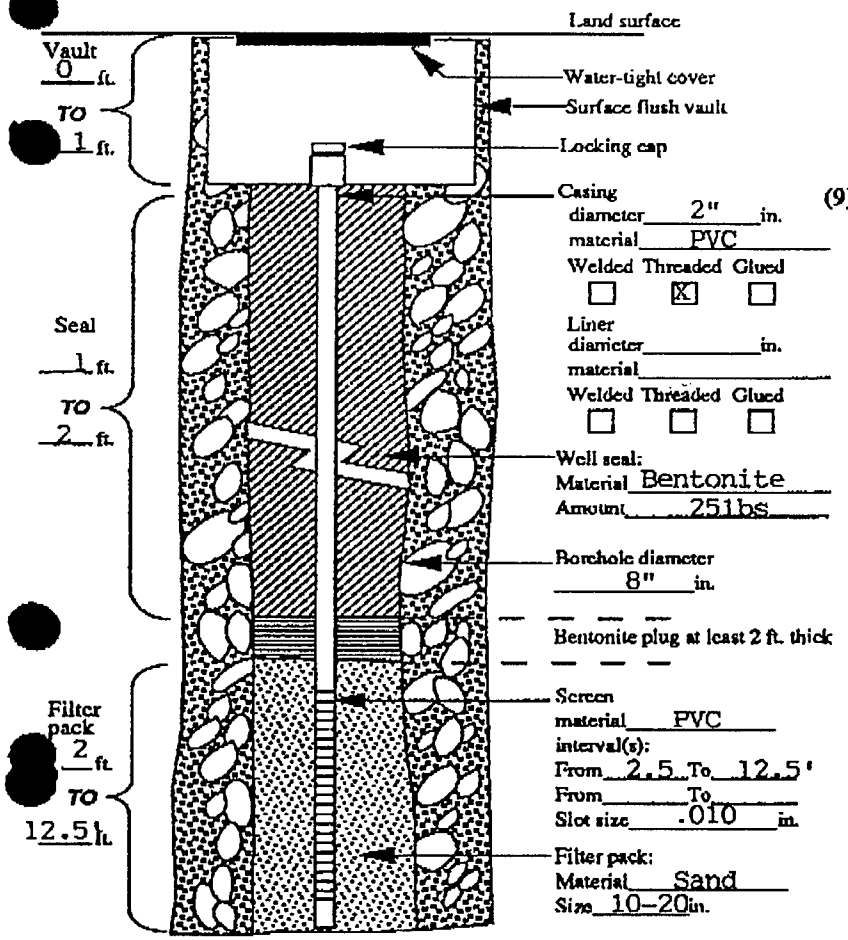
(1) OWNER/PROJECT:
WELL NO. Bes 3

Name: Port of Portland
Address: Box 3529
City: Portland State: OR Zip: 97208

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

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

(4) BORE HOLE CONSTRUCTION
Special Standards: Yes ☐ No ☐ Depth of completed well 12.5 ft.



(5) WELL TEST:
☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian
Permeability Yield GPM
Conductivity PH
Temperature of water 51 est °F/C Depth artesian flow found ft.
Was water analysis done? ☐ Yes ☐ No
By whom?
Depth of strata to be analyzed. From ft. to ft.
Remarks:

Name of supervising Geologist/Engineer

(6) LOCATION OF WELL By legal description
Well Location: County Multnomah
Township 2N (N or S) Range 1W (E or W) Section 25
1. SW 1/4 of NW 1/4 of above section.
2. Street address of well location Rivergate Ind. District Ramsey Lake
3. Tax lot number of well location 36 Block 15
4. ATTACH MAP WITH LOCATION IDENTIFIED.

(7) STATIC WATER LEVEL:
2' ft. below land surface. Date 3-3-92
Artesian Pressure lb/sq. in. Date

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

From	To	Est. Flow Rate	SWL

(9) WELL LOG:
Ground elevation

Material	From	To	SWL
Sand	0	17'	2'
Silt	17	26.5	
Backfilled Silt area			
with bentonite	26.5	17'	
Sand Backfill	17'	12.5	
Mon well Installed	0	12.5	

Date started 3-3-92 Completed 3-3-92

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

Signed [signature] MWC Number 10040 Date 12-28-92

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

Signed Greg Van De Hey MWC Number 10017 Date 12-28-92

STATE OF OREGON
MONITORING WELL REPORT
(as required by ORS 537.765 & OAR 690-240-095)

RECEIVED DEC 30 1992 WATER RESOURCES DEPT. SALEM, OREGON

Mult 656 N/ 1W/25bc

Start Card # 37444

(1) OWNER/PROJECT: WELL NO. Bes - 2

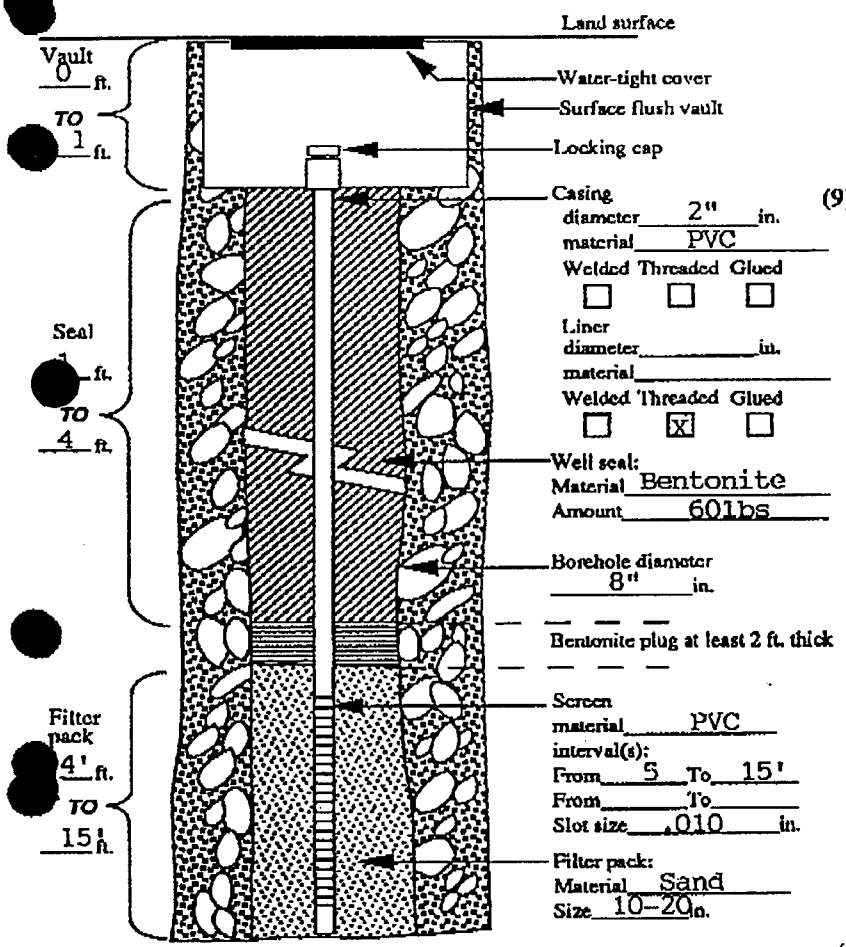
Name: Port of Portland
Address: Box 3529
City: Portland State: OR Zip: 97208

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

(3) DRILLING METHOD
[ ] Rotary Air [ ] Rotary Mud [ ] Cable
[X] Hollow Stem Auger [ ] Other

(4) BORE HOLE CONSTRUCTION

Special Standards Yes [ ] No [ ] Depth of completed well 15' ft.



(5) WELL TEST:
[ ] Pump [ ] Bailer [ ] Air [ ] Flowing Artesian
Permeability ____ Yield ____ GPM
Conductivity ____ PH ____
Temperature of water 51 est. F/C Depth artesian flow found ____ ft.
Was water analysis done? [ ] Yes [ ] No
By whom? ____
Depth of strata to be analyzed. From ____ ft. to ____ ft.
Remarks: ____

Name of supervising Geologist/Engineer ____

(6) LOCATION OF WELL By legal description
Well Location: County Multonmah
Township 2N (N or S) Range 1W (E or W) Section 25
1. SW 1/4 of NW 1/4 of above section.
2. Street address of well location Rivergate Ind. District Ramsey Lake
3. Tax lot number of well location 36 Block 15
4. ATTACH MAP WITH LOCATION IDENTIFIED.

(7) STATIC WATER LEVEL:
8' ft. below land surface. Date 3-392
Artesian Pressure ____ lb/sq. in. Date ____

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

From	To	Est. Flow Rate	SWL

(9) WELL LOG: Ground elevation ____

Material	From	To	SWL
Sand	0	20'	8'
Silt	20'	26.5'	
Backfilled silt area			
with Bentonite	26.5	20'	
with Sand	20'	15'	
Installed mon well	0'	15'	

Date started 3-3-92 Completed 3-3-92

(unbonded) Monitor Well Constructor Certification:
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to the best knowledge and belief.
Signed [signature] MWC Number 10040 Date 3-11-92

(bonded) Monitor Well Constructor Certification:
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.
Signed Greg Van De Hey MWC Number 10017 Date 12-28-92

mult 55362

RECEIVED
APR - 8 1998
WATER RESOURCES DEPT.
SALEM, OREGON

STATE OF OREGON
WATER SUPPLY WELL REPORT
(as required by ORS 537.765)
Instructions for completing this report are on the last page of this form.

WELL I.D. # L 23615
START CARD # 110287

(1) OWNER: Well Number
Name PORT OF PORTLAND
Address P.O. BOX 3529
City PORTLAND State OR. Zip 97208

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

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

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

(5) BORE HOLE CONSTRUCTION:
Special Construction approval [ ] Yes [X] No Depth of Completed Well 184 ft.
Explosives used [ ] Yes [X] No Type Amount

HOLE Diameter	From	To	SEAL Material	From	To	Sacks or pounds
10	0	184	Bentonite	0	20	8 sks
			Cement	20	50	5sks
			Drill gel	50	110	
			Cement	110	140	6 sks

How was seal placed: Method [ ] A [ ] B [X] C [ ] D [ ] E
[X] Other POURED INTO ANNULAR
Backfill placed from ft. to ft. Material
Gravel placed from 140 ft. to 182 ft. Size of gravel #8

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	6	+1	170	250	X		X	
	6	180	184	250	X		X	
Liner:								

Final location of shoe(s)

(7) PERFORATIONS/SCREENS:
[ ] Perforations Method
[X] Screens Type Wire Wound Material Stainless

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
170	180	.020		6	Pipe	X	

(8) WELL TESTS: Minimum testing time is 1 hour
[ ] Pump [ ] Bailer [X] Air [ ] Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
120		40	1 hr.

Temperature of water 56 F Depth Artesian Flow Found
Was a water analysis done? [ ] Yes By whom
Did any strata contain water not suitable for intended use? [ ] Too little
[ ] Salty [ ] Muddy [ ] Odor [ ] Colored [ ] Other
Depth of strata:

(9) LOCATION OF WELL by legal description:
County Multnomah Latitude Longitude
Township 2N N or S Range 1W E or W. WM.
Section 25 NW 1/4 SW 1/4
Tax Lot B Lot Block Subdivision
Street Address of Well (or nearest address)
RAMSEY LAKE IND. PARK

(10) STATIC WATER LEVEL:
15 ft. below land surface. Date 04/03/98
Artesian pressure lb. per square inch. Date

(11) WATER BEARING ZONES:
Depth at which water was first found 170

From	To	Estimated Flow Rate	SWL
170	180	120 gpm	15

(12) WELL LOG:
Ground Elevation

Material	From	To	SWL
Brown sandy clay	0	9	
Gray silty clay	9	110	
Fine to Med. black sand w/clay & wood	110	129	
Wood w/Fine gray sand	129	146	
Soft gray sandy clay	146	168	
Fine to coarse black sand	168	182	15
Soft gray clay	182	184	

MAY - 5 1998
WATER RESOURCES DEPT
SALEM, OREGON

Date started 03/31/98 Completed 04/03/98

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

(bonded) Water Well Constructor Certification:
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.
WWC Number 1266
Signed Date 04/07/

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OCT
NATURAL RESOURCES
SALEM, OREGON

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

MULT
51028

(1) OWNER/PROJECT: Hole Number B-1

Name PORTLAND GENERAL ELECTRIC
Address 14655 OLD SCHOLLS FERRY RD.
City BEAVERTON State OR Zip

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

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

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

(5) USE OF HOLE: GEOTECHNICAL

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

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

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

(7) CASING/SCREEN:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:		N/A						
Screen:								

Slot size ___

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

SQUIER ASSOC. #1176

(9) LOCATION OF HOLE by legal description:
County MULT Latitude ___ Longitude ___
Township 2N (N) or S Range 1W E or (W) WM.
Section 24 NE 1/4 SW 1/4
Tax Lot ___ Lot ___ Block ___ Subdivision ___
Street Address of Well (or nearest address) N. MARINE DR. & KELLY POINT PARK RD.

Map with location indentified must be attached

(10) STATIC WATER LEVEL:
19 ft. below land surface. Date 7/31/95
Artesian pressure ___ lb. per square inch. Date ___

(11) SUBSURFACE LOG:
Ground Elevation ___

Material Description	From	To	SWL
FILL: MEDIUM DENSE BWN. GRAY F. TO MED. SAND W/SILT.	0'	15'	
GRADES TO DENSE LT. BWN. GRAY F. SAND W/TRACE SILT.	15'	20'	
MED. DENSE ORANGE & GRAY F. TO MED. SAND & SILT.	20'	28'	
SAME W/GRAY CLAYEY SILT.	28'	40'	
SOFT GRAY CLAYEY SILT.	40'	45.5'	
MED. DENSE GRAY SAND W/SILT.	45.5'	51.5	

Date Started 7/31/95 Date Completed 7/31/95

(12) ABANDONMENT LOG:

Material Description	From	To	Sacks or Pounds
BENTONITE CHIPS	0'	51.5'	6.5 SK
BENTONITE POWDER			1 SACK

Date started 7/31/95 Date Completed 7/31/95

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

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

License or Registration Number 10013
Signed Randy L. Crisman Date 9/01/95
Affiliation CRISMAN DRILLING, INC.

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

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OCT - 9 1995
WATER RESOURCES DEPT.
SALEM, OREGON

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

MULT 51029

(1) OWNER/PROJECT: Hole Number B-1A

Name PORTLAND GENERAL ELECTRIC
Address 14655 OLD SCHOLLS FERRY RD.
City BEAVERTON State OR Zip

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

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

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

(5) USE OF HOLE: GEOTECHNICAL

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

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

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

(7) CASING/SCREEN:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:		N/A			[ ]	[ ]	[ ]	[ ]
Screen:					[ ]	[ ]	[ ]	[ ]

Slot size ____

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

SQUIER ASSOC. #1176

(9) LOCATION OF HOLE by legal description:
County MULT Latitude ____ Longitude ____
Township 2S (N) or S Range 1W E or (W) WM.
Section 24 NE 1/4 SW 1/4
Tax Lot ____ Lot ____ Block ____ Subdivision ____
Street Address of Well (or nearest address) N. MARINE DR. & KELLY POINT PARK RD.

Map with location indentified must be attached

(10) STATIC WATER LEVEL:
19 ft. below land surface. Date 7/31/95
Artesian pressure ____ lb. per square inch. Date ____

(11) SUBSURFACE LOG:
Ground Elevation ____

Material Description	From	To	SWL
FILL: LOOSE LT. TAN-BWN. SAND W/TRACE SILT. (DRY)	0'	5'	
GRADES TO MOIST.	5'	10'	
GRADES TO LOOSE GRAY F. TO MED. SAND & SILT INTERBEDS; MOIST	10'	15'	
GRADES TO MED. DENSE TAN.	15'	20'	
LOOSE GRAY FINE TO MED. SAND W/TRACE TO SOME SILT.	20'	24'	
MED. DENSE GRAY SAND W/SILT.	24'	26.5'	

Date Started 7/31/95 Date Completed 7/31/95

(12) ABANDONMENT LOG:

Material Description	From	To	Sacks or Pounds
BENTONITE CHIPS	0'	26.5'	13 SK
BORING DRILLED TO 25' PIEZOMETER INSERTED COLLECTED WATER SAMPLE THEN ABANDONED.			

Date started 7/31/95 Date Completed 7/31/95

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

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

License or Registration Number 10013
Signed Randy L. Crisman Date 9/01/95
Affiliation CRISMAN DRILLING, INC.

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

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MULT
51410

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

(1) OWNER/PROJECT: Hole Number MA 4

Name PORT OF PORTLAND
Address 700 NE MULTNOMAH
City PORTLAND State OR Zip 97232

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

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

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

(5) USE OF HOLE: ARCHAELOGICAL

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

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

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

(7) CASING/SCREEN:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:		N/A						
Screen:								

Slot size

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

ARCHAEOLOGICAL #1434

(9) LOCATION OF HOLE by legal description:
County MULTNOMAH Latitude ____ Longitude ____
Township 2N N or S Range 1W E or W. WM.
Section 24 SW 1/4 SW 1/4
Tax Lot NONE Lot Block Subdivision
Street Address of Well (or nearest address) COLUMBIA SLOUGH & N. MARINE DR. PORTLAND, OR
Map with location identified must be attached

(10) STATIC WATER LEVEL:
5.0 ft. below land surface. Date 5/06/96
Artesian pressure lb. per square inch. Date

(11) SUBSURFACE LOG:
Ground Elevation

Material Description	From	To	SWL
DREDGE SPOILS	0'	12.6'	
MEDIUM GRAY LOAMY CLAY	12.6'	13.2'	
DARK BROWN SILTY LOAM	13.2'	13.3'	
DARK GRAY LOAMY CLAY	13.3'	14.2'	
LIGHT GRAY LOAMY CLAY	14.2'	14.6'	
MEDIUM GRAY CLAY LOAM	14.6'	17.5'	

Date Started 5/06/96 Date Completed 5/06/96

(12) ABANDONMENT LOG:

Material Description	From	To	Sacks or Pounds
NATIVE SOIL & BENTONITE CHIPS.	0	17.5'	1-50LB

Date started 5/06/96 Date Completed 5/06/96

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

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

License or Registration Number 10013
Signed Randy L. Crisman Date 6/06/96
Affiliation CRISMAN DRILLING, INC.

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

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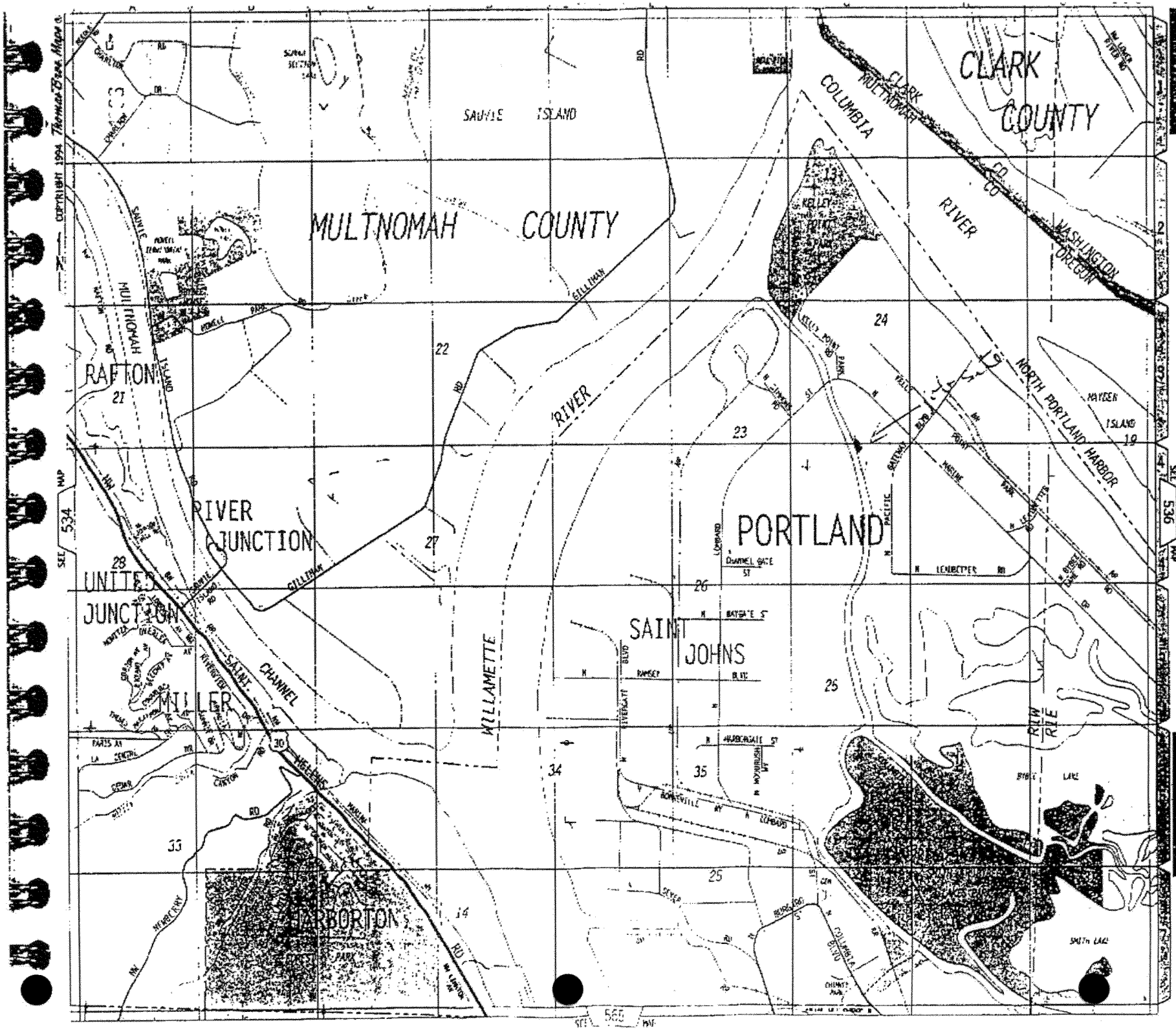
COPYRIGHT 1994 Thomas Bros. Maps
CLARK COUNTY
MULTNOMAH COUNTY
SAUVIE ISLAND
COLUMBIA RIVER
CLARK MULTNOMAH CO CO
WASHINGTON OREGON
KELLEY POINT PARK
NORTH PORTLAND HARBOR
HAYDEN ISLAND
RAFTON
RIVER JUNCTION
UNITED JUNCTION
MILLER
HARBORTON
PARK
PORTLAND
SAINT JOHNS
WILLAMETTE RIVER
MULTNOMAH CHANNEL
SAUVIE ISLAND
GILLIHAN RD
HOWELL PARK RD
SAINT HELENS RD
30
N LOMBARD
N RAMSEY BLVD
N BAYGATE ST
N HARBORGATE ST
CHANNEL GATE ST
N RIVERGATE BLVD
N LEADBETTER RD
N MARINE DR
N KELLEY POINT PARK RD
BONNEVILLE WY
N COLUMBIA BLVD
BYBEE LAKE
SMITH LAKE
SEE 534 MAP
SEE 536 MAP
SEE 565 MAP
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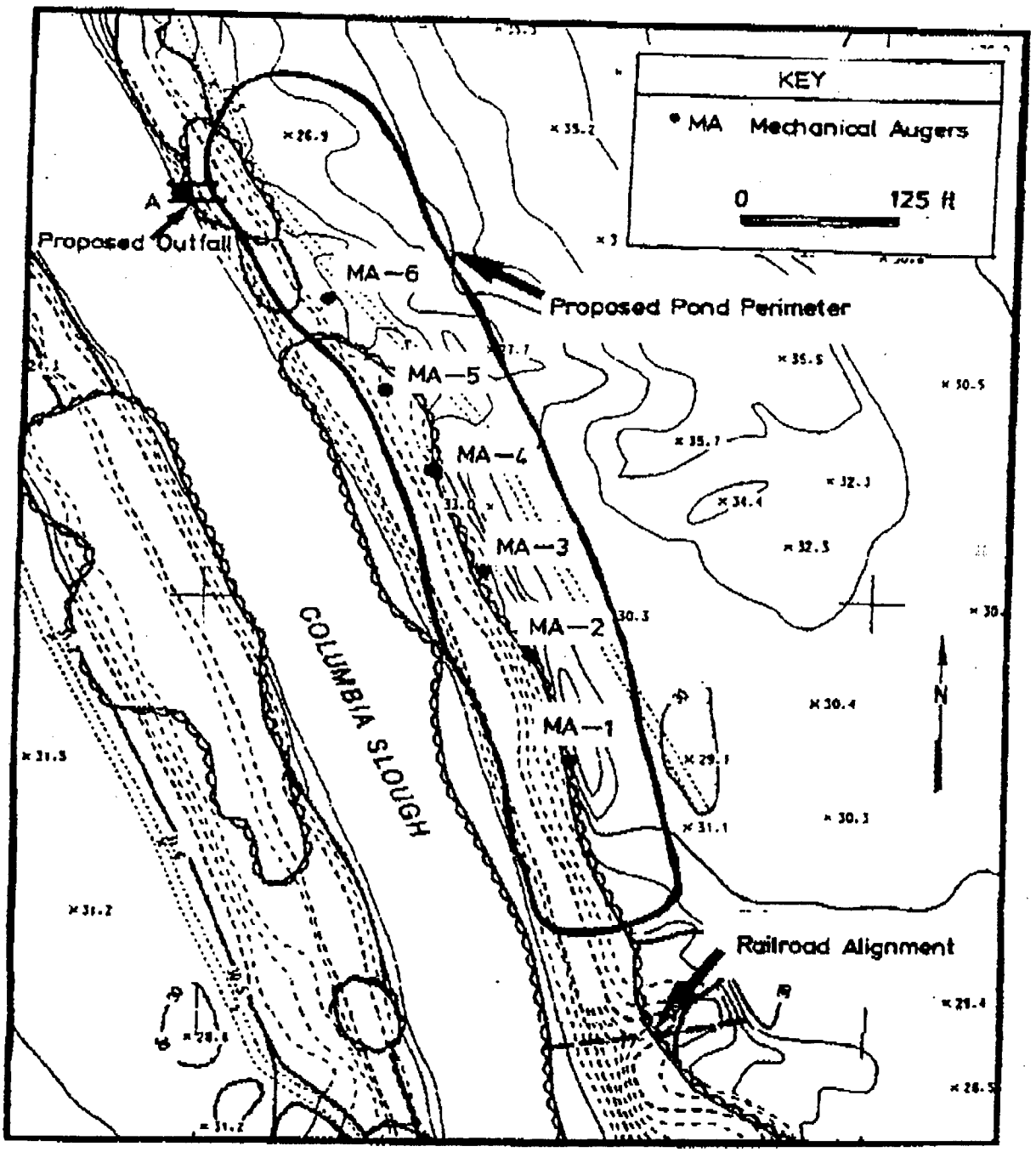


Figure 4. Location of archaeological mechanical augers and manual auger at proposed treatment facility.

STATE OF OREGON MONITORING WELL REPORT
(as required by ORS 537.765 & OAR 690-240-095)

MULT 3807

2N/1W/23da

Start Card # 100131

(1) OWNER/PROJECT: WELL NO. MW#4

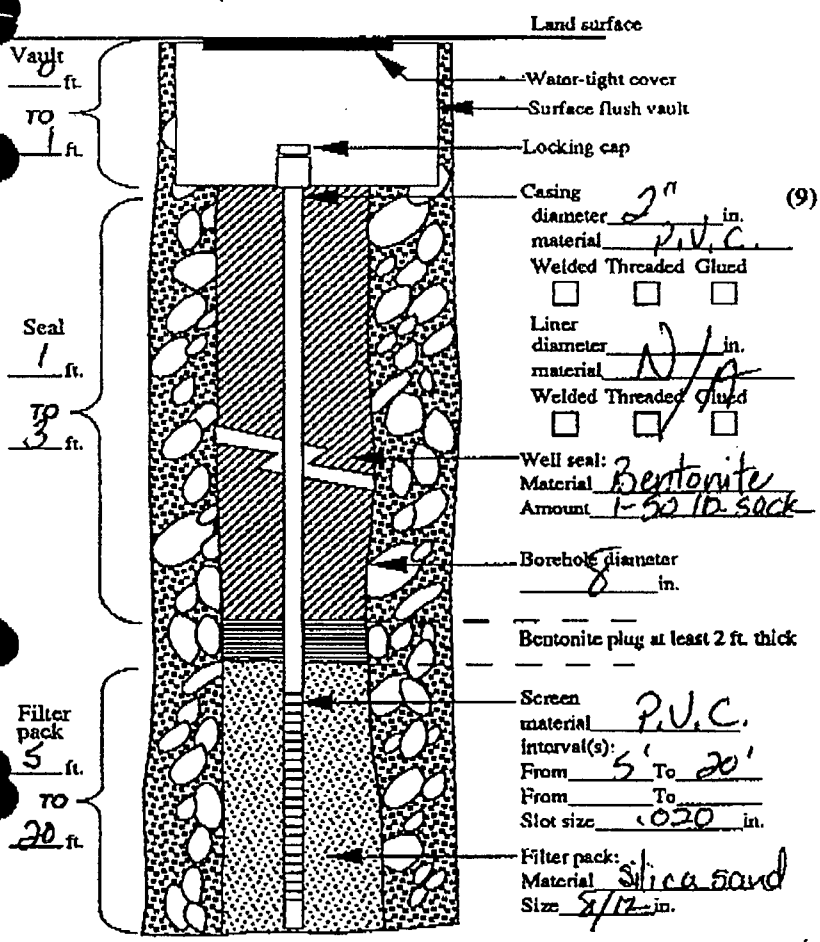
Name: Port of Portland
Address: 700 NE Multnomah
City: Portland State: OR Zip: 97232

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

(3) DRILLING METHOD
[ ] Rotary Air [ ] Rotary Mud [ ] Cable
[X] Hollow Stem Auger [ ] Other

(4) BORE HOLE CONSTRUCTION

Special Standards: Yes [ ] No [X] Depth of completed well 20' ft.



(5) WELL TEST:
[ ] Pump [X] Bailer [ ] Air [ ] Flowing Artesian
Permeability ____ Yield ____ GPM
Conductivity ____ PH ____
Temperature of water 14 °C °F/C Depth artesian flow found ____ ft.
Was water analysis done? [X] Yes [ ] No
By whom? Century West
Depth of strata to be analyzed: From 7.5' ft. to 20' ft.
Remarks:

Name of supervising Geologist/Engineer: Ingman Saul

(6) LOCATION OF WELL By legal description
Well Location: County Multnomah
Township 2 (N) or S) Range 1 (E or (W)) Section 23
1. NE 1/4 of SE 1/4 of above section.
2. Street address of well location: 14400-15500 N. Lombard Portland, OR
3. Tax lot number of well location N/A
4. ATTACH MAP WITH LOCATION IDENTIFIED.

(7) STATIC WATER LEVEL:
9.5 Ft. below land surface. Date 10-20-93
Artesian Pressure ____ lb/sq. in. Date ____

(8) WATER BEARING ZONES: Depth at which water was first found 9.5'

From	To	Est. Flow Rate	SWL
9.5'	20	?	9.5'

(9) WELL LOG: Ground elevation ____

Material	From	To	SWL
Sand, Brown, loose, dry, trace of silt, well sorted, fine to medium grained	0'	6.5'	
Clayey Silt, Gray, Moist, Stiff, with organics	6.5'	7.5'	
Sand, Gray, Moist, well sorted	7.5'	8'	
Clayey Silt, gray, moist, stiff w/ organics	8'	9'	
Sand, gray, wet, Clayey Silt	9'	18'	9.5'
Sand, gray, wet, well sorted, trace of silt	18'	20'	

Date started 10-20-93 Completed 10-20-93

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

(bonded) Monitor Well Constructor Certification:
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.
MWC Number 10013
Signed Randy A. Cisman Date 11-20-93

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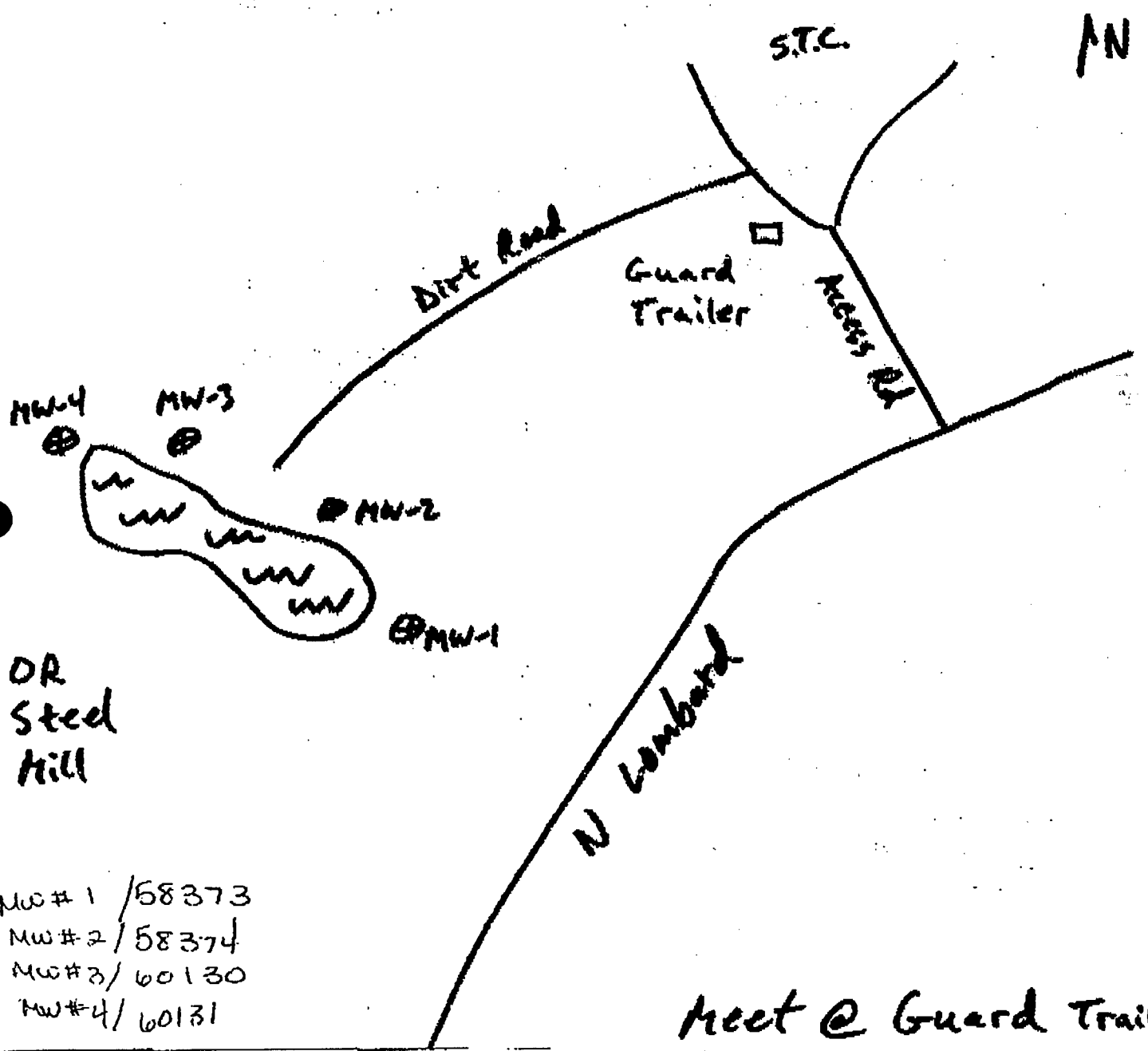
10/19/93

Port of Portland
Terminal 5
Blue Lagoon



OR
Steed
Hill

MW #1 / 58373
MW #2 / 58374
MW #3 / 60130
MW #4 / 60131

Meet @ Guard Trailer
8:00 10/20

Post-It™ brand fax transmittal memo 7671	# of pages ▸ 1
To RANDY ~~[illegible]~~ CRISMAN	From ERIC Collins
Co.	Co. CWE
Dept.	Phone # 231-6078
Fax # 620-1248	Fax #

STATE OF OREGON MONITORING WELL REPORT
(as required by ORS 537.765 & OAR 690-240-095)

MULT 3806

2N/1W/23da

Start Card # 58374

(1) OWNER/PROJECT: WELL NO. MW#2

Name Port of Portland

Address 700 NE Multnomah

City Portland State OR Zip 97232

(2) TYPE OF WORK:

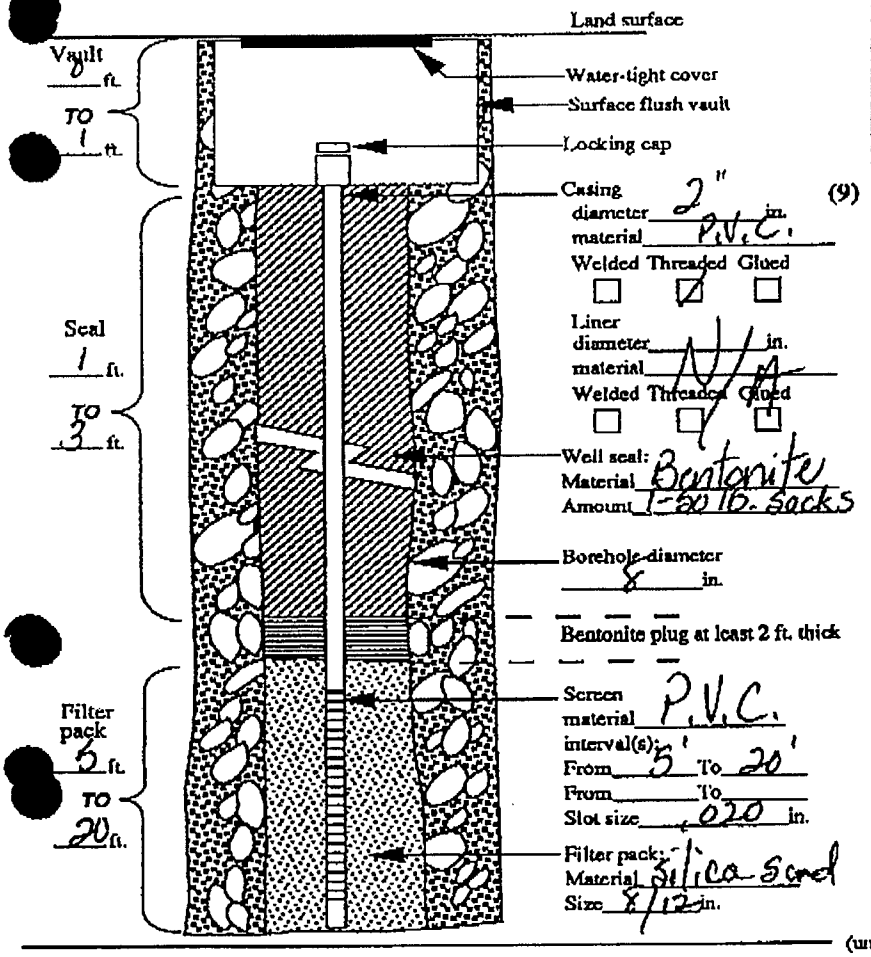
☒ New construction ☐ Repair ☐ Recondition
☐ Conversion ☐ Deepening ☐ Abandonment

(3) DRILLING METHOD

☐ Rotary Air ☐ Rotary Mud ☐ Cable
☒ Hollow Stem Auger ☐ Other

(4) BORE HOLE CONSTRUCTION

Special Standards Yes ☐ No ☒ Depth of completed well 20' ft.



(5) WELL TEST:

☐ Pump ☒ Bailer ☐ Air ☐ Flowing Artesian

Permeability Yield GPM

Conductivity PH

Temperature of water 14°C °F/C Depth artesian flow found ft.

Was water analysis done? ☒ Yes ☐ No

By whom? Century West

Depth of strata to be analyzed. From 7' ft. to 20' ft.

Remarks:

Name of supervising Geologist/Engineer Thomas Saul

(6) LOCATION OF WELL By legal description

Well Location: County Multnomah

Township 2 (N) or S) Range 1 (E or (W) Section 23

1. NE 1/4 of SE 1/4 of above section.
2. Street address of well location 14400 - 15500 N. Lombard Portland, OR
3. Tax lot number of well location N/A
4. ATTACH MAP WITH LOCATION IDENTIFIED.

(7) STATIC WATER LEVEL:

7' ft. below land surface. Date 10/20/93

Artesian Pressure lb/sq. in. Date

(8) WATER BEARING ZONES:

Depth at which water was first found 7'

From	To	Est. Flow Rate	SWL
7'	20'	?	7'

(9) WELL LOG: Ground elevation

Material	From	To	SWL
Sand, light brown, loose, dry, medium grained	0'	2.5'	
Sandy Silty Gravel, brown, dense, damp, fine to coarse rounded gravel, medium grained sand, no odor	2.5'	7.5'	7'
Gravel, Gray, very dense, saturated, fine to medium sized, rounded	7.5'	12.5'	
Sand, Gray, loose, saturated, medium grained	12.5'	17.5'	
Black, no odor Heaving Sand	17.5'	20'	

Date started 10/20/93 Completed 10/20/93

(unbonded) Monitor Well Constructor Certification:

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

MWC Number

Signed Date

(bonded) Monitor Well Constructor Certification:

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

MWC Number 10013

Signed Randy L. Crisman Date 11/20/93

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STATE OF OREGON
MONITORING WELL REPORT
(as required by ORS 537.765 & OR 690-240-095)

MULT 3804

2N / 1W / 23da

Start Card # 58373

(1) OWNER/PROJECT: WELL NO. MW#1

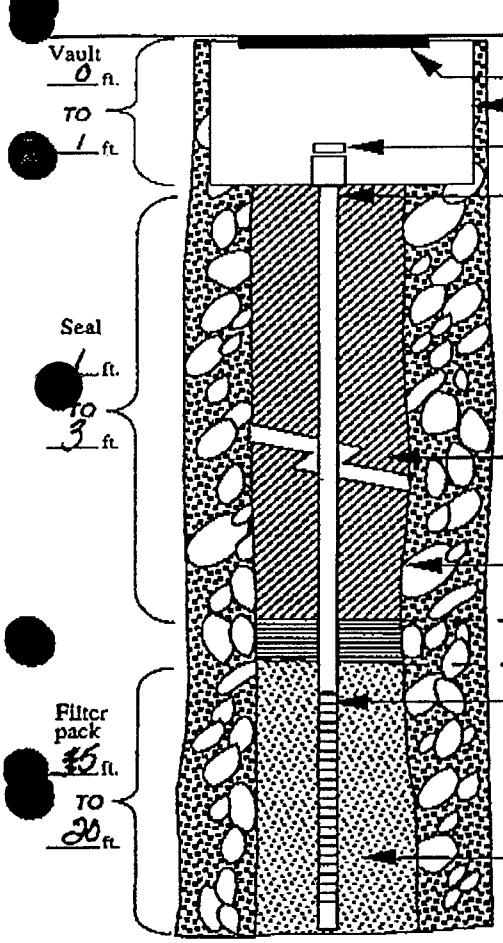
Name: Port of Portland
Address: 700 NE Multnomah
City: Portland State: OR Zip: 97232

(2) TYPE OF WORK:
- [x] New construction
- [ ] Repair
- [ ] Recondition
- [ ] Conversion
- [ ] Deepening
- [ ] Abandonment

(3) DRILLING METHOD
- [ ] Rotary Air
- [ ] Rotary Mud
- [ ] Cable
- [x] Hollow Stem Auger
- [ ] Other

(4) BORE HOLE CONSTRUCTION

Special Standards: Yes [ ] No [x] Depth of completed well 20' ft.



(5) WELL TEST:
- [ ] Pump
- [x] Bailer
- [ ] Air
- [ ] Flowing Artesian

Permeability _____ Yield _____ GPM
Conductivity _____ PH _____
Temperature of water 14°C °F/C Depth artesian flow found _____ ft.
Was water analysis done? [x] Yes [ ] No
By whom? Century West Eng.
Depth of strata to be analyzed. From 7.5' ft. To 20' ft.
Remarks:

Name of supervising Geologist/Engineer: Ingmar Saul

(6) LOCATION OF WELL By legal description

Well Location: County Multnomah
Township 2 (N or S) Range 1 (E or W) Section 23
1. NE 1/4 of SE 1/4 of above section.
2. Street address of well location 14400 - 15500 N. Lombard Portland, OR
3. Tax lot number of well location N/A
4. ATTACH MAP WITH LOCATION IDENTIFIED.

(7) STATIC WATER LEVEL:
7.5 Ft. below land surface. Date 10/20/93
Artesian Pressure _____ lb/sq. in. Date _____

(8) WATER BEARING ZONES: Depth at which water was first found 7.5'

From	To	Est. Flow Rate	SWL
7.5'	20'	?	7.5'

(9) WELL LOG: Ground elevation _____

Material	From	To	SWL
Gravel/Iron Slag	0'	2.5'	
Fill, black, fine sand			
medium gravel, minor sand			
Black, dense, dense, damp	2.5'	5'	
Brown, Fine Gravel,	5'	7.5'	
Medium Grained sand			
Sand, Brown to Gray,	7.5'	12.5'	7.5'
loose, saturated, fine			
to medium grained,			
no odor, heaving sand			
Brownish Gray,	12.5'	20'	
Medium Grained,			
Heaving Sand			

Date started 10-20-93 Completed 10-20-93

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

(bonded) Monitor Well Constructor Certification:
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.
MWC Number 10013
Signed Randy L. Crisman Date 11-22-93

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WATER WELL REPORT
STATE OF OREGON

RECEIVED
MAR 11 1982
WATER RESOURCES DEPT
SALEM, OREGON

State Well No. 2N/1W-23d
State Permit No. MULT 001717

(1) OWNER:
Name Riedel International
Address P.O. Box 3370
City Portland, Ore State Ore

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

(3) TYPE OF WELL:
Rotary Air X Driven ☐
Rotary Mud ☐ Dug ☐
Cable ☐ Bored ☐

(4) PROPOSED USE (check):
Domestic ☐ Industrial X Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐
Thermal: Withdrawal ☐ Reinjection ☐

(5) CASING INSTALLED: Steel X Threaded ☐ Plastic ☐ Welded X
6" Diam. from 0 ft. to 74 ft. Gauge .250
" Diam. from ft. to ft. Gauge

LINER INSTALLED:
5" Diam. from 72 ft. to 75 ft. Gauge .188

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

(7) SCREENS: Well screen installed? X Yes ☐ No
Manufacturer's Name Johnson
Type Stainless Model No.
Diam. 6 Slot Size .008 Set from 75 ft. to 80 ft.
Diam. Slot Size Set from ft. to ft.

(8) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☐ No If yes, by whom?
gal./min. with ft. drawdown after hrs.
Air test 150 gal./min. with drill stem at 50 ft. 1 hrs.
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m.
Temperature of water Depth artesian flow encountered ft.

(9) CONSTRUCTION: Special standards: Yes ☐ No X
Well seal—Material used Cement 5% Bentonite
Well sealed from land surface to 18 ft.
Diameter of well bore to bottom of seal 10 in.
Diameter of well bore below seal 6 in.
Number of sacks of cement used in well seal 6 sacks
How was cement grout placed? pumped
Was pump installed? yes Type sub HP ½ Depth 63 ft.
Was a drive shoe used? X Yes ☐ No Plugs Size: location ft.
Did any strata contain unusable water? X Yes ☐ No
Type of Water? sandy depth of strata 45-74
Method of sealing strata off casing
Was well gravel packed? ☐ Yes X No Size of gravel:
Gravel placed from ft. to ft.

(10) LOCATION OF WELL:
County Multnomah Driller's well number 0582
¼ SE ¼ Section 23 T. 2N R. 1W W.M.
Tax Lot # Lot Blk Subdivision
Address of well location: Terminal 5
Rivergate Industrial District

(11) WATER LEVEL: Completed well.
Depth at which water was first found 12 ft.
Static level 20 ft. below land surface. Date 2-25-82
Artesian pressure lbs. per square inch. Date

(12) WELL LOG: Diameter of well below casing --
Depth drilled 80 ft. Depth of completed well 80 ft.
Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Sand brown fine	0	12	
Sand grey fine	12	30	
Clay brown sandy	30	41	
Clay grey sandy	41	45	
Sand grey fine	45	74	
Sand black med.	74	80	20

Work started 2-24 1982 Completed 2-25- 1982
Date well drilling machine moved off of well 2-25 1982

Drilling Machine Operator's Certification:
This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.
[Signed] Maurice R. Skyles (Drilling Machine Operator) Date 3-4, 1982
Drilling Machine Operator's License No. 224

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 Skyles Drilling Inc. (Person, firm or corporation) (Type or print)
Address 1169 Molalla Av. Oregon City, OR.
[Signed] Maurice R. Skyles (Water Well Contractor)
Contractor's License No. 553 Date 3-4, 1982

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

SP*12658-690

RECEIVED

JUN 27 1996

WATER RESOURCES DEPT.
SALEM, OREGON

Mult 51366

STATE OF OREGON
WATER SUPPLY WELL REPORT
(as required by ORS 537.765)
Instructions for completing this report are on the last page of this form.

Label #: L01695
(START CARD) # 87135

(1) OWNER: Well Number
Name Port of Portland
Address PO Box 3529
City Portland State OR Zip 97208

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

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

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

(5) BORE HOLE CONSTRUCTION:
Special Construction approval [ ] Yes [X] No Depth of Completed Well 298 ft.
Explosives used [ ] Yes [X] No Type Amount

HOLE Diameter	From	To	SEAL Material	From	To	Sacks or pounds
20	0	38	Cement	0	38	41 sks
16	38	301				

How was seal placed: Method [ ] A [ ] B [X] C [ ] D [ ] E
[ ] Other
Back fill placed from ft. to ft. Material
Gravel placed from 155 ft. to 301 ft. Size of pack CSSI 8x12

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	16	+3	180	.375	X		X	
Liner:	12	155	298	.250	X		X	

except at screen - plate bottom w/bail

Final location of shoe(s) & casing remnant: 295-301

(7) PERFORATIONS/SCREENS:
[ ] Perforations Method
[X] Screens Type V shape wire wrap Material 304 SS

From	To	Slot size	Number	Diameter	Blank pipe size	Casing	Liner
175	266	.050	cont.	12	PS		
276	288	.050	cont.	12	PS		

(8) WELL TESTS: Minimum testing time is 1 hour
[X] Pump [ ] Bailer [ ] Air [ ] Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
see attached plots			1 hr.

Temperature of water 52°F Depth Artesian Flow Found
Was a water analysis done? [X] Yes By whom CH2M Hill
Did any strata contain water not suitable for intended use? [ ] Too little
[ ] Salty [ ] Muddy [ ] Odor [ ] Colored [ ] Other
Depth of strata:

SET 9612

(9) LOCATION OF WELL by legal description:
County Multnomah Latitude Longitude
Township 2N N or S Range 1W E or W. WM.
Section 23 SW 1/4 of SE 1/4
Tax Lot 5 Lot Block 10 Subdivision
Street Address of Well (or nearest address) NYA - Terminal 5
Rivergate Industrial Park, N. Lombard St.,
Portland, OR

(10) STATIC WATER LEVEL:
23 ft. below land surface. Date 5/21/96
Artesian pressure lb. per square inch. Date

(11) WATER BEARING ZONES:
Depth at which water was first found 1st significant @~100'

From	To	Estimated Flow Rate	SWL
100+/-	288	see (8)	see (10)

(12) WELL LOG:
Ground Elevation 30 +/-

Material	From	To	SWL
see attached log			

Date started 4/3/96 Completed 5/30/96

(unbonded) Water Well Constructor Certification:
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.
WWC Number 1085
Signed Donald H Davis Date 5/31/96

(bonded) Water Well Constructor Certification:
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.
WWC Number 649
Signed Stephen Schneider Date 5/31/96

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

PORT OF PORTLAND
RIVERGATE INDUSTRIAL PARK TERMINAL #5 WELL
By Schneider Drilling Co.
May 1996

Depth From	Depth To	Description
0	23	Sand, gray, medium
23	36	Clay, black, silty
36	40	Clay, black, silty w/peat
40	48	Clay, black-gray, silty
48	78	Sand-silt, black, clayey
78	95	Sand, dark gray, fine, silty
95	166	Sand, dark gray, fine-medium
166	170	Gravel, 3"- & sand, medium-coarse, gray
170	180	Gravel, 6"- & sand, medium-coarse, black
180	219	Gravel, 10"- & sand, med-coarse, black
219	220	Gravel, 10"- & clay, gray & brown
220	232	Gravel, 10"- & sand, medium-coarse, brown
232	234	Gravel, 6" & clay, brown & gray
234	243	Gravel, 4"- & sand, medium-coarse, brown
243	258	Gravel, 3"- & sand, medium-coarse, gray
258	260	Gravel, 6"- & sand, medium & trace of clay, brown
260	266	Gravel, 6"- & sand, medium, green
266	267	Gravel, 6"- & sand, medium, green & trace of clay
267	270	Gravel, 6"- & sand, medium, gray
270	273	Gravel, 3"- & sand, medium, gray, cemented
273	276	Sand, gray, med-fine, & small gravel
276	279	Gravel, 5"- & sand, medium-fine, gray
279	281	Gravel, 5"- & sand, green, some cemented
281	288	Gravel, 5"- & sand, medium, gray
288	292	Gravel, 5"- & sand, medium, gray, cemented
292	295	Gravel & clay, gray
295	301	Gravel, 6"-, cemented

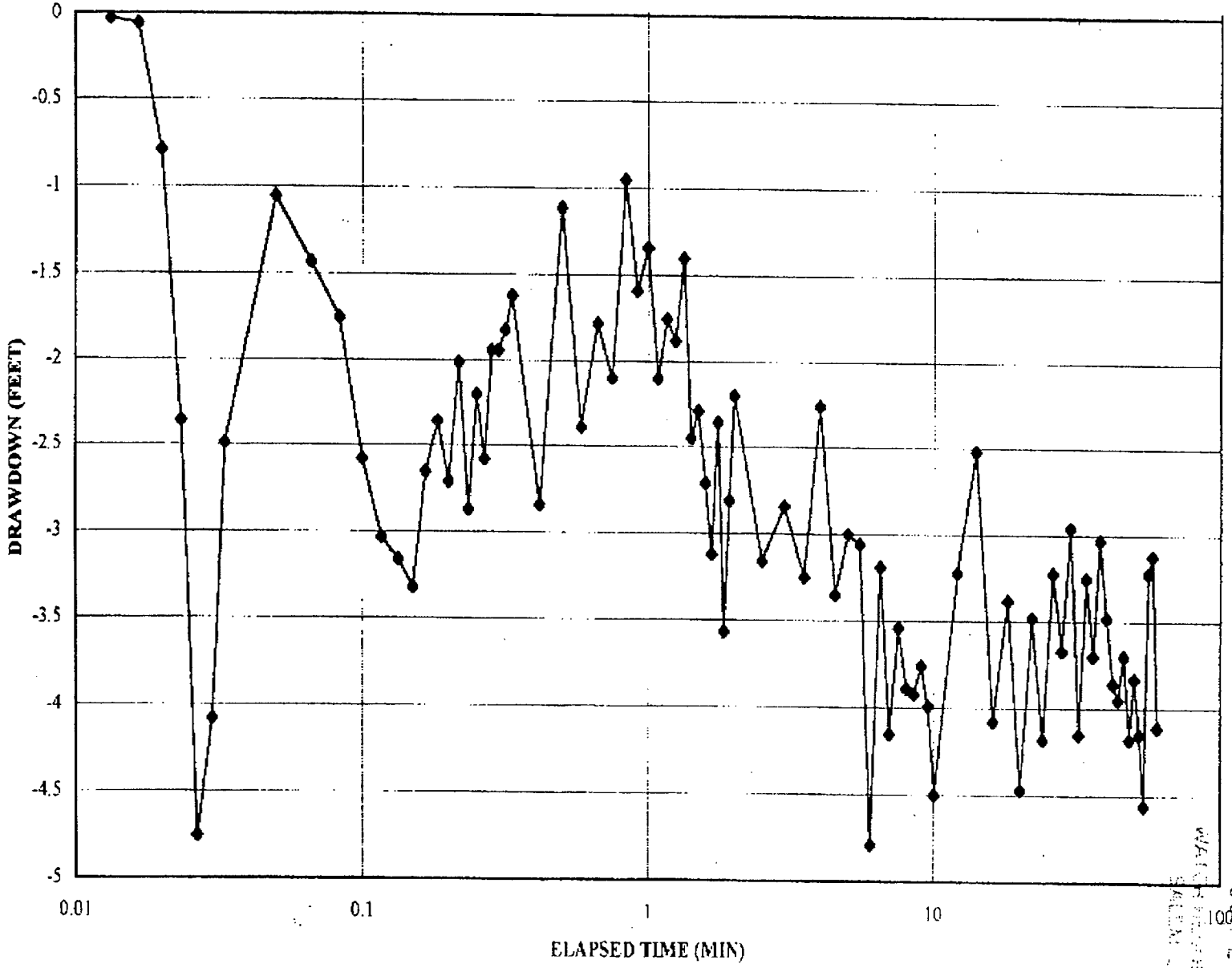
W32056.POP

CH2M Hill for Port of Portland

Rivergate T-5 Well # L01695

5/20/96 Step 1 - 1030 GPM

By SCHNEIDER DRILLING CO.

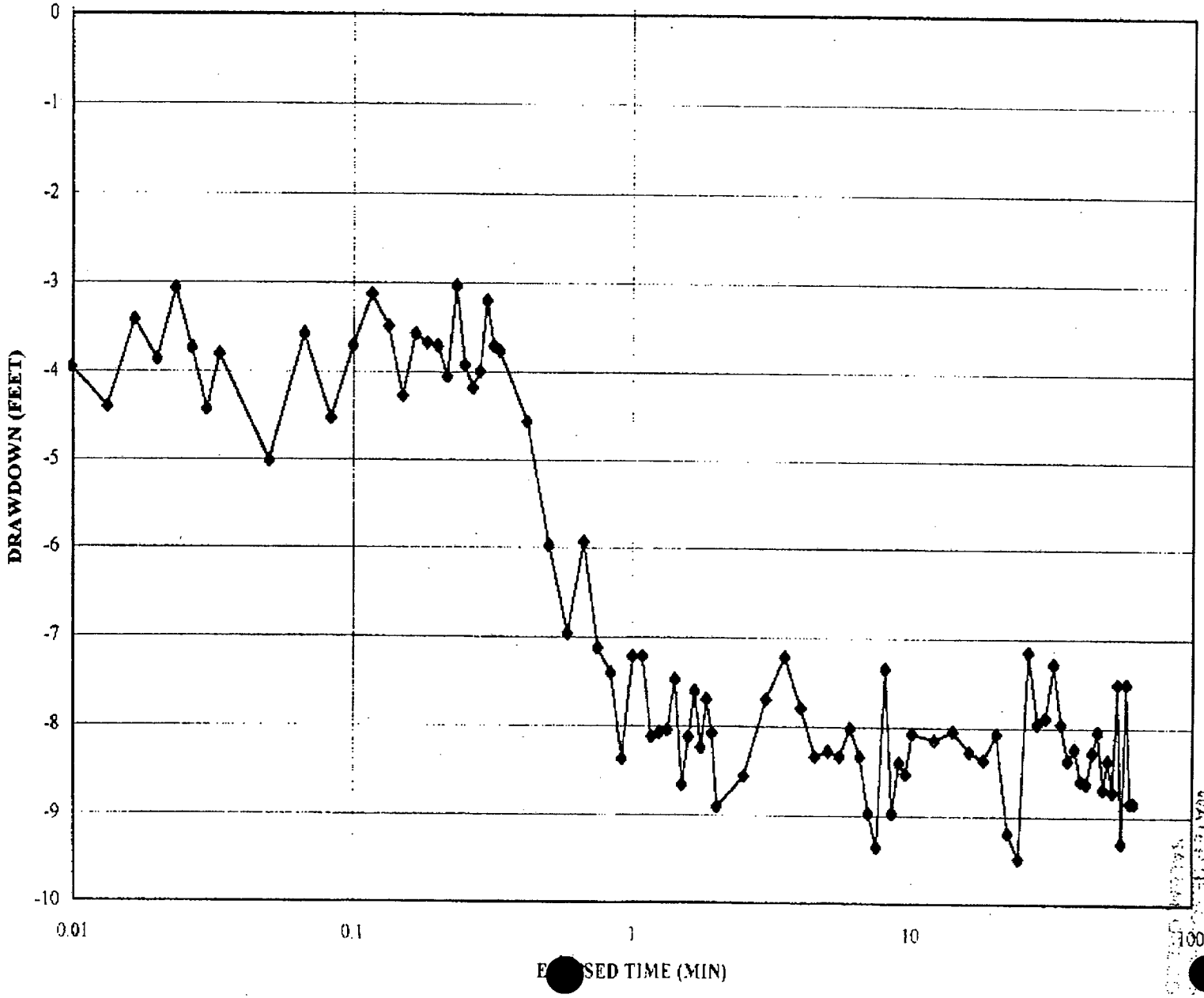


CH2M Hill for Port of Portland

Rivergate T-5 Well # L01695

5/20/96 Step 2 - 2025 GPM

By SCHNEIDER DRILLING CO.

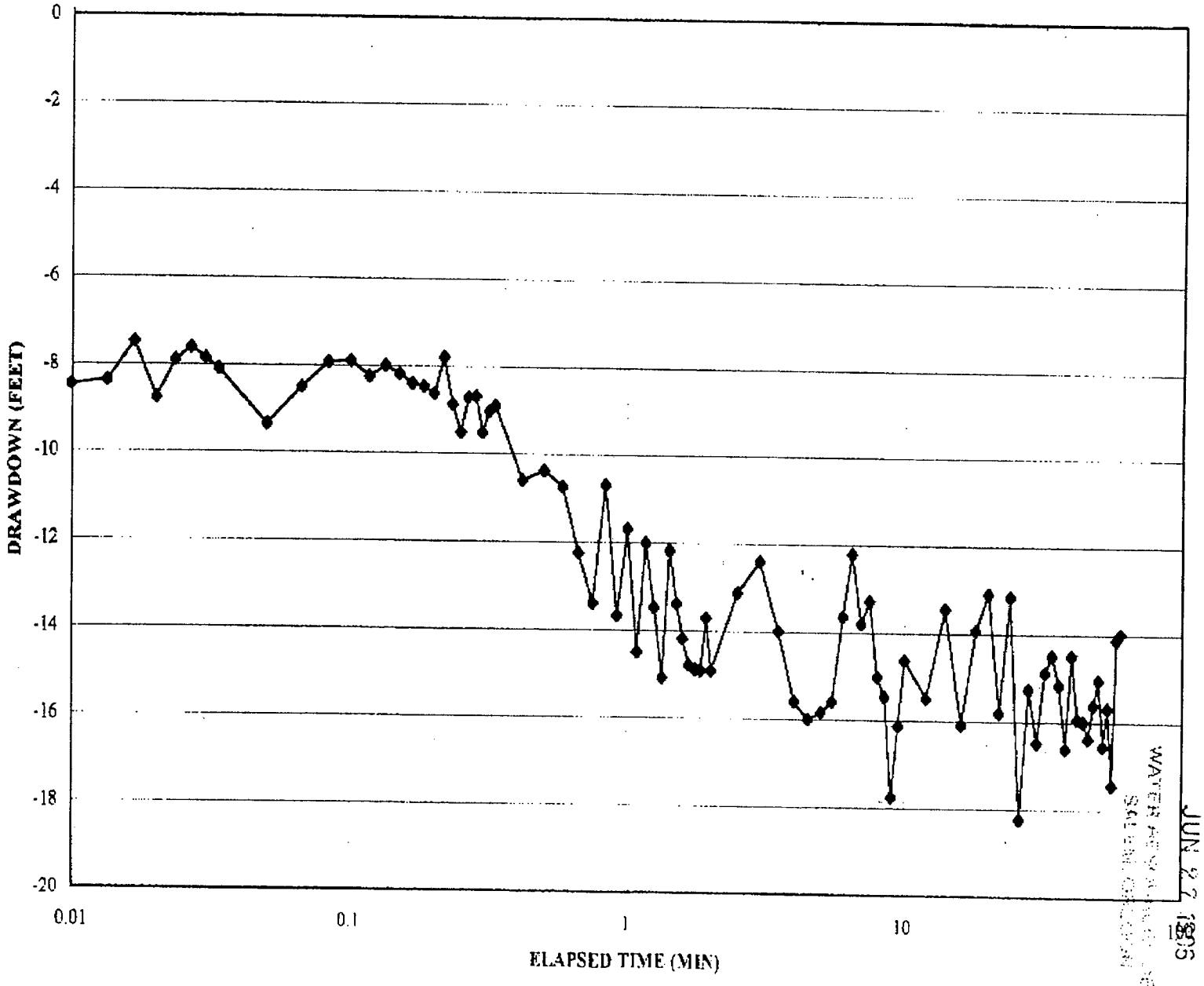


CH2M Hill for Port of Portland

Rivergate T-5 Well # L01695

5/20/96 Step 3 - 3080 GPM

By SCHNEIDER DRILLING CO.

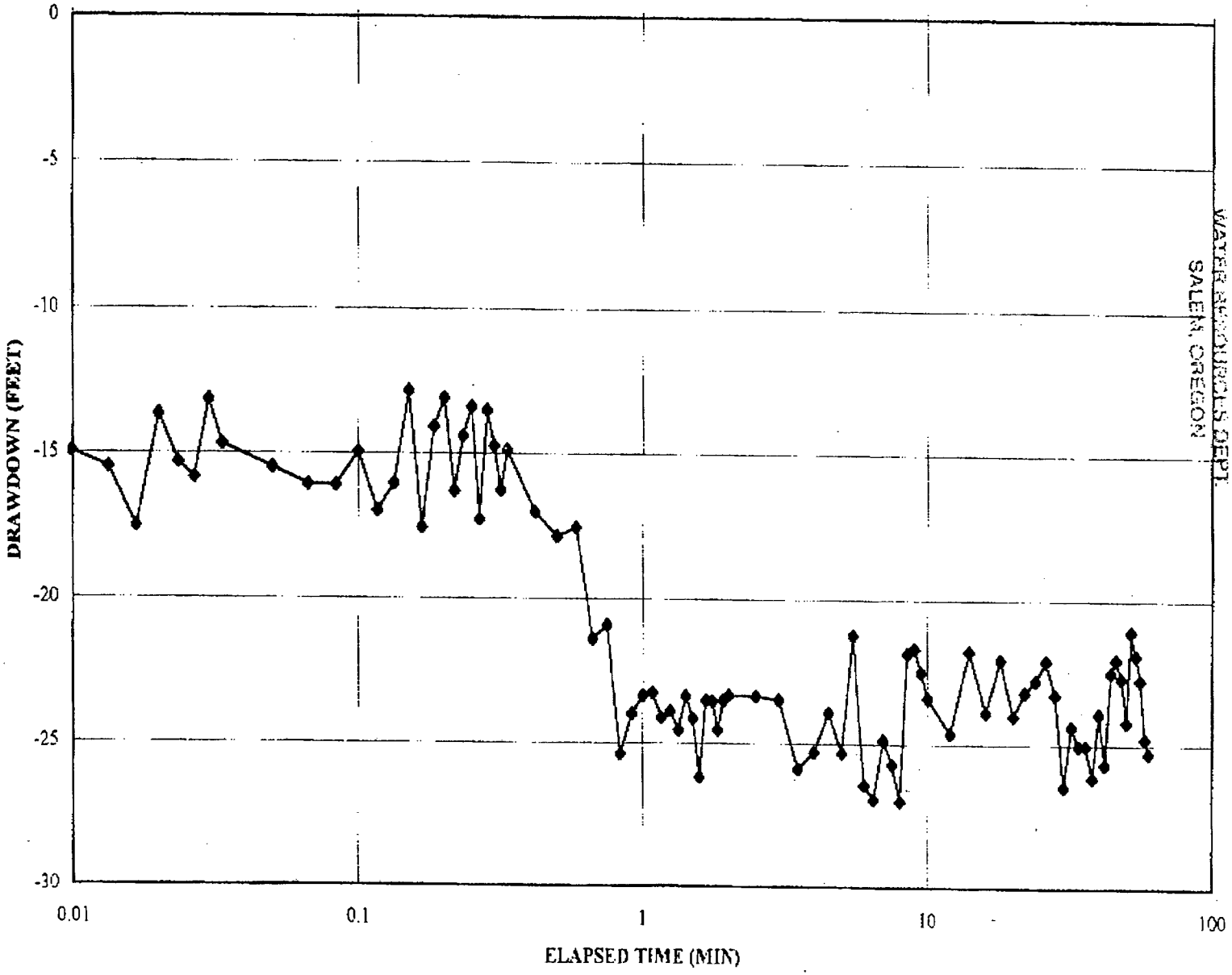


CH2M Hill for Port of Portland

Rivergate T-5 Well # L01695

5/20/96 Step 4 - 4180 GPM

By SCHNEIDER DRILLING CO.

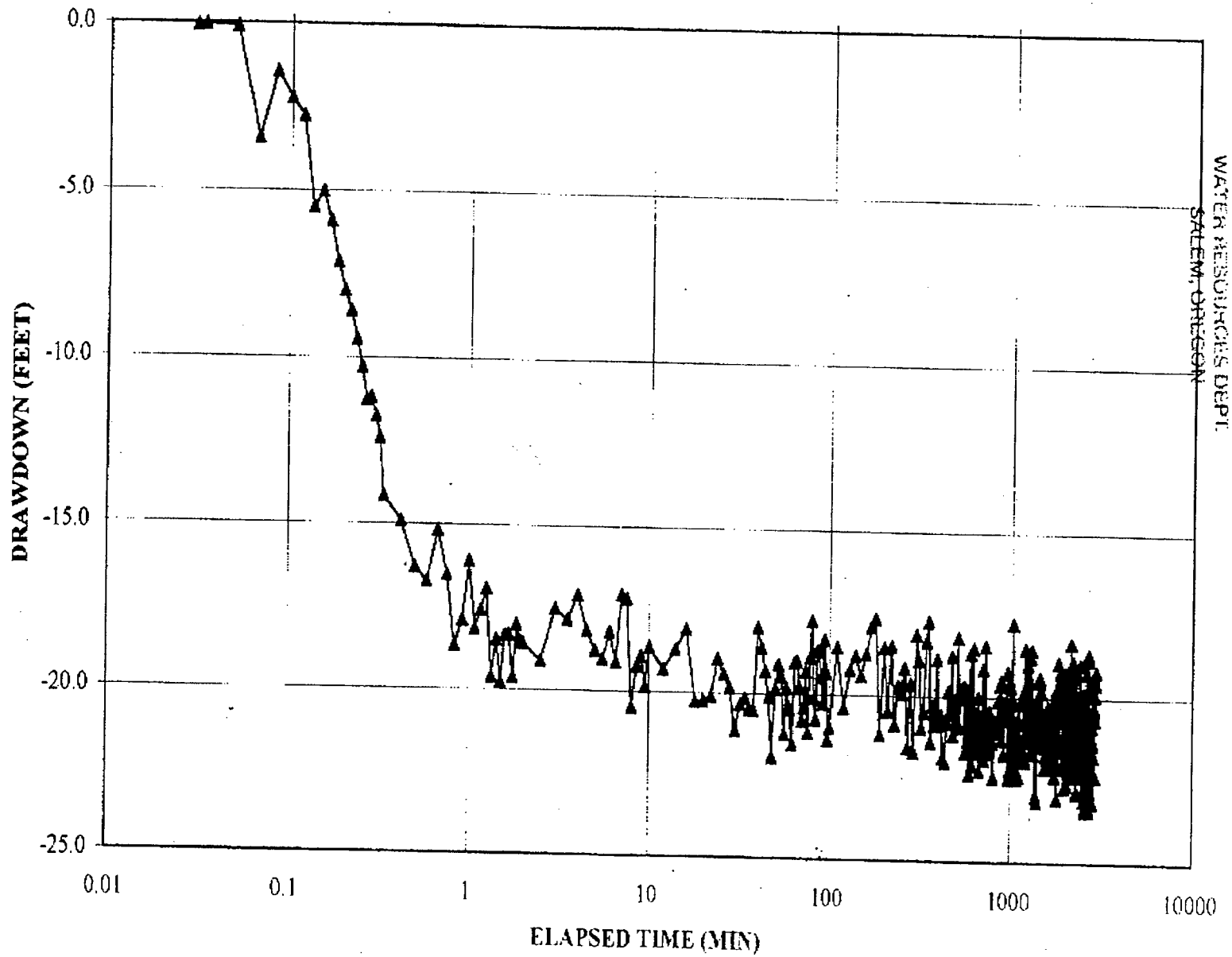


CH2M Hill for Port of Portland

5/21-23/96 Constant Rate Test - 3600 GPM

Rivergate T-5 Well # L01695

By SCHNEIDER DRILLING CO.

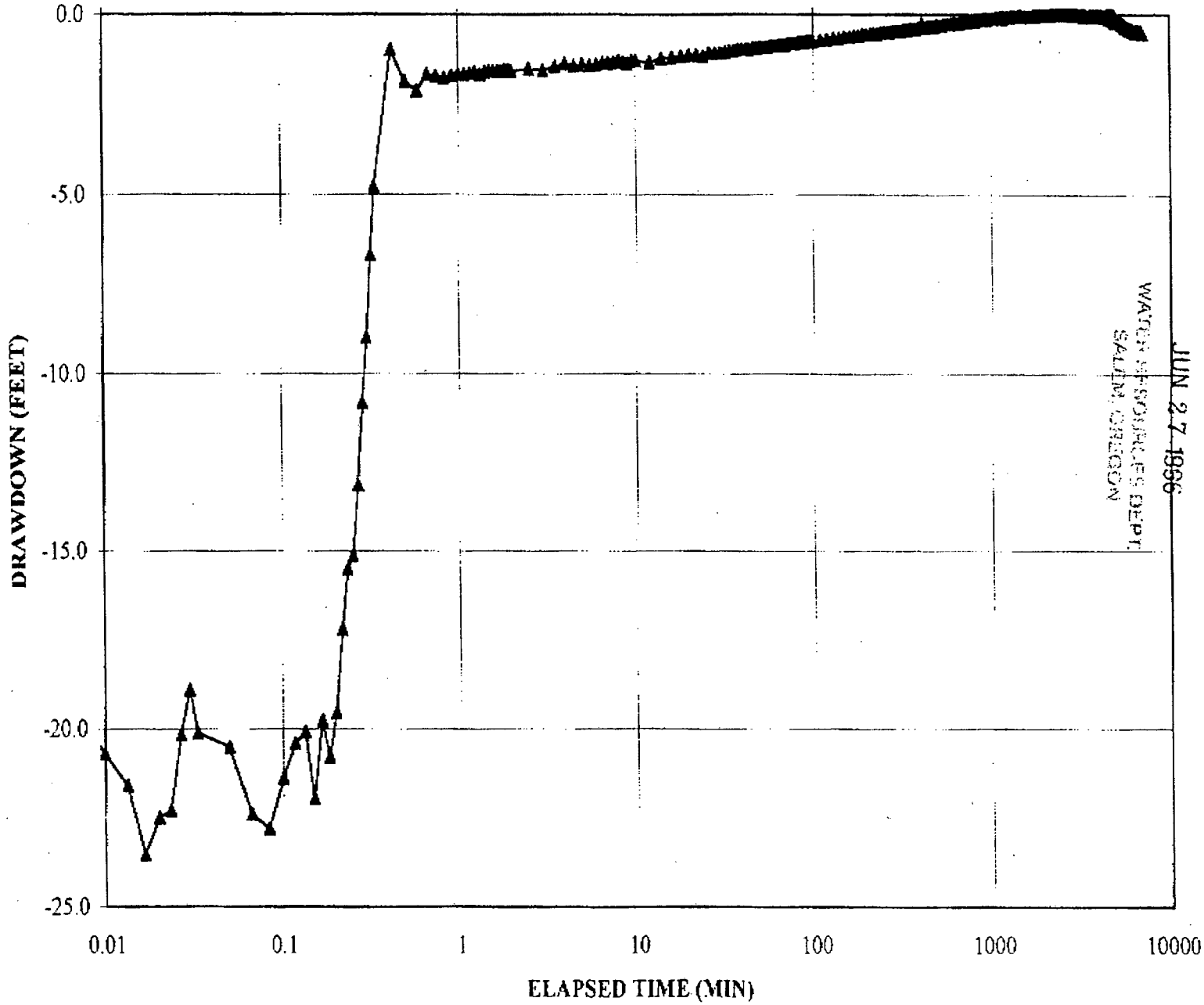


CH2M Hill for Port of Portland

5/23 -28/96 Constant Rate Recovery

Rivergate T-5 Well # L01695

By SCHNEIDER DRILLING CO.



STATE OF OREGON MONITORING WELL REPORT
(as required by ORS 537.765 & OAR 690-240-095)

MULT 3805

2N / 1W / 23da

Start Card # 60130

(1) OWNER/PROJECT: WELL NO. MW#3

Name: Port of Portland

Address: 7700 NE Multnomah

City: Portland State: OR Zip: 97232

(2) TYPE OF WORK:

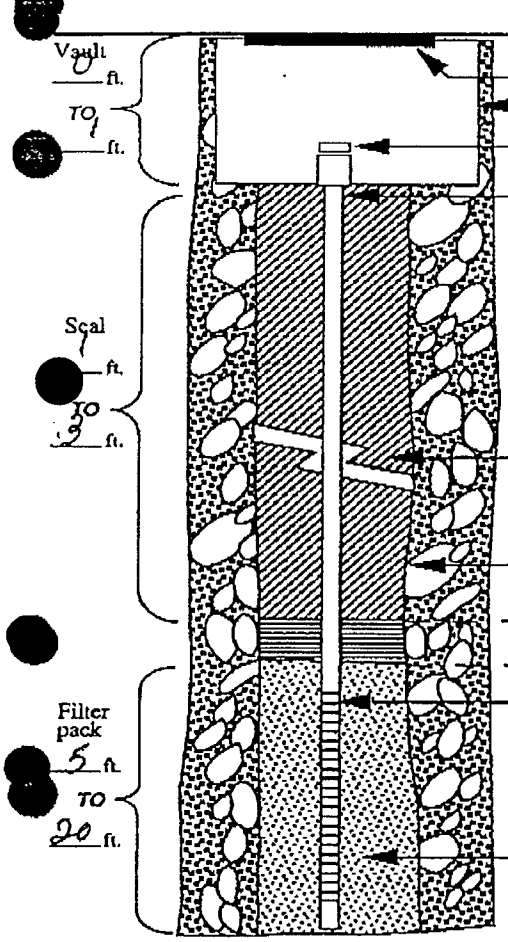
- [x] New construction
- [ ] Repair
- [ ] Recondition
- [ ] Conversion
- [ ] Deepening
- [ ] Abandonment

(3) DRILLING METHOD

- [ ] Rotary Air
- [ ] Rotary Mud
- [ ] Cable
- [x] Hollow Stem Auger
- [ ] Other

(4) BORE HOLE CONSTRUCTION

Special Standards: Yes [ ] No [x] Depth of completed well 20' ft.



(5) WELL TEST:

- [ ] Pump
- [x] Bailer
- [ ] Air
- [ ] Flowing Artesian

Permeability _____ Yield _____ GPM

Conductivity _____ PH _____

Temperature of water 14°C °F/C Depth artesian flow found _____ ft.

Was water analysis done? [x] Yes [x] No

By whom? Century West

Depth of strata to be analyzed. From 7.5' ft. to 20' ft.

Remarks:

Name of supervising Geologist/Engineer Ingmar Sand

(6) LOCATION OF WELL By legal description

Well Location: County Multnomah

Township 2 (N) or S) Range 1 (E or (W)) Section 23

1. NE 1/4 of SE 1/4 of above section.
2. Street address of well location 14400 - 15500 N. Lombard Portland, OR
3. Tax lot number of well location N/A
4. ATTACH MAP WITH LOCATION IDENTIFIED.

(7) STATIC WATER LEVEL:

7.5 Ft. below land surface. Date 10-20-93

Artesian Pressure _____ lb/sq. in. Date _____

(8) WATER BEARING ZONES: Depth at which water was first found 7.5'

From	To	Est. Flow Rate	SWL
7.5'	20'	?	7.5'

(9) WELL LOG: Ground elevation _____

Material	From	To	SWL
Gravelly Sand, light Brown, loose, dry, fine gravel, medium grained sand	0'	1'	
Sand, light brown, loose, dry, fine grained sand, damp	1'	7.5'	7.5'
medium grained sand, no odor dark brown, wet			
Dark Brown to Gray Saturated, no odor	7.5'	20'	
Black, no odor			

Date started 10-20-93 Completed 10-20-93

(unbonded) Monitor Well Constructor Certification:

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

MWC Number _____

Signed _____ Date _____

(bonded) Monitor Well Constructor Certification:

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

MWC Number 10013

Signed Randy L. Crissman Date 11-20-93

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

Appendix C.
Environmental Data Resources, Inc. Report

The EDR-Radius Map
with GeoCheck®

Multnomah Co. Corrections Fac.
N Marine Drive
Portland, OR 97203

Inquiry Number: 298113.3s

September 29, 1998

Environmental Data Resources, Inc.
an edr company

The Source For Environmental Risk Management Data

3530 Post Road
Southport, Connecticut 06490

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

TABLE OF CONTENTS

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc. (EDR). The report meets the government records search requirements of ASTM Standard Practice for Environmental Site Assessments, E 1527-97. Search distances are per ASTM standard or custom distances requested by the user.

The address of the subject property for which the search was intended is:

N MARINE DRIVE
PORTLAND, OR 97203

No mapped sites were found in EDR's search of available ("reasonably ascertainable") government records either on the subject property or within the ASTM E 1527-97 search radius around the subject property for the following Databases:

NPL:..... National Priority List
Delisted NPL:..... NPL Deletions
RCRIS-TSD:..... Resource Conservation and Recovery Information System
CERCLIS:..... Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP:..... Comprehensive Environmental Response, Compensation, and Liability Information System
CORRACTS:..... Corrective Action Report
SWF/LF:..... Solid Waste Facilities List
LUST:..... LUST Database List
UST:..... UST Database
RAATS:..... RCRA Administrative Action Tracking System
RCRIS-SQG:..... Resource Conservation and Recovery Information System
RCRIS-LQG:..... Resource Conservation and Recovery Information System
HMIRS:..... Hazardous Materials Information Reporting System
PADS:..... PCB Activity Database System
ERNS:..... Emergency Response Notification System
FINDS:..... Facility Index System
TRIS:..... Toxic Chemical Release Inventory System
NPL Lien:..... NPL Liens
TSCA:..... Toxic Substances Control Act
MLTS:..... Material Licensing Tracking System
ROD:..... ROD
CONSENT:..... Superfund (CERCLA) Consent Decrees
OR HAZMAT:..... Hazmat/Incidents
OR SPILLS:..... OR SPILLS
OR VCS:..... Voluntary Cleanup Program Sites
Coal Gas:..... Former Manufactured gas (Coal Gas) Sites.

Unmapped (orphan) sites are not considered in the foregoing analysis.

Search Results:

Search results for the subject property and the search radius, are listed below:

Subject Property:

The subject property was not listed in any of the databases searched by EDR.

EXECUTIVE SUMMARY

Surrounding Properties:

Elevations have been determined from the USGS 1 degree Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. EDR's definition of a site with an elevation equal to the subject property includes a tolerance of -10 feet. Sites with an elevation equal to or higher than the subject property have been differentiated below from sites with an elevation lower than the subject property (by more than 10 feet). Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

ECSI: The Environmental Cleanup Site Information System records information about sites in Oregon that may be of environmental interest. The data come from the Department of Environmental Quality.

A review of the SHWS list, as provided by EDR, and dated 03/01/1998 has revealed that there are 4 SHWS sites within approximately 1 Mile of the subject property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
BEALL TRANS-LINER	9200 N RAMSEY BLVD	1/2 - 1 W	1	9
RIVERGATE AUTO WRECKING - U PU	12104 N COLUMBIA BLVD	1/2 - 1 SSW	A2	12
PACIFIC CAR CRUSHING	12122 N COLUMBIA BLVD	1/2 - 1 SSW	A4	15
BPA - ST. JOHNS SUBSTATION	***12567 N COLUMBIA BLVD***	***1/2 - 1 SSW***	***A5***	***18***

OR CRL: Sites that are or may be contaminated and may require cleanup.

A review of the OR CRL list, as provided by EDR, has revealed that there are 2 OR CRL sites within approximately 1 Mile of the subject property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
RIVERGATE AUTO WRECKING - U PU	12104 N COLUMBIA BLVD	1/2 - 1 SSW	A3	15
BPA - ST. JOHNS SUBSTATION	***12567 N COLUMBIA BLVD***	***1/2 - 1 SSW***	***A5***	***18***

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
SMURFIT NEWSPRINT - PORTLAND MILL	SHWS,OR VCS
HOLMAN REDEVELOPMENT AREA - PARCEL 238	SHWS,OR VCS
THE STOR-ROOM MINI STORAGE	SHWS,OR VCS
ODOT - SURPLUS PROPERTY	SHWS
ST. JOHNS - KEELER #2 RIGHT-OF-WAY	SHWS,OR CRL
UNION STATION - PARCEL B SOUTH	SHWS,OR CRL,OR VCS
SCHNITZER INVESTMENT - NORTH BURGARD	SHWS
PACIFIC POWER AND LIGHT - DEKUM SUBSTATI	SHWS
DIESEL RELEASE - N EDGEWATER ST	SHWS
THROWAWAY BIT CORP.	SHWS,OR VCS
JPI DEVELOPMENT	SHWS,OR VCS
HOLMAN REDEVELOPMENT AREA - PARCEL 236	SHWS,OR VCS
HOLMAN REDEVELOPMENT AREA - PARCEL 237	SHWS,OR VCS
PACIFIC POWER AND LIGHT - GREGORY HEIGHT	SHWS
BLUE LAGOON - MARINE TERMINAL 5	SHWS
PACIFIC POWER AND LIGHT - MALLORY SUBSTA	SHWS
N MARINE DR EXTENSION - NORTH PORTLAND	SHWS,OR VCS
PACIFIC POWER AND LIGHT - MASON SUBSTATI	SHWS
SW MOODY AVE. - RIGHT-OF-WAY	SHWS,OR VCS
RASMUSSEN CO. (FORMER)	SHWS,OR VCS
PACIFIC POWER AND LIGHT - VILLA SUBSTATI	SHWS
UNION STATION AGRICULTURAL MARKETING CEN	SHWS
TAYLOR PROPERTY	SHWS,OR VCS
AINSWORTH SUBSTATION (FORMER)	SHWS,OR VCS
PACIFIC POWER AND LIGHT - PRESCOTT SUBST	SHWS
VERLA KWIRAN PROPERTY	SHWS
TIME OIL CO.- NORTHWEST TERMINAL	SHWS
PGE - ONISHI PROPERTY	SHWS,OR VCS
WHITAKER BUILDING	SHWS,OR VCS
RMAC	SWF/LF
BOB'S SANITARY SERVICE, INC. SLUDGE SITE	SWF/LF
PORTLAND COMPOST FACILITY	SWF/LF
SUNFLOWER RECYCLING	SWF/LF
SONAS SOIL RESOURCE RECOVERY OF OREGON,	SWF/LF
OBRIST TROUTDALE LANDFILL	SWF/LF
ST. JOHNS LANDFILL	SWF/LF
ST. JOHNS LANDFILL	SWF/LF,OR SPILLS
CARGILL INC	UST,OR SPILLS
ST JOHNS JUNCTION P L DELIVERY FAC	FINDS,RCRIS-LQG

TOPOGRAPHIC MAP - 298113.3s - Cascade Earth Sciences LTD.

0 1/2 1 2 Miles

- Major Roads
- Contour Lines
- Waterways
- Earthquake epicenter, Richter 5 or greater
- Closest Federal Well in quadrant
- Closest State Well in quadrant
- Closest Public Water Supply Well

TARGET PROPERTY:	Multnomah Co. Corrections Fac.	CUSTOMER:	Cascade Earth Sciences LTD.
ADDRESS:	N Marine Drive	CONTACT:	Ron Doughten
CITY/STATE/ZIP:	Portland OR 97203	INQUIRY #:	298113.3s

GEOCHECK VERSION 2.1
SUMMARY

TARGET PROPERTY COORDINATES

Latitude (North):	45.625500 - 45 37' 31.8"
Longitude (West):	122.753601 - 122 45' 13.0"
Universal Transverse Mercator:	Zone 10
UTM X (Meters):	-4675721.0
UTM Y (Meters):	15581439.0

USGS TOPOGRAPHIC MAP ASSOCIATED WITH THIS SITE

Target Property: 2445122-F7 SAUVIE ISLAND, OR WA

GEOLOGIC AGE IDENTIFICATION†

Geologic Code:	Q
Era:	Cenozoic
System:	Quaternary
Series:	Quaternary

ROCK STRATIGRAPHIC UNIT†

Category: Stratifed Sequence

GROUNDWATER FLOW INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, including well data collected on nearby properties, regional groundwater flow information (from deep aquifers), or surface topography.‡

AQUIFLOW™** Search Radius: 2.000 Miles

MAP ID	DISTANCE FROM TP	DIRECTION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported			

General Topographic Gradient at Target Property: Undeterminable

General Hydrogeologic Gradient at Target Property: The hydrogeologic gradient for this report has been determined using the depth to water table information provided below. Where available, the closest well in each quadrant has been identified (up to a radius of 5 miles around the target property) and used in the gradient calculation. While an attempt has been made to segregate shallow from deep aquifers, this cannot always be assured. Groundwater flow in the aquifer associated with the wells appears generally to be to the NNE. This would appear to be in conflict with the topographical gradient. The direction of the groundwater flow should be determined by a qualified environmental professional.

FEDERAL DATABASE WELL INFORMATION

WELL QUADRANT	DISTANCE FROM TP	LITHOLOGY	DEPTH TO WATER TABLE
Northern	1 - 2 Miles	Not Reported	29 ft.
Eastern	>2 Miles	Not Reported	30 ft.
Southern	1 - 2 Miles	Not Reported	14 ft.
Western	>2 Miles	Not Reported	16 ft.

† Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).
‡ U.S. EPA Ground Water Handbook, Vol I: Ground Water and Contamination, Office of Research and development EPA/625/6-90/016a,Chapter 4, page 78. September 1990.
** EDR AQUIFLOW™ Information System of hydrogeologically determined groundwater flow directions at specific locations. See the date pages at the end of this report for a complete description.

GEOCHECK VERSION 2.1
SUMMARY

STATE DATABASE WELL INFORMATION

WELL QUADRANT	DISTANCE FROM TP
Northern	>2 Miles
Eastern	>2 Miles
Southern	1/2 - 1 Mile
Western	1 - 2 Miles

PUBLIC WATER SUPPLY SYSTEM INFORMATION

Searched by Nearest PWS.
NOTE: PWS System location is not always the same as well location.

PWS Name: CHEHALIS SUBSTATION
P O BOX 491
VANCOUVER, WA 98660
Location Relative to TP: >2 Miles East
PWS currently has or has had major violation(s): No

AREA RADON INFORMATION

EPA Radon Zone for MULTNOMAH County: 2

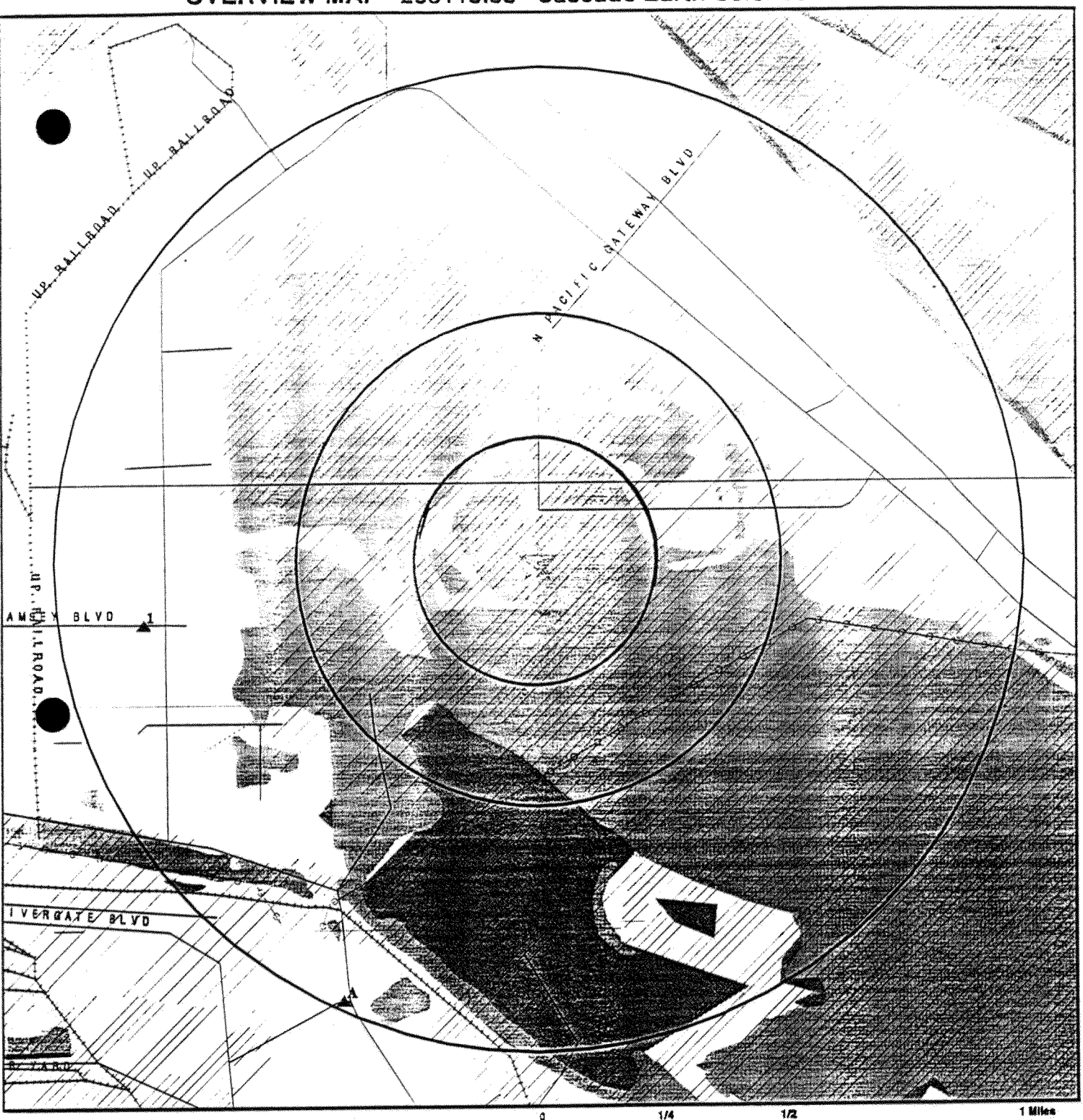
Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

MULTNOMAH COUNTY, OR

Number of sites tested: 33

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area	1.530 pCi/L	91%	9%	0%
Basement	2.630 pCi/L	57%	43%	0%

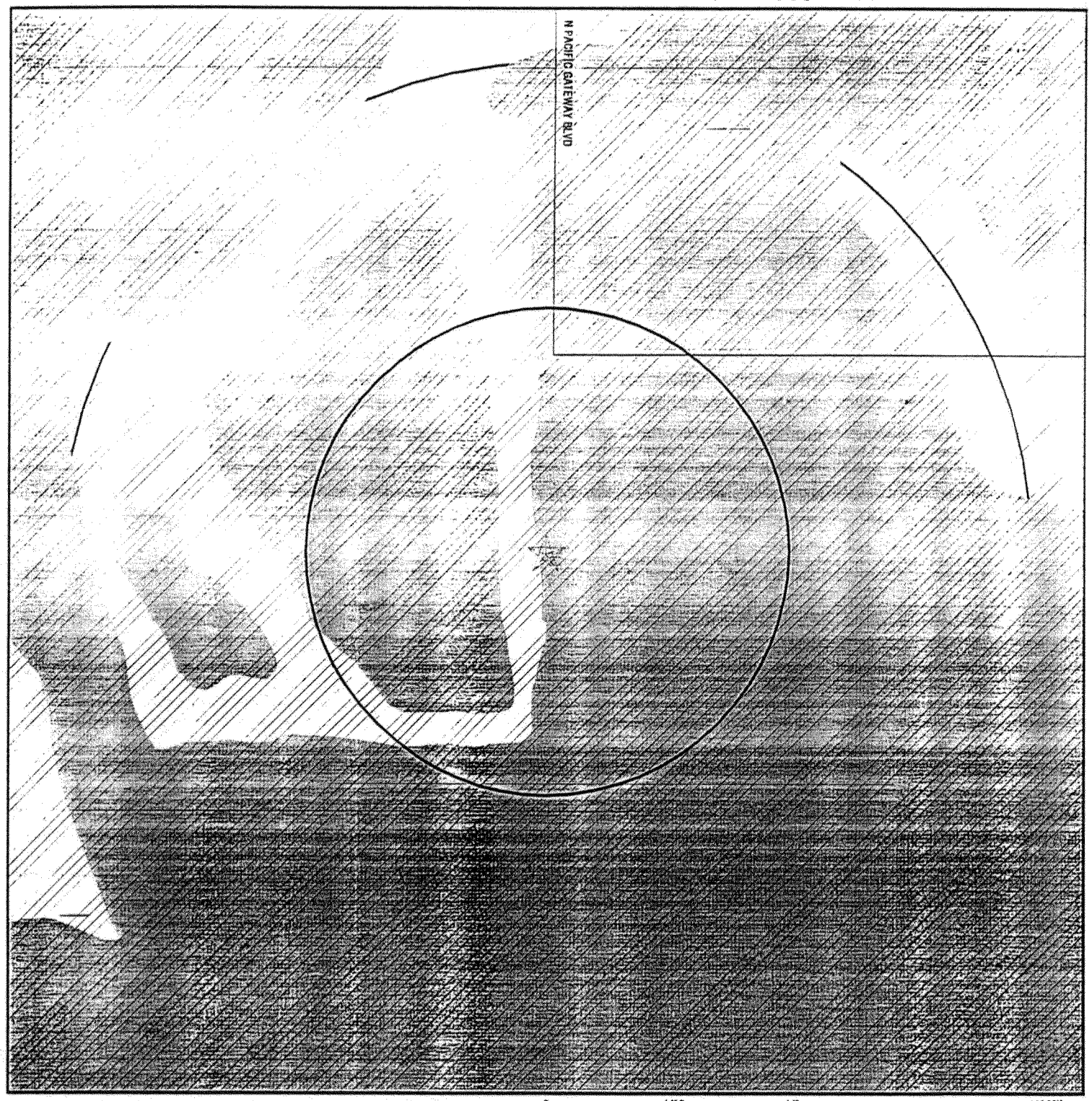
OVERVIEW MAP - 298113.3s - Cascade Earth Sciences LTD.



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Coal Gasification Sites (if requested)
- National Priority List Sites
- Landfill Sites
- Power transmission lines
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- Wetlands per National Wetlands Inventory (1994)
- Areas of Concern

TARGET PROPERTY:	Multnomah Co. Corrections Fac.	CUSTOMER:	Cascade Earth Sciences LTD.
ADDRESS:	N Marine Drive	CONTACT:	Ron Doughten
CITY/STATE/ZIP:	Portland OR 97203	INQUIRY #:	298113.3s
LAT/LONG:	45.6255 / 122.7536	DATE:	September 29, 1998 7:56 pm

DETAIL MAP - 298113.3s - Cascade Earth Sciences LTD.



0 1/16 1/8 1/4 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Coal Gasification Sites (if requested)
- Sensitive Receptors
- National Priority List Sites
- Landfill Sites
- Power transmission lines
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- Wetlands per National Wetlands Inventory (1994)
- Areas of Concern

TARGET PROPERTY:	Multnomah Co. Corrections Fac.	CUSTOMER:	Cascade Earth Sciences LTD.
ADDRESS:	N Marine Drive	CONTACT:	Ron Doughten
CITY/STATE/ZIP:	Portland OR 97203	INQUIRY #:	298113.3s

MAP FINDINGS SUMMARY SHOWING ALL SITES

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
NPL		1.000	0	0	0	0	NR	0
Delisted NPL		TP	NR	NR	NR	NR	NR	0
RCRIS-TSD		0.500	0	0	0	NR	NR	0
State Haz. Waste		1.000	0	0	0	4	NR	4
CERCLIS		0.500	0	0	0	NR	NR	0
CERC-NFRAP		TP	NR	NR	NR	NR	NR	0
CORRACTS		1.000	0	0	0	0	NR	0
State Landfill		0.500	0	0	0	NR	NR	0
LUST		0.500	0	0	0	NR	NR	0
UST		0.250	0	0	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
RCRIS Sm. Quan. Gen.		0.250	0	0	NR	NR	NR	0
RCRIS Lg. Quan. Gen.		0.250	0	0	NR	NR	NR	0
HMIRS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
ERNS		TP	NR	NR	NR	NR	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
NPL Liens		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
ROD		1.000	0	0	0	0	NR	0
CONSENT		1.000	0	0	0	0	NR	0
OR HAZMAT		TP	NR	NR	NR	NR	NR	0
OR SPILLS		TP	NR	NR	NR	NR	NR	0
OR CRL		1.000	0	0	0	2	NR	2
OR VCS		0.500	0	0	0	NR	NR	0
Coal Gas		1.000	0	0	0	0	NR	0

TP = Target Property

NR = Not Requested at this Search Distance

* Sites may be listed in more than one database

MAP FINDINGS SUMMARY SHOWING ONLY SITES HIGHER THAN OR THE SAME ELEVATION AS TP

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
NPL		1.000	0	0	0	0	NR	0
Delisted NPL		TP	NR	NR	NR	NR	NR	0
RCRIS-TSD		0.500	0	0	0	NR	NR	0
State Haz. Waste		1.000	0	0	0	4	NR	4
CERCLIS		0.500	0	0	0	NR	NR	0
CERC-NFRAP		TP	NR	NR	NR	NR	NR	0
CORRACTS		1.000	0	0	0	0	NR	0
State Landfill		0.500	0	0	0	NR	NR	0
LUST		0.500	0	0	0	NR	NR	0
UST		0.250	0	0	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
RCRIS Sm. Quan. Gen.		0.250	0	0	NR	NR	NR	0
RCRIS Lg. Quan. Gen.		0.250	0	0	NR	NR	NR	0
HMIRS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
ERNS		TP	NR	NR	NR	NR	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
NPL Liens		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
ROD		1.000	0	0	0	0	NR	0
CONSENT		1.000	0	0	0	0	NR	0
OR HAZMAT		TP	NR	NR	NR	NR	NR	0
OR SPILLS		TP	NR	NR	NR	NR	NR	0
OR CRL		1.000	0	0	0	2	NR	2
OR VCS		0.500	0	0	0	NR	NR	0
Coal Gas		1.000	0	0	0	0	NR	0

TP = Target Property

NR = Not Requested at this Search Distance

* Sites may be listed in more than one database

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number

Coal Gas Site Search: No site was found in a search of Real Property Scan's ENVIROHAZ database.

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1 West 1/2-1 Higher	**BEALL TRANS-LINER 9200 N RAMSEY BLVD PORTLAND, OR 97203**	**SHWS**	**S101839095 N/A**

ECSI:

State ID Number:	10		
Study Area:	No	Coordinator Supplier:	Not reported
Cerclis ID:	Not reported	Tax Lots:	#11
Size:	4 acres	NPL:	No
Orphan:	No	ECFS Code:	Not reported
Lat/Long:	46 / 122.7550	Tax Lots:	#11
Township Coord.:	2.00	Township Zone:	N
Range Coord.:	1.00	Range Zone:	W
Section Coord.:	26	Qtr Section:	Not reported
Address:	9200 N Ramsey BLVD		

Substance: OIL OR FUEL RELATED COMPOUNDS
Quant. Released: Unknown
Date: Prior to June 1987

Alias Name: Not reported

Texto: DEQ inspector observation 6-11-87 and company acknowledgement.
Release Desc.: Data Sources

Sampling Start:	Not reported	Sampling End:	Not reported
Sample Depth:	Not reported		
Sampling Result:	Not reported		
Obsrvtn Indicator:	Not reported		
Owner/Operator:	Not reported	Lab Data Indicator:	Not reported

Medium Description: Not reported
Minimum Concentration Valve: Not reported
Maximum Concentration Valve: Not reported
Investigation Status: Suspect Site - Needs Investigation

Contamination:

On June 11, 1987, NWR inspectors followed up on complaint alleging Beall was dumping oil on the ground and discharging effluents to a nearby stream. Beall cleans gasoline tanker trucks prior to repair, rinsate discharged to Portland's sewer system. Beall's foreman says tanker trucks contain very little (approx 1 qt) gasoline. DEQ inspectors observed small patch of discolored soil near cleaning station. No 'wet' areas observed. 3 drums on site - 2 filled with used oil, 1 with chlorothene (used to clean exterior of trucks). No waste chlorothene generated. Small paint storage area, several cans of waste mineral spirits. Beall discharges water used to test new tank trucks for leaks; water not contaminated and flows across ground to adjacent field. Some soil discoloration observed. No discharge to stream. Inspectors reported that Beall will be removing the oily soil near the cleaning station.

Data Sources:

Complaint File
Program: , Region: NW
Source File
Program: DEQ HW, Region: NW
Inspection reports
Photos
Complaint from labor union

Hazardous Substance/Waste Types:

BEALL TRANS-LINER (Continued) **S101839095**

compressor oil engine rinsewater, gasoline.

Site Location:

Rivergate Industrial Area near Columbia Slough

Manner of Release:

Operating practice of rinsing tank cars out; rinsate discharges directly to the ground prior to 6/87.

Project Activity Status:

Expanded PA recommended. Discolored and stained areas at the site need to be sampled.

Pathways & Other Hazards:

Drainage ditch located about a block east of Beall; ditch appears to be extension of Columbia slough but is man-made. No discharge to the ditch observed. No gasoline or petroleum odor present. Patches of algae evident in water; water itself had brownish-green tinge.

Remedial Action:

Unknown amount of oil-contaminated soil removed from site. Further action recommended.
(10/27/97 LSK) Site reevaluated as part of review of all sites within the Columbia Slough Study Area. Located on south shore of Oregon Slough.

Party Affiliation: None Reported:

Site Status: Not reported
Assoc Date: Not reported

Permit Number: Not reported | Permit Type: Not reported
Permit Agency: Not reported
Prmt Comments: Not reported

Common Name: Beall Trans-Liner
Years/Operation: Not reported
Operation Status: Active | Most Recent FLag: Yes
Oper. Comment: Cleans and repairs tanker trucks

Administrative Action: Listing Review completed
Admnstrtv Category: Listing Action
Comments: Not reported
Start Date: 12-DEC-90 | Completion: 12-DEC-90
Staff Number: 177 | FRT Action Priority: Not reported
Rank Value: 0 | Agency: Dept of Env. Quality
Region: Head Quarters

Administrative Action: Insufficient information to list
Admnstrtv Category: Listing Action
Comments: Not reported
Start Date: 13-DEC-90 | Completion: 31-DEC-99
Staff Number: 177 | FRT Action Priority: Not reported
Rank Value: 0 | Agency: Dept of Env. Quality
Region: Head Quarters

BEALL TRANS-LINER (Continued) **S101839095**

Administrative Action: State Expanded Preliminary Assessment recommended (XPA)
Admnstrtv Category: Remedial Action
Comments: Not reported
Start Date: 01-APR-91 Completion: 01-APR-91
Staff Number: 112 FRT Action Priority: Not reported
Rank Value: 0 Agency: Dept of Env. Quality
Region: Head Quarters

Administrative Action: Responsible party notified re 11/88 Inventory listing
Admnstrtv Category: Listing Action
Comments: Not reported
Start Date: 30-NOV-88 Completion: 31-DEC-99
Staff Number: Not reported FRT Action Priority: Not reported
Rank Value: 0 Agency: Dept of Env. Quality
Region: Head Quarters

Administrative Action: BASIC PRELIMINARY ASSESSEMENT
Admnstrtv Category: Remedial Action
Comments: Not reported
Start Date: 29-JAN-91 Completion: 01-APR-91
Staff Number: 112 FRT Action Priority: Not reported
Rank Value: 0 Agency: Dept of Env. Quality
Region: Head Quarters

Administrative Action: Site added to database
Admnstrtv Category: Administrative Action
Comments: Not reported
Start Date: 11-JUL-88 Completion: 31-DEC-99
Staff Number: 124 FRT Action Priority: Not reported
Rank Value: 0 Agency: Dept of Env. Quality
Region: Head Quarters

Administrative Action: SITE EVALUATION
Admnstrtv Category: Remedial Action
Comments: Not reported
Start Date: 12-DEC-90 Completion: 12-DEC-90
Staff Number: 177 FRT Action Priority: Not reported
Rank Value: 0 Agency: Dept of Env. Quality
Region: Head Quarters

Administrative Action: State Basic Preliminary Assessment recommended (PA)
Admnstrtv Category: Remedial Action
Comments: Not reported
Start Date: 13-DEC-90 Completion: 13-DEC-90
Staff Number: 177 FRT Action Priority: Not reported
Rank Value: 0 Agency: Dept of Env. Quality
Region: Head Quarters

Administrative Action: SITE PRIORITY EVALUATION FOR FURTHER ACTION
Admnstrtv Category: Remedial Action
Comments: Low priority for further investigation.
Start Date: 20-FEB-97 Completion: 31-DEC-99
Staff Number: 119 FRT Action Priority: LOW
Rank Value: 0 Agency: Dept of Env. Quality
Region: Northwest

ECSF Desc.: Not reported

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
A2 SSW 1/2-1 Higher	**RIVERGATE AUTO WRECKING - U PULL IT DIVI 12104 N COLUMBIA BLVD PORTLAND, OR 97203**	**SHWS**	**S102646838 N/A**

ECSI:

State ID Number:	2056		
Study Area:	No	Coordinator Supplier:	USGS 7.5 Min Topo
Cerclis ID:	Not reported	Tax Lots:	TL 13 and 25, Ramsey Villa C/D
Size:	6.9 acres total	NPL:	No
Orphan:	No	ECFS Code:	Not reported
Lat/Long:	46 / 122.7590	Tax Lots:	TL 13 and 25, Ramsey Villa C/D
Township Coord.:	2.00	Township Zone:	N
Range Coord.:	1.00	Range Zone:	W
Section Coord.:	36	Qtr Section:	CB
Address:	12104 N Columbia BLVD		

Substance: OIL - WASTE
Quant. Released: Unknown
Date: Presumed 1974 to 1997.

Substance: ETHYLENE GLYCOL
Quant. Released: Unknown
Date: Presumed 1974 to 1997.

Alias Name: Not reported

Texto: May 20, 1996, inspection observations by DEQ Stormwater Program and City of
Release Desc.: Data Sources
Texto: Portland Bureau of Environmental Services; December 1990 and April 1997
Release Desc.: Data Sources
Texto: Pollution Complaints to DEQ; April 1997 inspection observation by City of
Release Desc.: Data Sources
Texto: Portland BES; site visit observations by DEQ SAS 7/18/97.
Release Desc.: Data Sources
Texto: Not reported
Release Desc.: Data Sources
Texto: Not reported
Release Desc.: Data Sources
Texto: Soils. Possible shallow groundwater. Possible off-site soils along UPRR
Release Desc.: Media Contamination Footnote
Texto: tracks / ditch.
Release Desc.: Media Contamination Footnote
Texto: Not reported
Release Desc.: Media Contamination Footnote
Texto: Not reported
Release Desc.: Media Contamination Footnote
Texto: Not reported
Release Desc.: Media Contamination Footnote
Texto: Not reported
Release Desc.: Media Contamination Footnote
Texto: None prior to 1997. Site paved 1997.
Release Desc.: Release Containment
Texto: Not reported
Release Desc.: Release Containment
Texto: Not reported
Release Desc.: Release Containment
Texto: Not reported
Release Desc.: Release Containment
Texto: Not reported
Release Desc.: Release Containment

RIVERGATE AUTO WRECKING - U PULL IT DIVI (Continued) **S102646838**

Texto:	Not reported
Release Desc.:	Release Containment
Texto:	Historic reports of oil discharges to site soils. Runoff directed to off-
Release Desc.:	General Comments
Texto:	site ditch along UPRR tracks. Site paved July/August 1997.
Release Desc.:	General Comments
Texto:	Not reported
Release Desc.:	General Comments
Texto:	Not reported
Release Desc.:	General Comments
Texto:	Not reported
Release Desc.:	General Comments
Texto:	Not reported
Release Desc.:	General Comments
Texto:	Site soils. Possible groundwater. Possible releases to Columbia Slough.
Release Desc.:	Media Contamination Footnote
Texto:	Not reported
Release Desc.:	Media Contamination Footnote
Texto:	Not reported
Release Desc.:	Media Contamination Footnote
Texto:	Not reported
Release Desc.:	Media Contamination Footnote
Texto:	Not reported
Release Desc.:	Media Contamination Footnote
Texto:	Not reported
Release Desc.:	Media Contamination Footnote
Texto:	None prior to July 1997. Site paved July/August 1997.
Release Desc.:	Release Containment
Texto:	Not reported
Release Desc.:	Release Containment
Texto:	Not reported
Release Desc.:	Release Containment
Texto:	Not reported
Release Desc.:	Release Containment
Texto:	Not reported
Release Desc.:	Release Containment
Texto:	Not reported
Release Desc.:	Release Containment
Texto:	Documented observations by DEQ, City of Portland Bureau of Environmental
Release Desc.:	Data Sources
Texto:	Services.
Release Desc.:	Data Sources
Texto:	Not reported
Release Desc.:	Data Sources
Texto:	Not reported
Release Desc.:	Data Sources
Texto:	Not reported
Release Desc.:	Data Sources
Texto:	Not reported
Release Desc.:	Data Sources

RIVERGATE AUTO WRECKING - U PULL IT DIVI (Continued) **S102646838**

Sampling Start: Not reported
Sampling End: Not reported
Sample Depth: Not reported
Sampling Result: Not reported
Obsrvtn Indicator: Not reported
Owner/Operator: Not reported
Lab Data Indicator: Not reported
Medium Description: Not reported
Minimum Concentration Valve: Not reported
Maximum Concentration Valve: Not reported
Investigation Status: Listed on Confirmed Release List

Party Affiliation: None Reported:

Site Status: Not reported
Assoc Date: Not reported

Permit Number: Not reported
Permit Type: Not reported
Permit Agency: Not reported
Prmt Comments: Not reported

Common Name: Not reported
Years/Operation: Not reported
Operation Status: Not reported
Most Recent FLag: Not reported
Oper. Comment: Not reported

Administrative Action: Site added to database
Admnstrtv Category: Administrative Action
Comments: Not reported
Start Date: 10-JUN-97
Completion: 31-DEC-99
Staff Number: 229
FRT Action Priority: Not reported
Rank Value: 0
Agency: Dept of Env. Quality
Region: Head Quarters

Administrative Action: SITE EVALUATION
Admnstrtv Category: Remedial Action
Comments: Federal Screening associated with Columbia Slough site evaluations
Start Date: 22-AUG-97
Completion: 27-AUG-97
Staff Number: 271
FRT Action Priority: Not reported
Rank Value: 0
Agency: Dept of Env. Quality
Region: Northwest

Administrative Action: State Expanded Preliminary Assessment recommended (XPA)
Admnstrtv Category: Remedial Action
Comments: Not reported
Start Date: 27-AUG-97
Completion: 27-AUG-97
Staff Number: 271
FRT Action Priority: MED
Rank Value: 79
Agency: Dept of Env. Quality
Region: Northwest

Administrative Action: Proposal for Confirmed Release List recommended
Admnstrtv Category: Listing Action
Comments: Not reported
Start Date: 27-AUG-97
Completion: 27-AUG-97
Staff Number: 271
FRT Action Priority: Not reported
Rank Value: 0
Agency: Dept of Env. Quality
Region: Northwest

RIVERGATE AUTO WRECKING - U PULL IT DIVI (Continued) **S102646838**

Administrative Action: Facility proposed for Confirmed Release List
Admnstrtv Category: Listing Action
Comments: Not reported
Start Date: 11-SEP-97 | Completion: 11-SEP-97
Staff Number: 271 | FRT Action Priority: Not reported
Rank Value: 0 | Agency: Dept of Env. Quality
Region: Northwest

Administrative Action: PRELIMINARY ASSESSMENT EQUIVALENT
Admnstrtv Category: Remedial Action
Comments: Not reported
Start Date: 22-AUG-97 | Completion: 27-AUG-97
Staff Number: 271 | FRT Action Priority: Not reported
Rank Value: 0 | Agency: Dept of Env. Quality
Region: Northwest

Administrative Action: Facility placed on Confirmed Release List
Admnstrtv Category: Listing Action
Comments: Not reported
Start Date: 20-NOV-97 | Completion: 20-NOV-97
Staff Number: 304 | FRT Action Priority: Not reported
Rank Value: 0 | Agency: Dept of Env. Quality
Region: Head Quarters

Administrative Action: Listing Review completed
Admnstrtv Category: Listing Action
Comments: Not reported
Start Date: 26-AUG-97 | Completion: 27-AUG-97
Staff Number: 271 | FRT Action Priority: Not reported
Rank Value: 0 | Agency: Dept of Env. Quality
Region: Northwest

ECSF Desc.: Not reported

A3 SSW 1/2-1 Higher **RIVERGATE AUTO WRECKING - U PULL IT DIVI** **OR CRL** **S102997256**
12104 N COLUMBIA BLVD **N/A**
PORTLAND, OR 97203

OR CRL:
Facility ID: 2056
Media Affected: Not reported
Current Program: Site Response Section
Cleanup Status: Phase I - Remedial investigation and feasibility studies have not been initiated
Substances: ETHYLENE GLYCOL OIL - WASTE

A4 SSW 1/2-1 Higher **PACIFIC CAR CRUSHING** **SHWS** **S102646839**
12122 N COLUMBIA BLVD **N/A**
PORTLAND, OR 97203

ECSI:
State ID Number: 2057
Study Area: No | Coordinator Supplier: USGS 7.5 Min Topo
Cerclis ID: Not reported | Tax Lots: TL 62 of TL B&C Ramsey Villa
Size: Appr 6.25 acres | NPL: No
Orphan: No | ECFS Code: Not reported
Lat/Long: 46 / 122.7580 | Tax Lots: TL 62 of TL B&C Ramsey Villa
Township Coord.: 2.00 | Township Zone: N

PACIFIC CAR CRUSHING (Continued) **S102646839**

Range Coord.:	1.00	Range Zone:	W
Section Coord.:	36	Qtr Section:	CB
Address:	12122 N Columbia BLVD		

Substance: OIL - WASTE
Quant. Released: Unknown
Date: 1980 to present

Alias Name: Northwest Recycling, Inc.
Portland Auto Wrecking

Texto: Observations by DEQ Stormwater Program and City of Portland Bureau of
Release Desc.: Data Sources
Texto: Environmental Services,June 1996. Observations/photos by DEQ SAS July 1997.
Release Desc.: Data Sources
Texto: Not reported
Release Desc.: Data Sources
Texto: Not reported
Release Desc.: Data Sources
Texto: Not reported
Release Desc.: Data Sources
Texto: Not reported
Release Desc.: Data Sources
Texto: Site soils. Stormwater holding pond sediments. Off-site soils where
Release Desc.: Media Contamination Footnote
Texto: stormwater holding pond overflow discharges. Possible shallow groundwater.
Release Desc.: Media Contamination Footnote
Texto: Possible Columbia Slough surface water and sediments.
Release Desc.: Media Contamination Footnote
Texto: Not reported
Release Desc.: Media Contamination Footnote
Texto: Not reported
Release Desc.: Media Contamination Footnote
Texto: Not reported
Release Desc.: Media Contamination Footnote
Texto: Minimal-to-none. Automotive fluids released during auto crushing activities
Release Desc.: Release Containment
Texto: are discharged to a stormwater holding pond, to be disolved by surface water
Release Desc.: Release Containment
Texto: within pond. Overflow from pond discharges along neighboring property
Release Desc.: Release Containment
Texto: (Rivergate Auto Wrecking) and to ditch along UPRR tracks. Pond also likely
Release Desc.: Release Containment
Texto: discharges to shallow groundwater formation. Contaminants may reach Columbia
Release Desc.: Release Containment
Texto: Slough through runoff or contaminated groundwater discharge.
Release Desc.: Release Containment
Texto: Site's stormwater holding pond claimed to be clay lined. Extensive oil
Release Desc.: General Comments
Texto: staining around pond perimeter, though.
Release Desc.: General Comments
Texto: Not reported
Release Desc.: General Comments
Texto: Not reported
Release Desc.: General Comments
Texto: Not reported
Release Desc.: General Comments
Texto: Not reported
Release Desc.: General Comments

PACIFIC CAR CRUSHING (Continued) **S102646839**

Sampling Start: Not reported
Sampling End: Not reported
Sample Depth: Not reported
Sampling Result: Not reported
Obsrvtn Indicator: Not reported
Owner/Operator: Not reported
Lab Data Indicator: Not reported
Medium Description: Not reported
Minimum Concentration Valve: Not reported
Maximum Concentration Valve: Not reported
Investigation Status: Suspect Site - Needs Investigation

Party Affiliation: None Reported:

Site Status: Not reported
Assoc Date: Not reported

Permit Number: Not reported
Permit Type: Not reported
Permit Agency: Not reported
Prmt Comments: Not reported

Common Name: Not reported
Years/Operation: Not reported
Operation Status: Not reported
Most Recent FLag: Not reported
Oper. Comment: Not reported

Administrative Action: Site added to database
Admnstrtv Category: Administrative Action
Comments: Not reported
Start Date: 10-JUN-97
Completion: 31-DEC-99
Staff Number: 229
FRT Action Priority: Not reported
Rank Value: 0
Agency: Dept of Env. Quality
Region: Head Quarters

Administrative Action: SITE EVALUATION
Admnstrtv Category: Remedial Action
Comments: Federal Screening of Columbia Slough sites.
Start Date: 23-JUL-97
Completion: 30-JUL-97
Staff Number: 271
FRT Action Priority: Not reported
Rank Value: 0
Agency: Dept of Env. Quality
Region: Northwest

Administrative Action: Remedial Investigation/Feasibility Study recommended
Admnstrtv Category: Remedial Action
Comments: Sampling/characterization recommended for site soils, groundwater, pond sediments, and off-site soils and groundwater.
Start Date: 30-JUL-97
Completion: 30-JUL-97
Staff Number: 271
FRT Action Priority: HMED
Rank Value: 81
Agency: Dept of Env. Quality
Region: Northwest

Administrative Action: Proposal for Confirmed Release List recommended
Admnstrtv Category: Listing Action
Comments: Not reported
Start Date: 30-JUL-97
Completion: 30-JUL-97
Staff Number: 271
FRT Action Priority: Not reported
Rank Value: 0
Agency: Dept of Env. Quality
Region: Northwest

PACIFIC CAR CRUSHING (Continued) **S102646839**

Administrative Action: Proposal for Inventory recommended
Admnstrtv Category: Listing Action
Comments: Not reported
Start Date: 30-JUL-97 | Completion: 30-JUL-97
Staff Number: 271 | FRT Action Priority: Not reported
Rank Value: 0 | Agency: Dept of Env. Quality
Region: Northwest

Administrative Action: PRELIMINARY ASSESSMENT EQUIVALENT
Admnstrtv Category: Remedial Action
Comments: Not reported
Start Date: 23-JUL-97 | Completion: 30-JUL-97
Staff Number: 271 | FRT Action Priority: Not reported
Rank Value: 0 | Agency: Dept of Env. Quality
Region: Northwest

Administrative Action: Listing Review completed
Admnstrtv Category: Listing Action
Comments: Not reported
Start Date: 29-JUL-97 | Completion: 30-JUL-97
Staff Number: 271 | FRT Action Priority: Not reported
Rank Value: 0 | Agency: Dept of Env. Quality
Region: Northwest

Administrative Action: SRS Waiting List
Admnstrtv Category: Remedial Action
Comments: Not reported
Start Date: 17-FEB-98 | Completion: 31-DEC-99
Staff Number: 271 | FRT Action Priority: HMED
Rank Value: 81 | Agency: Dept of Env. Quality
Region: Northwest

Administrative Action: Facility proposed for Inventory
Admnstrtv Category: Listing Action
Comments: Not reported
Start Date: 23-FEB-98 | Completion: 23-FEB-98
Staff Number: 304 | FRT Action Priority: Not reported
Rank Value: 0 | Agency: Dept of Env. Quality
Region: Northwest

Administrative Action: Facility proposed for Confirmed Release List
Admnstrtv Category: Listing Action
Comments: Not reported
Start Date: 23-FEB-98 | Completion: 23-FEB-98
Staff Number: 304 | FRT Action Priority: Not reported
Rank Value: 0 | Agency: Dept of Env. Quality
Region: Northwest

ECSF Desc.: Not reported

A5 SSW 1/2-1 Higher | **BPA - ST. JOHNS SUBSTATION**
12567 N COLUMBIA BLVD
PORTLAND, OR 97203 | **SHWS OR CRL** | **S102845669 N/A**

ECSI:
State ID Number: 1858
Study Area: No | Coordinator Supplier: Not reported
Cerclis ID: Not reported | Tax Lots: Not reported
Size: Not reported | NPL: No
Orphan: No | ECFS Code: Not reported

BPA - ST. JOHNS SUBSTATION (Continued) **S102845669**

Lat/Long: 46 / 122.7640
Township Coord.: 2.00
Range Coord.: 1.00
Section Coord.: 35
Address: 12567 N Columbia Blvd.

Tax Lots: Not reported
Township Zone: N
Range Zone: W
Qtr Section: Not reported

Substance: TRICHLOROETHANE,1,1,1-
Quant. Released: unk.
Date: unk.

Substance: DICHLOROETHYLENE,1,1-
Quant. Released: unk.
Date: unk.

Substance: DICHLOROETHANE,1,1-
Quant. Released: unk.
Date: unk.

Substance: PCBs
Quant. Released: unk.
Date: unk.

Alias Name: Not reported
Texto: Not reported
Release Desc.: Not reported

Sampling Start: Not reported
Sampling End: Not reported
Sample Depth: Not reported
Sampling Result: Not reported
Obsrvtn Indicator: Not reported
Owner/Operator: Not reported
Lab Data Indicator: Not reported
Medium Description: Not reported
Minimum Concentration Valve: Not reported
Maximum Concentration Valve: Not reported
Investigation Status: Listed on Confirmed Release List

Party Affiliation: None Reported:

Site Status: Not reported
Assoc Date: Not reported

Permit Number: Not reported
Permit Type: Not reported
Permit Agency: Not reported
Prmt Comments: Not reported

Common Name: St. Johns Substation
Years/Operation: at least 1940 to present
Operation Status: Active
Most Recent FLag: Yes
Oper. Comment: Electrical substation

Administrative Action: Site added to database
Admnstrtv Category: Administrative Action
Comments: Not reported
Start Date: 25-APR-96
Completion: 31-DEC-99
Staff Number: 297
FRT Action Priority: Not reported
Rank Value: 0
Agency: Dept of Env. Quality
Region: Northwest

BPA - ST. JOHNS SUBSTATION (Continued) **S102845669**

Administrative Action: SITE EVALUATION
Admnstrtv Category: Remedial Action
Comments: State screening.
Start Date: 26-APR-96 Completion: 28-MAR-97
Staff Number: 283 FRT Action Priority: Not reported
Rank Value: 0 Agency: Dept of Env. Quality
Region: Northwest

Administrative Action: Listing Review completed
Admnstrtv Category: Listing Action
Comments: Not reported
Start Date: 21-MAR-97 Completion: 28-MAR-97
Staff Number: 283 FRT Action Priority: Not reported
Rank Value: 0 Agency: Dept of Env. Quality
Region: Northwest

Administrative Action: Proposal for Confirmed Release List recommended
Admnstrtv Category: Listing Action
Comments: Not reported
Start Date: 28-MAR-97 Completion: 28-MAR-97
Staff Number: 283 FRT Action Priority: Not reported
Rank Value: 0 Agency: Dept of Env. Quality
Region: Northwest

Administrative Action: Remedial Investigation recommended (RI)
Admnstrtv Category: Remedial Action
Comments: VOCs (groundwater) and remaining PCB levels (soil).
Start Date: 28-MAR-97 Completion: 28-MAR-97
Staff Number: 283 FRT Action Priority: MED
Rank Value: 0 Agency: Dept of Env. Quality
Region: Northwest

Administrative Action: Facility proposed for Confirmed Release List
Admnstrtv Category: Listing Action
Comments: Not reported
Start Date: 28-APR-97 Completion: 28-APR-97
Staff Number: 304 FRT Action Priority: MED
Rank Value: 0 Agency: Dept of Env. Quality
Region: Northwest

Administrative Action: Extension requested by owner/operator
Admnstrtv Category: Listing Action
Comments: Telephone call from Mr. Mark Hermiston requesting 45 day extension for comment
Start Date: 16-JUN-97 Completion: 16-JUN-97
Staff Number: 304 FRT Action Priority: Not reported
Rank Value: 0 Agency: Dept of Env. Quality
Region: Head Quarters

Administrative Action: Petition or request granted
Admnstrtv Category: Listing Action
Comments: Not reported
Start Date: 16-JUN-97 Completion: 16-JUN-97
Staff Number: 304 FRT Action Priority: Not reported
Rank Value: 0 Agency: Dept of Env. Quality
Region: Head Quarters

BPA - ST. JOHNS SUBSTATION (Continued) **S102845669**

Administrative Action: Owner/operator comments received on listing notification
Admnstrtv Category: Listing Action
Comments: Letter from James Meyer, BPA
Start Date: 08-AUG-97 Completion: 08-AUG-97
Staff Number: 304 FRT Action Priority: Not reported
Rank Value: 0 Agency: Dept of Env. Quality
Region: Head Quarters

Administrative Action: Review for final listing
Admnstrtv Category: Listing Action
Comments: Not reported
Start Date: 26-AUG-97 Completion: 31-DEC-99
Staff Number: 283 FRT Action Priority: Not reported
Rank Value: 0 Agency: Dept of Env. Quality
Region: Northwest

Administrative Action: Facility placed on Confirmed Release List
Admnstrtv Category: Listing Action
Comments: Not reported
Start Date: 10-DEC-97 Completion: 10-DEC-97
Staff Number: 304 FRT Action Priority: Not reported
Rank Value: 0 Agency: Dept of Env. Quality
Region: Head Quarters

ECSF Desc.: Not reported

OR CRL:
Facility ID: 1858
Media Affected: GROUNDWATER SOIL
Current Program: Site Response Section
Cleanup Status: Phase I - Remedial investigation and feasibility studies have not been initiated
Substances: DICHLOROETHANE,1,1-DICHLOROETHYLENE,1,1-PCBS TRICHLOROETHANE,1,1,1-

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)	Facility ID
MULTNOMAH COUNTY	S102456500	RMAC	S22;T1N;R3EWM		SWF/LF	105308/A
MULTNOMAH COUNTY	S102456464	BOB'S SANITARY SERVICE, INC. SLUDGE SITE	S28,29,32,T2NR1E		SWF/LF	106733/A
MULTNOMAH COUNTY	S102456498	PORTLAND COMPOST FACILITY	SEC 18,T1N,R2E		SWF/LF	105042/B
MULTNOMAH COUNTY	S102456509	SUNFLOWER RECYCLING	SEC03,T01S,R01E		SWF/LF	104196/A
MULTNOMAH COUNTY	S102456503	SONAS SOIL RESOURCE RECOVERY OF OREGON,	SEC26,T2N,R1W		SWF/LF	106986/A
MULTNOMAH COUNTY	S100453284	OBRIST TROUTDALE LANDFILL	SEC36,T01N,R03E		SWF/LF	104092/A
MULTNOMAH COUNTY	S102456507	ST. JOHNS LANDFILL	SEC36,T02N,R01W		SWF/LF	55966/A
PORTLAND	S102777924	SMURFIT NEWSPRINT - PORTLAND MILL	6637 SE 100TH AVE		SHWS, OR VCS	275
PORTLAND	S102777960	HOLMAN REDEVELOPMENT AREA - PARCEL 238	6154 NE 112TH AVE		SHWS, OR VCS	2099
PORTLAND	S102777926	THE STOR-ROOM MINI STORAGE	4534 SE 17TH AVE		SHWS, OR VCS	2049
PORTLAND	S102534714	ODOT - SURPLUS PROPERTY	NW 22ND AVE		SHWS	
PORTLAND	S102082390	ST. JOHNS - KEELER #2 RIGHT-OF-WAY	2N/1W/S35	97203	SHWS, OR CRL	1067
PORTLAND	S102534848	UNION STATION - PARCEL B SOUTH	BETWEEN UNION STATION / NAITO PARKW		SHWS, OR CRL, OR VCS	1885
PORTLAND	S102521429	SCHNITZER INVESTMENT - NORTH BURGARD	10400 N BURGARD WAY	97203	SHWS	
PORTLAND	S102959231	PACIFIC POWER AND LIGHT - DEKUM SUBSTATI	NE DEKUM		SHWS	
PORTLAND	S101839280	DIESEL RELEASE - N EDGEWATER ST	N EDGEWATER ST	97203	SHWS	
PORTLAND	S102777938	THROWAWAY BIT CORP.	624 NE EVERETT ST		SHWS, OR VCS	1068
PORTLAND	S102615851	JPI DEVELOPMENT	NE HOLMAN AND AIRPORT WAY		SHWS, OR VCS	2036
PORTLAND	S102777959	HOLMAN REDEVELOPMENT AREA - PARCEL 236	11212 NE HOLMAN ST		SHWS, OR VCS	2097
PORTLAND	S102777961	HOLMAN REDEVELOPMENT AREA - PARCEL 237	11300 NE HOLMAN ST		SHWS, OR VCS	2098
PORTLAND	S102959232	PACIFIC POWER AND LIGHT - GREGORY HEIGHT	NE KLICKITAT		SHWS	
PORTLAND	S101839629	BLUE LAGOON - MARINE TERMINAL 5	N LOMBARD ST	97203	SHWS	
PORTLAND	S102959233	PACIFIC POWER AND LIGHT - MALLORY SUBSTA	NE MALLORY		SHWS	
PORTLAND	S102615794	N MARINE DR EXTENSION - NORTH PORTLAND	N MARINE DR		SHWS, OR VCS	1170
PORTLAND	S102959234	PACIFIC POWER AND LIGHT - MASON SUBSTATI	N MASON ST		SHWS	
PORTLAND	S102615777	SW MOODY AVE. - RIGHT-OF-WAY	SW MOODY AVE		SHWS, OR VCS	1401
PORTLAND	S102777962	RASMUSSEN CO. (FORMER)	1710 SW MORRISON ST		SHWS, OR VCS	1799
PORTLAND	S102959236	PACIFIC POWER AND LIGHT - VILLA SUBSTATI	NE MULTNOMAH ST		SHWS	
PORTLAND	S102521391	UNION STATION AGRICULTURAL MARKETING CEN	NW NAITO PKWY		SHWS	
PORTLAND	S102777925	TAYLOR PROPERTY	NE		SHWS, OR VCS	2053
PORTLAND	S102879159	AINSWORTH SUBSTATION (FORMER)	NE		SHWS, OR VCS	1864
PORTLAND	S102959235	PACIFIC POWER AND LIGHT - PRESCOTT SUBST	NE PRESCOTT ST		SHWS	
PORTLAND	S102879170	VERLA KWIRAN PROPERTY	11200 NE SIMPSON ST		SHWS	
PORTLAND	S102079944	ST. JOHNS LANDFILL	STORM DRAIN TO BAIRD ST. OUTFALL		SWF/LF, OR SPILLS	116
PORTLAND	U000432205	CARGILL INC	TERMINAL 4 - FOOT OF N LOMBARD		UST, OR SPILLS	389
PORTLAND	S102777973	TIME OIL CO.- NORTHWEST TERMINAL	10350 N TIME OIL RD		SHWS	
PORTLAND	1000265612	ST JOHNS JUNCTION P L DELIVERY FAC	UPRR TERMINAL RD TERM 4	97203	FINDS, RCRIS-LQG	
PORTLAND	S102777950	PGE - ONISHI PROPERTY	1625 SW WARWICK AVE		SHWS, OR VCS	2078
PORTLAND	S102879173	WHITAKER BUILDING	12545 NE WHITAKER WAY		SHWS, OR VCS	2159

GEOCHECK VERSION 2.1 ADDENDUM
FEDERAL DATABASE WELL INFORMATION

Well Closest to Target Property (Northern Quadrant)

BASIC WELL DATA

Site ID:	453854122435701	Distance from TP:	1 - 2 Miles
Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1940	County:	Not Reported
Altitude:	30.00 ft.	State:	Not Reported
Well Depth:	138.00 ft.	Topographic Setting:	Valley flat
Depth to Water Table:	29.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	03011949	Prim. Use of Water:	Industrial

LITHOLOGIC DATA

Not Reported

WATER LEVEL VARIABILITY

Not Reported

GEOCHECK VERSION 2.1
FEDERAL DATABASE WELL INFORMATION

Well Closest to Target Property (Eastern Quadrant)

BASIC WELL DATA

Site ID:	453810122415302	Distance from TP:	>2 Miles
Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1949	County:	Not Reported
Altitude:	33.00 ft.	State:	Not Reported
Well Depth:	100.00 ft.	Topographic Setting:	Alluvial or marine terrace
Depth to Water Table:	30.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	11011973	Prim. Use of Water:	Industrial

LITHOLOGIC DATA

Not Reported

WATER LEVEL VARIABILITY

Not Reported

GEOCHECK VERSION 2.1
FEDERAL DATABASE WELL INFORMATION

Well Closest to Target Property (Southern Quadrant)

BASIC WELL DATA

Site ID:	453638122460301	Distance from TP:	1 - 2 Miles
Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1943	County:	Multnomah
Altitude:	30.00 ft.	State:	Oregon
Well Depth:	123.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	14.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	07221943	Prim. Use of Water:	Industrial

LITHOLOGIC DATA

Not Reported

WATER LEVEL VARIABILITY

Not Reported

GEOCHECK VERSION 2.1
FEDERAL DATABASE WELL INFORMATION

Well Closest to Target Property (Western Quadrant)

BASIC WELL DATA

Site ID:	453728122475701	Distance from TP:	>2 Miles
Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1959	County:	Multnomah
Altitude:	20.00 ft.	State:	Oregon
Well Depth:	195.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	16.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	10031959	Prim. Use of Water:	Industrial

LITHOLOGIC DATA

Not Reported

WATER LEVEL VARIABILITY

Not Reported

GEOCHECK VERSION 2.1
STATE DATABASE WELL INFORMATION

Water Well Information:

Well Within >2 Miles of Target Property (Northern Quadrant)

Well ID:	Not Reported		
Application Number:	G 9742	Certificate Number:	0
Permit Number:	G 9538	Point of Division Num.:	1
Map Name:	2.00N 1.00W	Section:	14
Source:	Not Reported	Use:	IR
List:	0	Station:	0
X Coordinate:	0	Y Coordinate:	0
Latitude:	0	Longitude:	0
Aquifer Type:	Not Reported	Data Source:	Not Reported
Water Use:	Not Reported	Altitude:	0
Well Type:	Not Reported	Depth:	0
Description:	Not Reported	County Code:	Not Reported
Water Level:	0		
Well:	0		

Well Within >2 Miles of Target Property (Eastern Quadrant)

Well ID:	Not Reported		
Application Number:	GR 2270	Certificate Number:	0
Permit Number:	GR 4027	Point of Division Num.:	1
Map Name:	2.00N 1.00E	Section:	32
Source:	Not Reported	Use:	IM
List:	0	Station:	0
X Coordinate:	0	Y Coordinate:	0
Latitude:	0	Longitude:	0
Aquifer Type:	Not Reported	Data Source:	Not Reported
Water Use:	Not Reported	Altitude:	0
Well Type:	Not Reported	Depth:	0
Description:	Not Reported	County Code:	Not Reported
Water Level:	0		
Well:	0		

Well Within 1/2 - 1 Mile of Target Property (Southern Quadrant)

Well ID:	Not Reported		
Application Number:	GR 4169	Certificate Number:	0
Permit Number:	GR 3729	Point of Division Num.:	1
Map Name:	2.00N 1.00W	Section:	36
Source:	Not Reported	Use:	DO
List:	0	Station:	0
X Coordinate:	0	Y Coordinate:	0
Latitude:	0	Longitude:	0
Aquifer Type:	Not Reported	Data Source:	Not Reported
Water Use:	Not Reported	Altitude:	0
Well Type:	Not Reported	Depth:	0
Description:	Not Reported	County Code:	Not Reported
Water Level:	0		
Well:	0		

GEOCHECK VERSION 2.1
STATE DATABASE WELL INFORMATION

Well Within 1 - 2 Miles of Target Property (Western Quadrant)

Well ID:	Not Reported		
Application Number:	G 2515	Certificate Number:	33131
Permit Number:	G 2333	Point of Division Num.:	1
Map Name:	2.00N 1.00W	Section:	26
Source:	Not Reported	Use:	IM
List:	0	Station:	0
X Coordinate:	0	Y Coordinate:	0
Latitude:	0	Longitude:	0
Aquifer Type:	Not Reported	Data Source:	Not Reported
Water Use:	Not Reported	Altitude:	0
Well Type:	Not Reported	Depth:	0
Description:	Not Reported	County Code:	Not Reported
Water Level:	0		
Well:	0		

GEOCHECK VERSION 2.1
PUBLIC WATER SUPPLY SYSTEM INFORMATION

Searched by Nearest PWS.

PWS SUMMARY:

PWS ID:	WA53BP150	PWS Status:	Active	Distance from TP:	>2 Miles
Date Initiated:	June / 1977	Date Deactivated:	Not Reported	Dir relative to TP:	East
PWS Name:	CHEHALIS SUBSTATION P O BOX 491 VANCOUVER, WA 98660				

Addressee / Facility: Not Reported

Facility Latitude: 45 37 54 Facility Longitude: 122 40 24

City Served: Not Reported

Treatment Class: Treated Population Served: Under 101 Persons

PWS currently has or has had major violation(s): No

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Elapsed ASTM days: Provides confirmation that this EDR report meets or exceeds the 90-day updating requirement of the ASTM standard.

FEDERAL ASTM RECORDS:

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System
Source: EPA/NTIS
Telephone: 703-413-0223
CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 06/15/98
Date Made Active at EDR: 07/20/98
Database Release Frequency: Quarterly
Date of Data Arrival at EDR: 07/08/98
Elapsed ASTM days: 12
Date of Last EDR Contact: 08/27/98

ERNS: Emergency Response Notification System
Source: EPA/NTIS
Telephone: 202-260-2342
Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 06/30/98
Date Made Active at EDR: 07/20/98
Database Release Frequency: Quarterly
Date of Data Arrival at EDR: 07/14/98
Elapsed ASTM days: 6
Date of Last EDR Contact: 07/10/98

NPL: National Priority List
Source: EPA
Telephone: 703-603-8852
National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC).

Date of Government Version: 03/06/98
Date Made Active at EDR: 07/09/98
Database Release Frequency: Semi-Annually
Date of Data Arrival at EDR: 06/09/98
Elapsed ASTM days: 30
Date of Last EDR Contact: 09/21/98

RCRIS: Resource Conservation and Recovery Information System
Source: EPA/NTIS
Telephone: 800-424-9346
Resource Conservation and Recovery Information System. RCRIS includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA).

Date of Government Version: 01/01/98
Date Made Active at EDR: 04/13/98
Database Release Frequency: Semi-Annually
Date of Data Arrival at EDR: 02/17/98
Elapsed ASTM days: 55
Date of Last EDR Contact: 08/14/98

CORRACTS: Corrective Action Report
Source: EPA
Telephone: 800-424-9346
CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/15/97
Date Made Active at EDR: 02/02/98
Database Release Frequency: Semi-Annually
Date of Data Arrival at EDR: 01/05/98
Elapsed ASTM days: 28
Date of Last EDR Contact: 08/14/98

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FEDERAL NON-ASTM RECORDS:

BRS: Biennial Reporting System
Source: EPA/NTIS
Telephone: 800-424-9346
The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/95
Database Release Frequency: Biennially
Date of Last EDR Contact: 09/22/98
Date of Next Scheduled EDR Contact: 12/21/98

CONSENT: Superfund (CERCLA) Consent Decrees
Source: EPA Regional Offices
Telephone: Varies
Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: Varies
Database Release Frequency: Varies
Date of Last EDR Contact: Varies
Date of Next Scheduled EDR Contact: N/A

FINDS: Facility Index System
Source: EPA/NTIS
Telephone: 703-908-2493
Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 04/01/97
Database Release Frequency: Quarterly
Date of Last EDR Contact: 08/19/98
Date of Next Scheduled EDR Contact: 09/21/98

HMIRS: Hazardous Materials Information Reporting System
Source: U.S. Department of Transportation
Telephone: 202-366-4526
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/31/97
Database Release Frequency: Annually
Date of Last EDR Contact: 07/22/98
Date of Next Scheduled EDR Contact: 10/26/98

MLTS: Material Licensing Tracking System
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 01/30/98
Database Release Frequency: Quarterly
Date of Last EDR Contact: 07/13/98
Date of Next Scheduled EDR Contact: 10/12/98

NPL LIENS: Federal Superfund Liens
Source: EPA
Telephone: 205-564-4267
Federal Superfund Liens. Under the authority granted the USEPA by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner receives notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/91
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 08/28/98
Date of Next Scheduled EDR Contact: 11/23/98

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

PADS: PCB Activity Database System
Source: EPA
Telephone: 202-260-3936
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 09/22/97
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 08/18/98
Date of Next Scheduled EDR Contact: 11/16/98

RAATS: RCRA Administrative Action Tracking System
Source: EPA
Telephone: 202-564-4104
RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/95
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 09/14/98
Date of Next Scheduled EDR Contact: 12/14/98

ROD: Records Of Decision
Source: NTIS
Telephone: 703-416-0223
Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 03/31/95
Database Release Frequency: Annually

Date of Last EDR Contact: 09/03/98
Date of Next Scheduled EDR Contact: 11/30/98

TRIS: Toxic Chemical Release Inventory System
Source: EPA/NTIS
Telephone: 202-260-1531
Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/95
Database Release Frequency: Annually

Date of Last EDR Contact: 06/11/98
Date of Next Scheduled EDR Contact: 09/28/98

TSCA: Toxic Substances Control Act
Source: EPA/NTIS
Telephone: 202-260-1444
Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site. USEPA has no current plan to update and/or re-issue this database.

Date of Government Version: 12/31/94
Database Release Frequency: Annually

Date of Last EDR Contact: 07/22/98
Date of Next Scheduled EDR Contact: 10/26/98

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STATE OF OREGON ASTM RECORDS:

ECSI: Environmental Cleanup Site Information System
Source: Department of Environmental Quality
Telephone: 503-229-6343
Sites that are or may be contaminated and may require cleanup.

Date of Government Version: 03/01/98
Date Made Active at EDR: 05/28/98
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 04/28/98
Elapsed ASTM days: 30
Date of Last EDR Contact: 09/21/98

LUST: LUST Database List
Source: Department of Environmental Quality
Telephone: 503-229-5790
Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 03/01/98
Date Made Active at EDR: 05/28/98
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 04/28/98
Elapsed ASTM days: 30
Date of Last EDR Contact: 08/11/98

LF: Solid Waste Facilities List
Source: Department of Environmental Quality
Telephone: 503-229-6299
Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 12/31/97
Date Made Active at EDR: 05/12/98
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 04/13/98
Elapsed ASTM days: 29
Date of Last EDR Contact: 07/27/98

UST: UST Database
Source: Department of Environmental Quality
Telephone: 503-229-5815
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 06/01/98
Date Made Active at EDR: 08/14/98
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 07/10/98
Elapsed ASTM days: 35
Date of Last EDR Contact: 09/21/98

STATE OF OREGON NON-ASTM RECORDS:

CRL: Confirmed Release List and Inventory
Source: Department of Environmental Quality
Telephone: 503-229-6170
All facilities with a confirmed release.

Date of Government Version: 04/23/98
Database Release Frequency: Quarterly

Date of Last EDR Contact: 08/13/98
Date of Next Scheduled EDR Contact: 11/09/98

HAZMAT: Hazmat/Incidents
Source: State Fire Marshal's Office
Telephone: 503-373-1540
Hazardous material incidents reported to the State Fire Marshal by emergency responders. The hazardous material may or may not have been released.

Date of Government Version: 12/31/97
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 08/31/98
Date of Next Scheduled EDR Contact: 11/30/98

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SPILLS: Spill Data
Source: Department of Environmental Quality
Telephone: 503-229-5731

Date of Government Version: 12/31/97
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 07/24/98
Date of Next Scheduled EDR Contact: 10/12/98

VCS: Voluntary Cleanup Program Sites
Source: DEQ
Telephone: 503-229-5256
Responsible parties have entered into an agreement with DEQ to voluntarily address contamination associated with their property.

Date of Government Version: 05/14/98
Database Release Frequency: Quarterly

Date of Last EDR Contact: 08/13/98
Date of Next Scheduled EDR Contact: 11/09/98

Historical and Other Database(s)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

Former Manufactured Gas (Coal Gas) Sites: The existence and location of Coal Gas sites is provided exclusively to EDR by Real Property Scan, Inc. ©Copyright 1993 Real Property Scan, Inc. For a technical description of the types of hazards which may be found at such sites, contact your EDR customer service representative.

Disclaimer Provided by Real Property Scan, Inc.

The information contained in this report has predominantly been obtained from publicly available sources produced by entities other than Real Property Scan. While reasonable steps have been taken to insure the accuracy of this report, Real Property Scan does not guarantee the accuracy of this report. Any liability on the part of Real Property Scan is strictly limited to a refund of the amount paid. No claim is made for the actual existence of toxins at any site. This report does not constitute a legal opinion.

DELISTED NPL: NPL Deletions
Source: EPA
Telephone: 703-603-8769
The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 03/06/98
Date Made Active at EDR: 07/09/98
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 06/09/98
Elapsed ASTM days: 30
Date of Last EDR Contact: 07/30/98

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

NFRAP: No Further Remedial Action Planned
Source: EPA/NTIS
Telephone: 703-413-0223
As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration. EPA has removed approximately 25,000 NFRAP sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to promote economic redevelopment of unproductive urban sites.

Date of Government Version: 06/15/98
Date Made Active at EDR: 07/20/98
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 07/08/98
Elapsed ASTM days: 12
Date of Last EDR Contact: 08/27/98

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-260-2805
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-260-2805
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SWDIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

Area Radon Information: The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones: Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

Oil/Gas Pipelines/Electrical Transmission Lines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines and electrical transmission lines.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

USGS Water Wells: In November 1971 the United States Geological Survey (USGS) implemented a national water resource information tracking system. This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on more than 900,000 wells, springs, and other sources of groundwater.

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1996 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in March 1997 from the U.S. Fish and Wildlife Service.

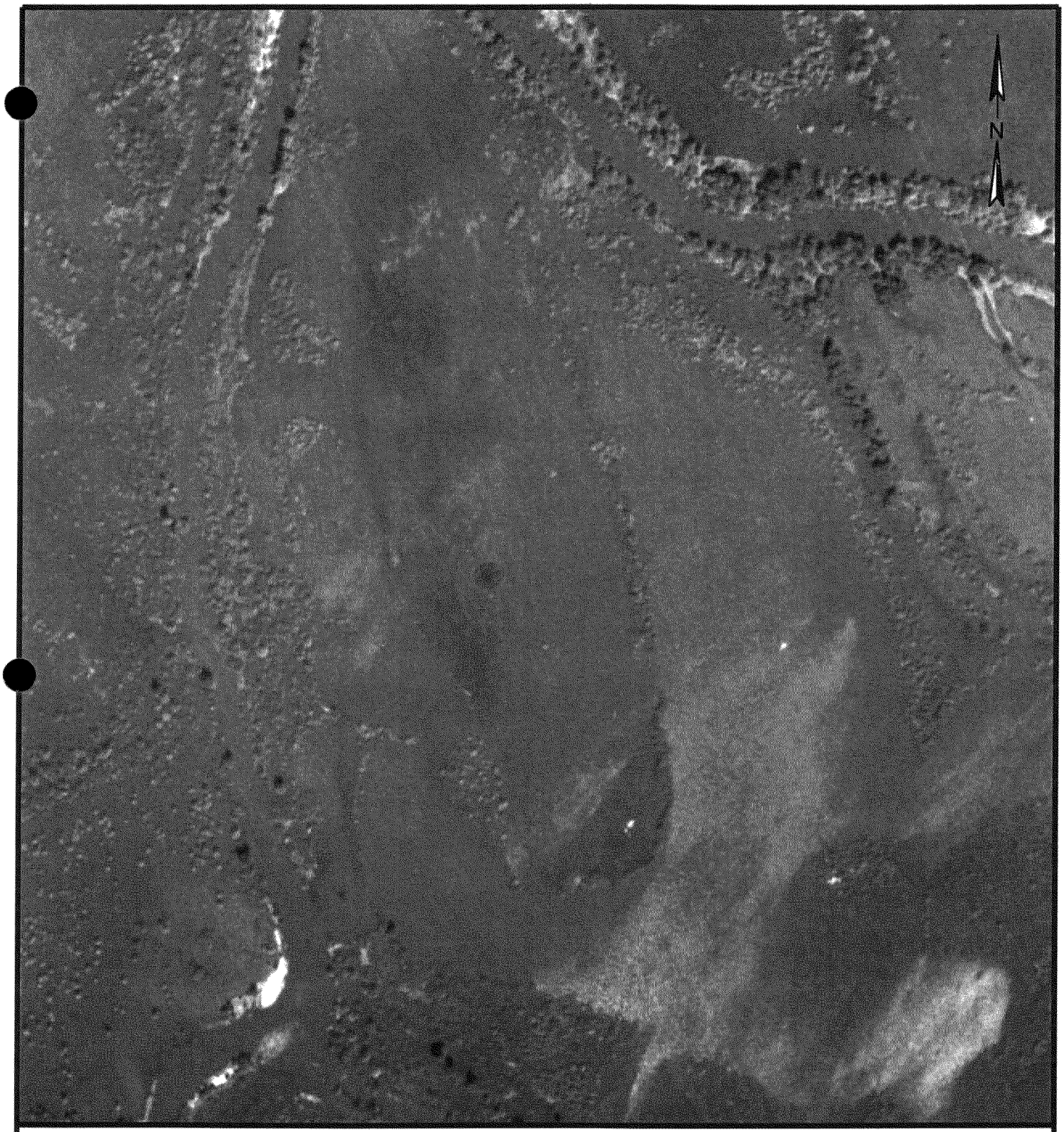
Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Water Dams: National Inventory of Dams
Source: Federal Emergency Management Agency
Telephone: 202-646-2801
National computer database of more than 74,000 dams maintained by the Federal Emergency Management Agency.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Oregon Digitized Wells
Source: Water Resources Department
Telephone: 503-378-8455

Appendix D.
Historical Aerial Photographs



Historical Aerial Photograph
Photo Date: 1936

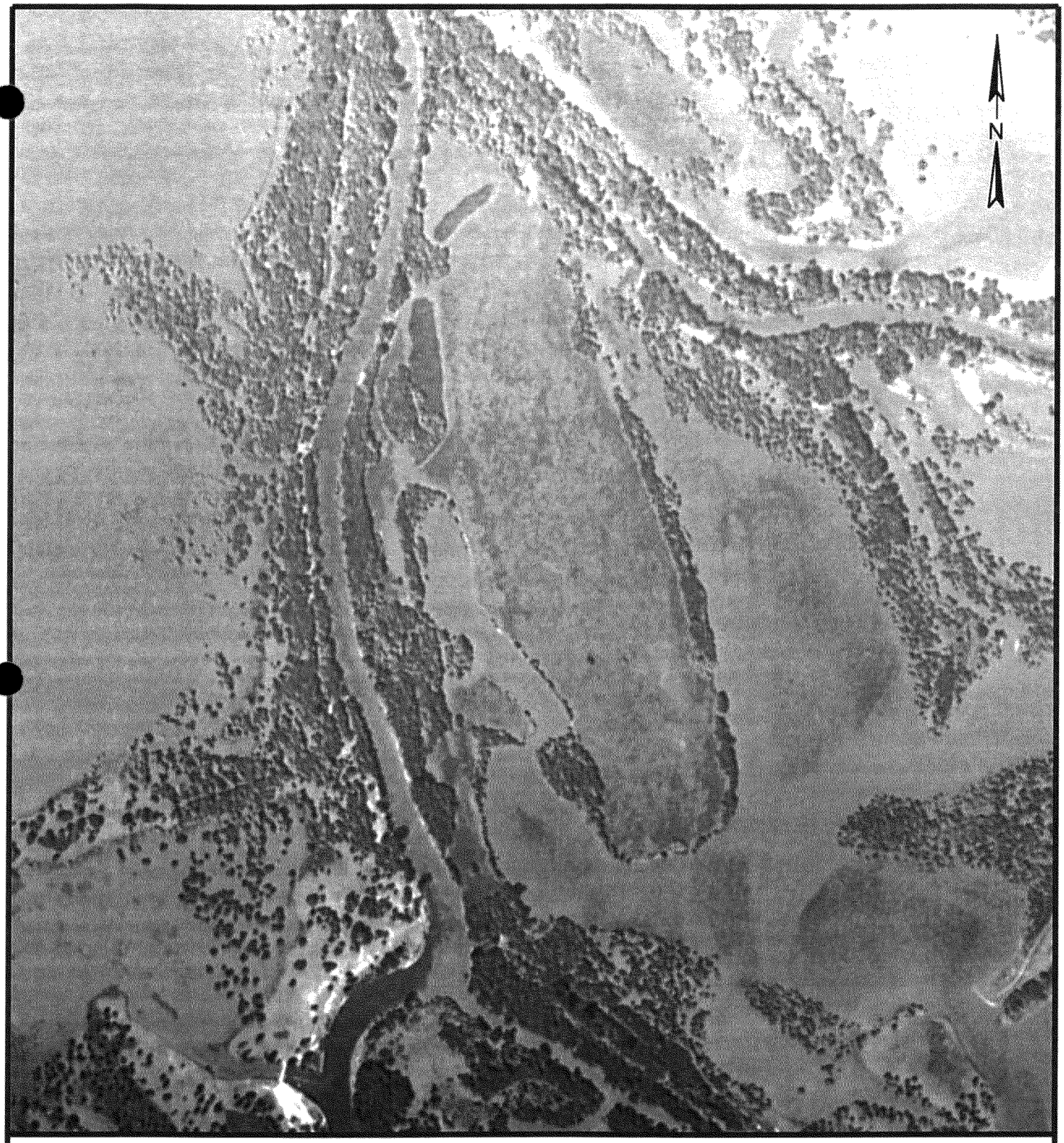
(SOURCE: UNIVERSITY OF OREGON PHOTO AND MAP LIBRARY)

PROJECT NUMBER: 8520030	Multnomah County Correctional Facility
DATE: 7 October 1998	
DWG: DWG NO: Historic photos.ppt	Portland, Oregon
PROJECT MANAGER: CRH	
REVISED:	CASCADE EARTH SCIENCES, LTD Oregon - Washington - Idaho

Historical Aerial Photograph
Photo Date: 1939

(SOURCE: UNIVERSITY OF OREGON
PHOTO AND MAP LIBRARY)

PROJECT NUMBER: 8520030	Multnomah County Correctional Facility
DATE: 7 October 1998	
DWG: DWG NO: Historic photos.ppt	Portland, Oregon
PROJECT MANAGER: CRH	
REVISED:	CASCADE EARTH SCIENCES, LTD Oregon - Washington - Idaho



Historical Aerial Photograph
Photo Date: 24 July 1948

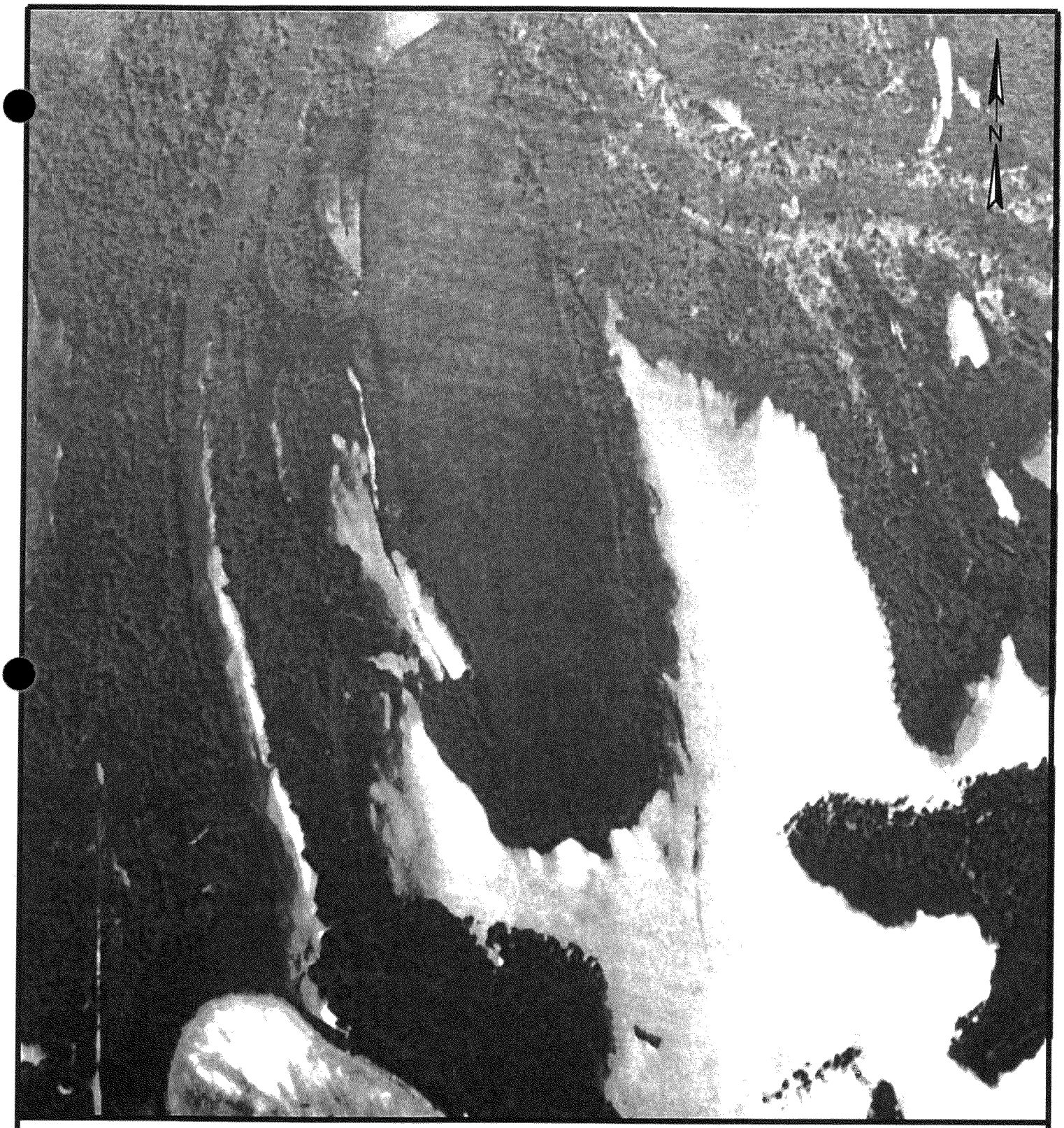
(SOURCE: UNIVERSITY OF OREGON
PHOTO AND MAP LIBRARY)

PROJECT NUMBER: 8520030	Multnomah County Correctional Facility
DATE: 7 October 1998	
DWG: DWG NO: Historic photos.ppt	Portland, Oregon
PROJECT MANAGER: CRH	
REVISED:	CASCADE EARTH SCIENCES, LTD Oregon - Washington - Idaho

Historical Aerial Photograph
Photo Date: 6 August 1955

(SOURCE: EDR)

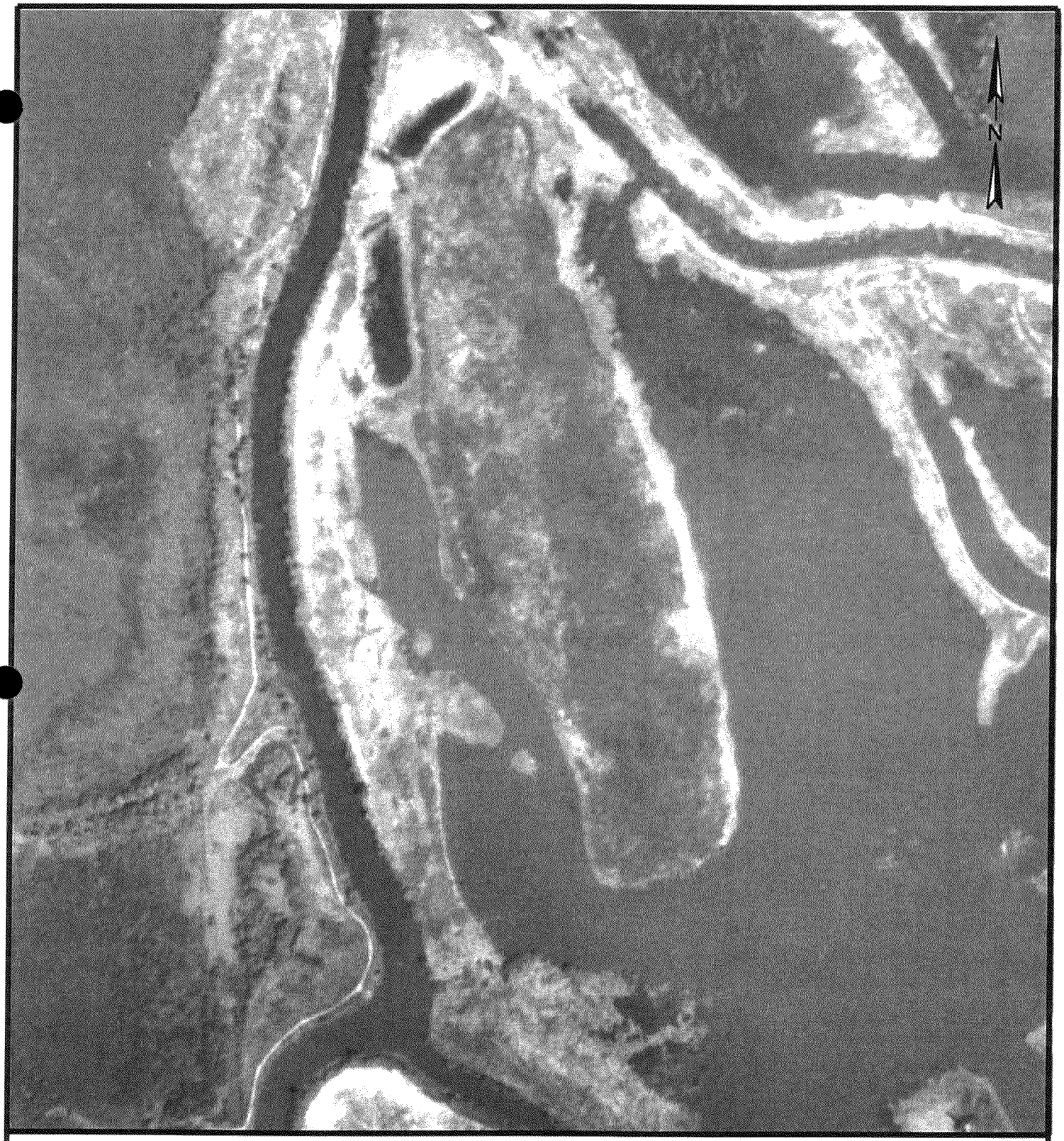
PROJECT NUMBER: 8520030	Multnomah County Correctional Facility
DATE: 7 October 1998	
DWG: DWG NO: Historic photos.ppt	Portland, Oregon
PROJECT MANAGER: CRH	
REVISED:	CASCADE EARTH SCIENCES, LTD Oregon - Washington - Idaho



Historical Aerial Photograph
Photo Date: 14 June 1963

(SOURCE: UNIVERSITY OF OREGON PHOTO AND MAP LIBRARY)

PROJECT NUMBER: 9520030	Multnomah County Correctional Facility
DATE: 7 October 1998	
DWG: DWG NO: Historic photos.ppt	Portland, Oregon
PROJECT MANAGER: CRH	
REVISED:	CASCADE EARTH SCIENCES, LTD Oregon - Washington - Idaho



Historical Aerial Photograph
Photo Date: 25 June 1970

(SOURCE: UNIVERSITY OF OREGON
PHOTO AND MAP LIBRARY)

PROJECT NUMBER: 8520030	Multnomah County Correctional Facility
DATE: 7 October 1998	
DWG: DWG NO: Historic photos.ppt	Portland, Oregon
PROJECT MANAGER: CRH	
REVISED:	CASCADE EARTH SCIENCES, LTD Oregon - Washington - Idaho

Historical Aerial Photograph
Photo Date: 22 April 1982

(SOURCE: UNIVERSITY OF OREGON PHOTO AND MAP LIBRARY)

PROJECT NUMBER: 8520030	Multnomah County Correctional Facility
DATE: 7 October 1998	
DWG: DWG NO: Historic photos.ppt	Portland, Oregon
PROJECT MANAGER: CRH	
REVISED:	CASCADE EARTH SCIENCES, LTD Oregon - Washington - Idaho

Historical Aerial Photograph
Photo Date: 4 February 1984

(SOURCE: EDR)

PROJECT NUMBER: 8520030	Multnomah County Correctional Facility
DATE: 7 October 1998	
DWG: DWG NO: Historic photos.ppt	Portland, Oregon
PROJECT MANAGER: CRH	
REVISED:	CASCADE EARTH SCIENCES, LTD Oregon - Washington - Idaho

Historical Aerial Photograph
Photo Date: 23 June 1986

(SOURCE: UNIVERSITY OF OREGON
PHOTO AND MAP LIBRARY)

PROJECT NUMBER: 8520030	Multnomah County Correctional Facility
DATE: 7 October 1996	
DWG: DWG NO: Historic photos.ppt	Portland, Oregon
PROJECT MANAGER: CRH	
REVISED:	CASCADE EARTH SCIENCES, LTD Oregon - Washington - Idaho

Historical Aerial Photograph
Photo Date: 12 August 1990

(SOURCE: UNIVERSITY OF OREGON
PHOTO AND MAP LIBRARY)

PROJECT NUMBER: 6520030	Multnomah County Correctional Facility
DATE: 7 October 1998	
DWG: DWG NO: Historic photos.ppt	Portland, Oregon
PROJECT MANAGER: CRH	
REVISED:	CASCADE EARTH SCIENCES, LTD Oregon - Washington - Idaho

Historical Aerial Photograph
Photo Date: 27 March 1994

(SOURCE: UNIVERSITY OF OREGON
PHOTO AND MAP LIBRARY)

PROJECT NUMBER: 8520030	Multnomah County Correctional Facility
DATE: 7 October 1998	
DWG: DWG NO: Historic photos ppt	Portland, Oregon
PROJECT MANAGER: CRH	
REVISED:	CASCADE EARTH SCIENCES, LTD Oregon - Washington - Idaho

Appendix E.
OAL Analytical Report (Phase I ESA)

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

CASCADE EARTH SCIENCES, Ltd.

Shipped From:
( ) Albany 7150 Supra Dr., S.W., OR 97321 (541) 926-7737
( ) Boise 963 S. Orchard, Ste. L, ID 83705 (208) 388-1030
( ) LaGrande 107 Island Ave., OR 97850 (541) 963-7758
( ) Medford 225 S. Holly St., OR 97501 (541) 779-2280
( ) Pocatello P.O. Box 2379, ID 83206 (208) 237-7041
(✓) Portland 6130 N.E. 78th Ct., Suite C2., OR 97218 (503) 255-2205
( ) Spokane P.O. Box 14725, WA 99214 (509) 921-0290

Project: Multnomah County Corrections Facility PN: 8520030
Turn Around: Normal Sampling Date:
Send Report To: Adolfson/CES Location: Portland
QA/QC Requirements: Standard
Provide Preliminary Results: ✓ Verbal / Fax (circle) Fax Number: 255-2744
Laboratory Name: Oregon Analytical Laboratory
Address: 14855 SW Old Scholls Ferry Rd., Beaverton, OR.
Contact: Kanji Morrow Phone # 590-5300

	SAMPLE I.D.	DATE	TIME	LAB I.D.	PRESERV-ATIVE	SAMPLE MATRIX	Volatile Organic GC/MS 624/8240	Semi-Volatile Organic GC/MS 625/8270	Halogenated Volatiles 601/8010	Aromatic Volatiles 602/8020 BTEX	Total Petroleum Hydrocarbons (circle) HCID G D	Total Petroleum Hydrocarbons EPA 418.1 418.1 MOD (circle)	Total Organic Carbon (TOC) 415/9060	Polyaromatic Hydrocarbons (PAH) 8310 8100 8270 (circle)	PCBs 8081		TCLP Metals As,Ba,Cd,Cr,Pb,Hg,Se,Ag	Metals (Total) or dissolved List Priority 13 Metals	Extractable Bases (circle) Ca,Na,Mg,K	Ph,Cond,Cl,SO_4,PO_4,F,Br (circle) NO_2,NO_3	NH_3N,COD,Total-P,TKN (circle)				NUMBER OF CONTAINERS
1	B3-10	10/8	1320	L8362-1	Ø	SOIL	✓				✓				✓			✓							3
2.	B2-10	10/9	850	-2	Ø	SOIL	✓				✓				✓			✓							3
3																									
4.																									
5																									
6.																									
7.																									
8.																									
9.																									
10																									
11.																									
12.																									

ORGANIC ANALYSIS | INORGANIC ANALYSIS | OTHER

COMMENTS: Final Report & billing to Adolfson Associates, Inc. - Attention: Wallace Leake.

Copy Report to Chris Hyatt - CES Portland

INVOICE INFORMATION
P.O. No.:
Bill To: ADOLFSON ASSOCIATES
Attn: Wallace Leake

SHIPMENT INFORMATION
Shipped via: Courier
Seals Intact: N/A
Temp When Rcd.: 8 °C
Samples Collected By:
Sample Receipt: 4-8oz JARS + 2-4oz JARS
Condition: GOOD
Seal No.: N/A

Relinquished By:	Company:	Date/Time:	Received By:	Company:
[signature]	CES	10-9-98 @ 1215	[signature]	OAL
Relinquished By:	Company:	Date/Time:	Received By:	Company:
Relinquished By:	Company:	Date/Time: 10/9/98 1510	Received By: [signature]	Company: OAL

Laboratory: Please Return Original (White) with Results

White - CES Yellow - Laboratory Pink - Sender

OAL

L8362

Client: *Adolfson Associates, Inc.*
Contact: *Wallace Leake*

Project: *8520030*
Multnomah County Corrections Facility

Polychlorinated Biphenyl (PCB)
by EPA 3540/8081

Sample ID	*Matrix*					*Lab Number*
Analyte		Result	Reporting Limit	Units (ppm)	Comment	

B3-10 — *Soil* — Sampled: *10/08/98* Extracted: *10/12/98* Analyzed: *10/14/98 by WB* — *L8362-1*

Analyte	Result	Reporting Limit	Units
Total PCB in Soil	0.08	0.05	mg/kg

Surrogate	Recovery	Limit
Tetrachloro-m-xylene	100.%	50 - 150
Decachlorobiphenyl	104.%	50 - 150

B2-10 — *Soil* — Sampled: *10/08/98* Extracted: *10/12/98* Analyzed: *10/14/98 by WB* — *L8362-2*

Analyte	Result	Reporting Limit	Units
Total PCB in Soil	ND	0.05	mg/kg

Surrogate	Recovery	Limit
Tetrachloro-m-xylene	99.%	50 - 150
Decachlorobiphenyl	105.%	50 - 150

Summary: DATA VALID? Yes No

Analytical Laboratory Data Validation Check Sheet

Job Name: Multnomah Co-Ph. I Job Number: 8520030

Date of Review: 11/12/98 Lab Name: OAL Lab Batch Id #: L8362

Chain of Custody

1.) Correct containers used ? Yes No N/A

2.) Correct preservative (if any) used ? Yes No N/A

3.) Signature blocks complete and ending with lab ? Yes No N/A

4.) Analyses requested matches analyses reported ? Yes No N/A

5.) Sample identification number matches with lab report ? Yes No N/A

6.) Trip Blank Submitted ? Yes No N/A

7.) Field Blank Submitted ? Yes No N/A

Timing

8.) Samples extracted within holding time ? Yes No N/A

9.) Analysis performed within holding time ? Yes No N/A

Quality Assurance/Quality Control

10.) Lab Blank Completed ? Yes No N/A

11.) Lab, Field, or Trip Blank(s) reports contaminants ? Yes No N/A

If yes, indicate blank type, chemical(s) and concentration(s):

12.) Are Reporting Limits raised ? (If yes, explain @ "Comments") Yes No N/A

Accuracy

13.) Surrogate Recovery within lab limits (Default is 70-130 %) Yes No N/A

If no, list exceptions:

Precision

14.) Matrix Spike (MS) Recovery within 70-130 % ? Yes No N/A

15.) Matrix Spike Duplicate (MSD) within 70-130 % ? Yes No N/A

16.) Rel. % Diff. (RPD) within lab limits (Default 25%) ? Yes No N/A

17.) RPD calculation for Field Duplicates within limits (Default 75%) ? Yes No N/A

Comments: Sample B3-10 re-extracted for PCBs. PCBs = 0.07 mg/kg. Compares favorably w/ initial result of 0.08 mg/kg

Initial Review By: [signature] Final Review By: [signature]

Oregon Analytical Laboratory
14855 S.W. Scholls Ferry Road
Beaverton, Oregon 97007
(503) 590-5300
FAX (503) 590-1404

Invoice
Partials
Return to PB
OAL#8362

FACSIMILE TRANSMISSION COVER SHEET

Date: 10/27/98	FAX #: 255-2744
To: CHRIS HYATT	
Company: CES	

From: PATTY BOYDEN - CLIENT MANAGER	Phone: (503) 590-1338
Number of Pages (including cover sheet): 2	

Remarks:

RE: PCB results for B3-10 (OAL#L8362-1)

Chris,
As per your request, the chemist re-extracted B3-10 for PCB. Result compares favorably with initial result of 0.08 mg/kg. Re-extracted sample = 0.07 mg/kg PCB. Final report will include initial result. If you have any questions, feel free to contact me at 590-1338.

Thanks,
Patty

\OALADM\FORMS\FAX\FAX-COV.SHT

OAL

L8362

October 23, 1998

Chris Hyatt
Cascade Earth Sciences
6130 NE 78th Court
Suite C2
Portland, OR 97218

Phone: (503) 255-2205
FAX: (503) 255-2744

Re: Laboratory Sample Analysis

Project: Adolfson Associates, Inc.
8520030
Multnomah County Corrections Facility

Project Manager: Wallace Leake

Dear Chris Hyatt:

On Friday, October 9, 1998, OAL received two (2) soil samples for analysis. The samples were analyzed utilizing EPA, ASTM, or equivalent methodology.

Should you have any questions concerning the results in this report, please contact us at (503) 590-5300. Refer to OAL login number L8362.

Sincerely,

Patty Boyden
Project Manager

Suzanne LeMay
QA/QC Officer

cc: Chris Hyatt, Wallace Leake

OAL

L8362

Sample Summary

Sample ID	Lab #	Description	Sampled	Received
B3-10	L8362-1	soil	10/08/98 13:20	10/09/98
B2-10	L8362-2	soil	10/08/98 08:50	10/09/98

Definition of Terms

D1 Reported value is based on a dilution due to matrix interference.

ND Analytical result was below the reporting limit.

Analysts

Initials	Analyst	Title
DM	Dan Miller	Organics Chemist
GCK	Bill Kernion	Chemist
JD	Jason Davendonis	Technician
JJR	Joseph Race	Analyst
WB	Wayne Boyle	Analyst

Method Summary

Analysis	Method
8240 Volatile Organic Compounds (VOC)	EPA 8260
Antimony	EPA 200.7/6010
Arsenic	EPA 200.9
Beryllium	EPA 200.7/6010
Cadmium	EPA 200.7/6010
Chromium	EPA 200.7/6010
Copper	EPA 200.7/6010
Hydrocarbon Identification (HCID)	NWTPH-HCID
Lead	EPA 200.7/6010
Mercury	EPA 245.5/7471A
Nickel	EPA 200.7/6010
Polychlorinated Biphenyl (PCB)	EPA 3540/8081
Selenium	EPA 200.9
Silver	EPA 200.7/6010
Thallium	EPA 200.9
Zinc	EPA 200.7/6010

OREGON ANALYTICAL LABORATORY
A Division of Portland General Electric
14855 S.W. Scholls Ferry Road, Beaverton, OR 97007
Phone 503-590-5300 • Fax 503-590-1404
www.oalab.com/oal • Toll-Free 1-800-644-0967

OAL

L8362

Client: *Adolfson Associates, Inc.*
Contact: *Wallace Leake*

Project: *8520030*
Multnomah County Corrections Facility

Total Metals

Sample ID	*Matrix*						*Lab Number*
Analyte	Result	Reporting Limit	Units (ppm)	Date Analyzed	Method	Comment	Analyst
				Sampled: *10/08/98*			
				Hot Plate Digestion EPA 200.2/3050A: *10/15/98*			
B3-10	*Soil*			Mercury Digestion: *10/16/98*			*L8362-1*
Antimony	ND	2.0	mg/kg	10/15/98	EPA 200.7/6010		GCK
Arsenic	ND	2.0	mg/kg	10/21/98	EPA 200.9	D1	GCK
Beryllium	0.16	0.10	mg/kg	10/15/98	EPA 200.7/6010		GCK
Cadmium	ND	0.20	mg/kg	10/15/98	EPA 200.7/6010		GCK
Chromium	10.0	0.50	mg/kg	10/15/98	EPA 200.7/6010		GCK
Copper	6.98	0.20	mg/kg	10/15/98	EPA 200.7/6010		GCK
Lead	4.9	2.5	mg/kg	10/15/98	EPA 200.7/6010		GCK
Mercury	ND	0.10	mg/kg	10/19/98	EPA 245.5/7471A		JD
Nickel	9.6	1.0	mg/kg	10/15/98	EPA 200.7/6010		GCK
Selenium	ND	2.0	mg/kg	10/21/98	EPA 200.9	D1	GCK
Silver	ND	0.30	mg/kg	10/15/98	EPA 200.7/6010		GCK
Thallium	ND	0.50	mg/kg	10/22/98	EPA 200.9	D1	GCK
Zinc	49.3	1.0	mg/kg	10/15/98	EPA 200.7/6010		GCK

OREGON ANALYTICAL LABORATORY
A Division of Portland General Electric
14855 S.W. Scholls Ferry Road, Beaverton, OR 97007
Phone 503-590-5300 • Fax 503-590-1404

OAL

L8362

Client: *Adolfson Associates, Inc.*
Contact: *Wallace Leake*

Project: *8520030*
Multnomah County Corrections Facility

Total Metals

Sample ID	*Matrix*							*Lab Number*
Analyte		Result	Reporting Limit	Units (ppm)	Date Analyzed	Method	Comment	Analyst
					Sampled: *10/08/98*			
					Hot Plate Digestion EPA 200.2/3050A: *10/15/98*			
B2-10	*Soil*				Mercury Digestion: *10/16/98*			*L8362-2*
Antimony		ND	2.0	mg/kg	10/15/98	EPA 200.7/6010		GCK
Arsenic		ND	2.0	mg/kg	10/21/98	EPA 200.9	D1	GCK
Beryllium		0.14	0.10	mg/kg	10/15/98	EPA 200.7/6010		GCK
Cadmium		ND	0.20	mg/kg	10/15/98	EPA 200.7/6010		GCK
Chromium		11.3	0.50	mg/kg	10/15/98	EPA 200.7/6010		GCK
Copper		7.10	0.20	mg/kg	10/15/98	EPA 200.7/6010		GCK
Lead		3.9	2.5	mg/kg	10/15/98	EPA 200.7/6010		GCK
Mercury		ND	0.10	mg/kg	10/19/98	EPA 245.5/7471A		JD
Nickel		9.9	1.0	mg/kg	10/15/98	EPA 200.7/6010		GCK
Selenium		ND	2.0	mg/kg	10/21/98	EPA 200.9	D1	GCK
Silver		ND	0.30	mg/kg	10/15/98	EPA 200.7/6010		GCK
Thallium		ND	0.50	mg/kg	10/22/98	EPA 200.9	D1	GCK
Zinc		39.2	1.0	mg/kg	10/15/98	EPA 200.7/6010		GCK

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www.oalab.com/oal • Toll-Free 1-800-644-0967

OAL

L8362

Client: *Adolfson Associates, Inc.*
Contact: *Wallace Leake*

Project: *8520030*
Multnomah County Corrections Facility

8240 Volatile Organic Compounds (VOC)
by EPA 8260

Sample ID	*Matrix*					*Lab Number*
Analyte		Result	Reporting Limit	Units	Comment	
B3-10	*Soil*				Sampled: *10/08/98* Extracted: *10/15/98* Analyzed: *10/20/98 by DM*	*L8362-1*
See Attached Data Sheet						
B2-10	*Soil*				Sampled: *10/08/98* Extracted: *10/15/98* Analyzed: *10/20/98 by DM*	*L8362-2*
See Attached Data Sheet						

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OAL

L8362

Client: Adolfson Associates, Inc.
Contact: Wallace Leake

Project: 8520030

8240 Volatiles
by EPA Method 8260

Sample ID	Analyte	Result	Blank Result	Reporting Limit	Units	Comment	Lab Number
B3-10 Soil			MB1020M			Sampled : 10/08/98 Analyzed : 10/20/98	L8362-1
CAS #							
75-71-8	Dichlorodifluoromethane	nd	nd	20	ug/Kg		
74-87-3	Chloromethane	nd	nd	20	ug/Kg		
75-01-4	Vinyl chloride	nd	nd	20	ug/Kg		
74-83-9	Bromomethane	nd	nd	20	ug/Kg		
75-00-3	Chloroethane	nd	nd	20	ug/Kg		
75-69-4	Trichlorofluoromethane	nd	nd	10	ug/Kg		
67-64-1	Acetone	nd	nd	200	ug/Kg		
75-35-4	1,1-Dichloroethene	nd	nd	10	ug/Kg		
75-09-2	Methylene chloride	nd	nd	20	ug/Kg		
156-60-5	trans-1,2-Dichloroethene	nd	nd	10	ug/Kg		
75-34-3	1,1-Dichloroethane	nd	nd	10	ug/Kg		
78-93-3	2-Butanone	nd	nd	200	ug/Kg		
156-59-4	cis-1,2-Dichloroethene	nd	nd	10	ug/Kg		
67-66-3	Chloroform	nd	nd	10	ug/Kg		
71-55-6	1,1,1-Trichloroethane	nd	nd	10	ug/Kg		
56-23-5	Carbon tetrachloride	nd	nd	10	ug/Kg		
71-43-2	Benzene	nd	nd	10	ug/Kg		
107-06-2	1,2-Dichloroethane	nd	nd	10	ug/Kg		
79-01-6	Trichloroethene	nd	nd	10	ug/Kg		
78-87-5	1,2-Dichloropropane	nd	nd	10	ug/Kg		
75-27-4	Bromodichloromethane	nd	nd	10	ug/Kg		
110-75-8	2-Chloroethyl vinyl ether	nd	nd	10	ug/Kg		
10061-01-5	cis-1,3-Dichloropropene	nd	nd	10	ug/Kg		

none detected = nd

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OAL

L8362

Client: *Adolfson Associates, Inc.*
Contact: *Wallace Leake*

Project: *8520030*
Multnomah County Corrections Facility

Hydrocarbon Identification (HCID)
by NWTPH-HCID

Sample ID	*Matrix*					*Lab Number*
Analyte		Result	Reporting Limit	Units (ppm)	Comment	

Sampled: *10/08/98*
Extracted: *10/12/98*
Analyzed: *10/12/98 by JJR*

B3-10 *Soil* *L8362-1*

Gasoline Region	ND	20.	mg/kg
Diesel Region	ND	50.	mg/kg
Oil Region	ND	100	mg/kg

Surrogate	Recovery	Limit
2-Fluorobiphenyl	101.%	50 - 150
O-terphenyl	103.%	50 - 150

Sampled: *10/08/98*
Extracted: *10/12/98*
Analyzed: *10/12/98 by JJR*

B2-10 *Soil* *L8362-2*

Gasoline Region	ND	20.	mg/kg
Diesel Region	ND	50.	mg/kg
Oil Region	ND	100	mg/kg

Surrogate	Recovery	Limit
2-Fluorobiphenyl	100.%	50 - 150
O-terphenyl	103.%	50 - 150

Gasoline Range: toluene to dodecane(C12)
Diesel Range: dodecane(C12) to tetracosane(C24)
Oil Range: tetracosane(C24) to tetratetracontane(C44)

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OAL

L8362

Client: Adolfson Associates, Inc.
Contact: Wallace Leake

Project: 8520030

8240 Volatiles
by EPA Method 8260

Sample ID	Analyte	Result	Blank Result	Reporting Limit	Units	Comment	Lab Number
B2-10 Soil			MB1015H			Sampled : 10/09/98 Analyzed : 10/20/98	L8362-2
CAS #							
108-10-1	4-Methyl-2-pentanone	nd	nd	100	ug/Kg		
108-88-3	Toluene	nd	nd	10	ug/Kg		
591-78-6	2-Hexanone	nd	nd	100	ug/Kg		
10061-02-6	trans-1,3-Dichloropropene	nd	nd	10	ug/Kg		
79-00-5	1,1,2-Trichloroethane	nd	nd	10	ug/Kg		
127-18-4	Tetrachloroethene	nd	nd	10	ug/Kg		
124-48-1	Dibromochloromethane	nd	nd	10	ug/Kg		
106-93-4	1,2-Dibromoethane	nd	nd	10	ug/Kg		
108-90-7	Chlorobenzene	nd	nd	10	ug/Kg		
100-41-4	Ethylbenzene	nd	nd	10	ug/Kg		
100-42-5	Styrene	nd	nd	10	ug/Kg		
75-25-2	Bromoform	nd	nd	10	ug/Kg		
79-34-5	1,1,2,2-Tetrachloroethane	nd	nd	10	ug/Kg		
541-73-1	1,3-Dichlorobenzene	nd	nd	10	ug/Kg		
106-46-7	1,4-Dichlorobenzene	nd	nd	10	ug/Kg		
95-50-1	1,2-Dichlorobenzene	nd	nd	10	ug/Kg		
	Total Xylenes	nd	nd	10	ug/Kg		

Surrogates	Recovery L8362-2	Recovery MB1015H
1,2-Dichloroethane-d4	100%	109%
Toluene-d8	94%	89%
4-Bromofluorobenzene	98%	95%

none detected = nd

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OAL

L8362

Client: Adolfson Associates, Inc.
Contact: Wallace Leake

Project: 8520030

8240 Volatiles
by EPA Method 8260

Sample ID	Analyte	Result	Blank Result	Reporting Limit	Units	Comment	Lab Number
B3-10 Soil			MB1020M			Sampled : 10/08/98 Analyzed : 10/20/98	L8362-1
CAS #							
108-10-1	4-Methyl-2-pentanone	nd	nd	100	ug/Kg		
108-88-3	Toluene	nd	nd	10	ug/Kg		
591-78-6	2-Hexanone	nd	nd	100	ug/Kg		
10061-02-6	trans-1,3-Dichloropropene	nd	nd	10	ug/Kg		
79-00-5	1,1,2-Trichloroethane	nd	nd	10	ug/Kg		
127-18-4	Tetrachloroethene	nd	nd	10	ug/Kg		
124-48-1	Dibromochloromethane	nd	nd	10	ug/Kg		
106-93-4	1,2-Dibromoethane	nd	nd	10	ug/Kg		
108-90-7	Chlorobenzene	nd	nd	10	ug/Kg		
100-41-4	Ethylbenzene	nd	nd	10	ug/Kg		
100-42-5	Styrene	nd	nd	10	ug/Kg		
75-25-2	Bromoform	nd	nd	10	ug/Kg		
79-34-5	1,1,2,2-Tetrachloroethane	nd	nd	10	ug/Kg		
541-73-1	1,3-Dichlorobenzene	nd	nd	10	ug/Kg		
106-46-7	1,4-Dichlorobenzene	nd	nd	10	ug/Kg		
95-50-1	1,2-Dichlorobenzene	nd	nd	10	ug/Kg		
	Total Xylenes	nd	nd	10	ug/Kg		

Surrogates	Recovery L8362-1	Recovery MB1020M
1,2-Dichloroethane-d4	97%	103%
Toluene-d8	88%	93%
4-Bromofluorobenzene	88%	95%

none detected = nd

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L8362

Client: Adolfson Associates, Inc.
Contact: Wallace Leake

Project: 8520030

8240 Volatiles
by EPA Method 8260

Sample ID	Analyte	Result	Blank Result	Reporting Limit	Units	Comment	Lab Number
B2-10 Soil			MB1015H			Sampled : 10/09/98 Analyzed : 10/20/98	L8362-2
CAS #							
75-71-8	Dichlorodifluoromethane	nd	nd	20	ug/Kg		
74-87-3	Chloromethane	nd	nd	20	ug/Kg		
75-01-4	Vinyl chloride	nd	nd	20	ug/Kg		
74-83-9	Bromomethane	nd	nd	20	ug/Kg		
75-00-3	Chloroethane	nd	nd	20	ug/Kg		
75-69-4	Trichlorofluoromethane	nd	nd	10	ug/Kg		
67-64-1	Acetone	nd	nd	200	ug/Kg		
75-35-4	1,1-Dichloroethene	nd	nd	10	ug/Kg		
75-09-2	Methylene chloride	nd	nd	20	ug/Kg		
156-60-5	trans-1,2-Dichloroethene	nd	nd	10	ug/Kg		
75-34-3	1,1-Dichloroethane	nd	nd	10	ug/Kg		
78-93-3	2-Butanone	nd	nd	200	ug/Kg		
156-59-4	cis-1,2-Dichloroethene	nd	nd	10	ug/Kg		
67-66-3	Chloroform	nd	nd	10	ug/Kg		
71-55-6	1,1,1-Trichloroethane	nd	nd	10	ug/Kg		
56-23-5	Carbon tetrachloride	nd	nd	10	ug/Kg		
71-43-2	Benzene	nd	nd	10	ug/Kg		
107-06-2	1,2-Dichloroethane	nd	nd	10	ug/Kg		
79-01-6	Trichloroethene	nd	nd	10	ug/Kg		
78-87-5	1,2-Dichloropropane	nd	nd	10	ug/Kg		
75-27-4	Bromodichloromethane	nd	nd	10	ug/Kg		
110-75-8	2-Chloroethyl vinyl ether	nd	nd	10	ug/Kg		
10061-01-5	cis-1,3-Dichloropropene	nd	nd	10	ug/Kg		

none detected = nd

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Summary: DATA VALID? Yes No

Analytical Laboratory Data Validation Check Sheet

Job Name: Multnomah Co - Ph I Job Number: 8520030

Date of Review: 11/12/98 Lab Name: OAL Lab Batch Id #: L8632

Chain of Custody

1.) Correct containers used ?	Yes	No	N/A
2.) Correct preservative (if any) used ?	Yes	No	N/A
3.) Signature blocks complete and ending with lab ?	Yes	No	N/A
4.) Analyses requested matches analyses reported ?	Yes	No	N/A
5.) Sample identification number matches with lab report ?	Yes	No	N/A
6.) Trip Blank Submitted ?	Yes	No	N/A
7.) Field Blank Submitted ?	Yes	No	N/A

Timing

8.) Samples extracted within holding time ?	Yes	No	N/A
9.) Analysis performed within holding time ?	Yes	No	N/A

Quality Assurance/Quality Control

10.) Lab Blank Completed ?	Yes	No	N/A
11.) Lab, Field, or Trip Blank(s) reports contaminants ?	Yes	No	N/A

If yes, indicate blank type, chemical(s) and concentration(s): _____

12.) Are Reporting Limits raised ? (If yes, explain @ "Comments")	Yes	No	N/A

Accuracy

13.) Surrogate Recovery within lab limits (Default is 70-130 %)	Yes	No	N/A

If no, list exceptions: _____

Precision

14.) Matrix Spike (MS) Recovery within 70-130 % ?	Yes	No	N/A
15.) Matrix Spike Duplicate (MSD) within 70-130 % ?	Yes	No	N/A
16.) Rel. % Diff. (RPD) within lab limits (Default 25%) ?	Yes	No	N/A
17.) RPD calculation for Field Duplicates within limits (Default 75%) ?	Yes	No	N/A

Comments: Follow-up analysis for beryllium

Initial Review By: JF **Final** Review By: [signature]

OAL

L8632

November 6, 1998

Chris Hyatt
Cascade Earth Sciences
6130 NE 78th Court
Suite C2
Portland, OR 97218

Phone: (503) 255-2205
FAX: (503) 255-2744

Re: Laboratory Sample Analysis

Project: Adolfson Associates, Inc.
8520030
Multnomah County Corrections Facility

Project Manager: Wallace Leake

Dear Chris Hyatt:

On Friday, October 9, 1998, OAL received one (1) soil sample for analysis. The sample was analyzed utilizing EPA, ASTM, or equivalent methodology.

Should you have any questions concerning the results in this report, please contact us at (503) 590-5300. Refer to OAL login number L8632.

Sincerely,

For Deb Griffith
Patty Boyden
Project Manager

Suzanne LeMay
QA/QC Officer

cc: Chris Hyatt, Wallace Leake

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OAL

L8632

Sample Summary

Sample ID	Lab #	Description	Sampled	Received
B3-10	L8632-1	soil	10/08/98 13:20	10/09/98

Definition of Terms

ND Analytical result was below the reporting limit.

Analysts

Initials	Analyst	Title
GCK	Bill Kernion	Chemist

Method Summary

Analysis	Method
Beryllium	EPA 200.7/6010

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OAL

L8632

Client: *Adolfson Associates, Inc.*
Contact: *Wallace Leake*

Project: *8520030*
Multnomah County Corrections Facility

TCLP Metals

Sample ID / Analyte	*Matrix*	Result	Reporting Limit	Units (ppm)	Date Analyzed	Method	Comment	*Lab Number* / Analyst
						Sampled: *10/08/98*		
						TCLP EPA 1311: *11/04/98*		
B3-10	*Soil*					*Hot Plate Digestion EPA 200.2/3005A: 11/05/98*		*L8632-1*
Beryllium		ND	0.0020	mg/L	11/05/98	EPA 200.7/6010	1	GCK

[1] The reporting limit is lower than OAL's normal TCLP reporting limit.

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CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

CASCADE EARTH SCIENCES, Ltd.

Shipped From:
( ) Albany 7150 Supra Dr., S.W., OR 97321 (541) 926-7797
( ) Boise 963 S. Orchard, Ste. L, ID 83706 (208) 388-1030
( ) LaGrande 107 Island Ave., OR 97850 (541) 963-7758
( ) Medford 225 S. Holly St., OR 97501 (541) 779-2280
( ) Pocatello P.O. Box 2379, ID 83206 (208) 237-7041
(✓) Portland 6139 N.E. 78th Ct., Suite C2, OR 97218 (503) 255-2205
( ) Spokane P.O. Box 14725, WA 99214 (509) 921-0299

Project: Multnomah County Correctional Facility PN: 852.00.30
Turn Around: Standard Sampling Date:
Send Report To: Adolfson/CES Location: Portland
QA/QC Requirements: Standard
Provide Preliminary Results: Verbal / Fax (circle) Fax Number: 255-2744
Laboratory Name: Oregon Analytical Laboratory
Address: 14505 SW Sunshine Blvd, Tigard, OR
Contact: Karen Blevins Phone #: 639-5300

	SAMPLE ID	DATE	TIME	LAB I.D.	PRESERV-ATIVE	SAMPLE MATRIX	Volatile Organics GC/MS 624/8240	Semi-Volatile Organics GC/MS 625/8270	Halogenated Volatiles 601/8010	Aromatic Volatiles 602/8020 BTEX	Total Petroleum Hydrocarbons (circle) G D	Total Petroleum Hydrocarbons EPA 418.1 418.1 MOD (circle)	Total Organic Carbon (TOC) 415/9060	Polyaromatic Hydrocarbons (PAH) 8310 8100 8270 (circle)	PCBs 8081		TCLP Metals As,Ba,Cd,Cr,Pb,Hg,Se,Ag	Metals (circle) Total or dissolved List Tri-Metals, LS, Mn, Fe, Cu	Extractable Bases Ca,Na,Mg,K (circle)	Ph,Cond,Cl,SO_4,PO_4,F,Br NO_2,NO_3 (circle)	NH_3,N,COD,Total-P,TKN (circle)				NUMBER OF CONTAINERS
1	B3-10	10/8	1320	~~L8362-1~~	Ø	Soil	✓				✓				✓			✓	L8632-1						1
2	B2-10	10/9	850	~~-2~~	Ø	Soil	✓				✓				✓			✓							1
3																									
4																									
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									

COMMENTS: Send report & billing to Adolfson Associates, Inc. Attn: Wallace Leake.
Copy report to Chris Hyatt - CES Portland

INVOICE INFORMATION
P.O. No.:
Bill To: ADOLFSON ASSOCIATES
Attn: Wallace Leake

SHIPMENT INFORMATION
Shipped via: Courier
Seals Intact: N/A
Temp When Rcd.: 8 °C
Samples Collected By:
Sample Receipt: 4-802 JMS / 2-402 JMS
Condition: Good
Seal No.: N/A

Relinquished By	Company:	Date/Time:	Received By:	Company:
	CES	10-9-98 @ 1215		
Relinquished By	Company:	Date/Time:	Received By:	Company:
Relinquished By	Company:	Date/Time: 10/9/98 1830	Received By:	Company: OAL

Laboratory: Please Return Original (White) with Results

White - CES Yellow - Laboratory Pink - Sender

Appendix F.
Soil Boring Log

PROJECT: MULTNOMAH COUNTY CORRECTIONS	CASCADE EARTH SCIENCES, LTD.	PROJECT NUMBER: 8510044	SOIL BORING: SB-2
BORING LOCATION: N. MARINE DRIVE		LOGGED BY: CRH CHECKED BY: -	
DRILLED BY: GEOTECH EXPLORATIONS, INC.		START DATE: 11/2/98	COMPLETION DATE: 11/2/98
DRILLING EQUIPMENT: GEOPROBE - DIRECT PUSH		SAMPLING EQUIPMENT: 4.0' MACRO CORE (MC)	

SOIL BORING DATA

TOTAL DEPTH: 25.0	GROUND SURFACE ELEV. (FT MSL): ~30	FIRST SATURATED ZONE DEPTH: 20.8	SWL (BGS) AND DATE 20.8
BACKFILL INTERVAL: 0.0-25.0 TYPE: BENTONITE CHIPS		SURFACE SEAL INTERVAL: 0 TYPE: -	

GROUP SYMBOL	INTERVAL (FT)	DESCRIPTION OF LITHOLOGY	DEPTH (FT)	SAMPLE BLOW COUNT	SAMPLE RECOVERY	SAMPLE TYPE	SAMPLE NUMBER	REMARKS (DRILLING CONDITIONS, PID READINGS, ETC.)
		ALLUVIUM						
	0.0-25.0	SAND: Brownish black; moist; loose; fine to medium grained; occasional minor silt.	0					Ground surface
			2	-	3.0/4.0	MC	0-4	0.0-4.0
			4					4.0-8.0
			6	-	3.0/4.0	MC	4-8	
			8					8.0-12.0
			10	-	3.5/4.0	MC	8-12	
SP			12					12.0-16.0
			14	-	2.0/4.0	MC	12-16	
		Wood fragments at 16'. Soft drilling at 12-20'.	16					
			18					
			20					
			22					Tough drilling at 22', possibly wood.
			24	-	100%	GRAB H2O	SB2	12.0-16.0
		Total Depth= 25.0 ft.	26					Refusal at 25'. Water sample SB2: Screen set at 23-25'.
			28					
			30					
			32					

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE INFORMATION PRESENTED IS A SIMPLIFICATION OF ACTUAL CONDITIONS ENCOUNTERED.

ALL DEPTHS IN FEET BELOW GROUND SURFACE

Appendix G.
OAL Analytical Report (Phase II ESA)

NOV 1 0 1998

OAL

L8691

November 6, 1998

Jeff Freeman
Cascade Earth Sciences
7150 SW Supra Drive
Albany, OR 97321

Phone: (541) 926-7737
FAX: (541) 967-7619

Re: Laboratory Sample Analysis

Project: 8510044
Multnomah County Corrections

Project Manager: Jeff Freeman

Dear Jeff Freeman:

On Monday, November 2, 1998, OAL received forty-three (43) samples for analysis: forty-two soil samples; and one water sample. The samples were analyzed utilizing EPA, ASTM, or equivalent methodology.

Should you have any questions concerning the results in this report, please contact us at (503) 590-5300. Refer to OAL login number L8691.

Sincerely,

for Patty Boyden
Project Manager

Suzanne LeMay
QA/QC Officer

cc: Jeff Freeman, Wallace Leake

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A Division of Portland General Electric
14855 S.W. Scholls Ferry Road, Beaverton, OR 97007
Phone 503-590-5300 • Fax 503-590-1404

NOV 1 0 1998

OAL

L8691

Sample Summary

Sample ID	Lab #	Description	Sampled	Received
SB2	L8691-1	water	11/02/98 10:20	11/02/98
SB1 0-4	L8691-2	soil	11/02/98	11/02/98
SB1 4-8	L8691-3	soil	11/02/98	11/02/98
SB1 8-12	L8691-4	soil	11/02/98	11/02/98
SB1 12-16	L8691-5	soil	11/02/98	11/02/98
SB2 0-4	L8691-6	soil	11/02/98	11/02/98
SB2 4-8	L8691-7	soil	11/02/98	11/02/98
SB2 8-12	L8691-8	soil	11/02/98	11/02/98
SB2 12-16	L8691-9	soil	11/02/98	11/02/98
SB3 0-4	L8691-10	soil	11/02/98	11/02/98
SB3 4-8	L8691-11	soil	11/02/98	11/02/98
SB3 8-12	L8691-12	soil	11/02/98	11/02/98
SB3 12-16	L8691-13	soil	11/02/98	11/02/98
SB4 0-4	L8691-14	soil	11/02/98	11/02/98
SB4 4-8	L8691-15	soil	11/02/98	11/02/98
SB4 8-12	L8691-16	soil	11/02/98	11/02/98
SB5 0-4	L8691-17	soil	11/02/98	11/02/98
SB5 4-8	L8691-18	soil	11/02/98	11/02/98
SB5 8-12	L8691-19	soil	11/02/98	11/02/98
SB6 0-4	L8691-20	soil	11/02/98	11/02/98
SB6 4-8	L8691-21	soil	11/02/98	11/02/98
SB6 8-12	L8691-22	soil	11/02/98	11/02/98
SB7 0-4	L8691-23	soil	11/02/98	11/02/98
SB7 4-8	L8691-24	soil	11/02/98	11/02/98
SB7 8-12	L8691-25	soil	11/02/98	11/02/98
SB8 0-4	L8691-26	soil	11/02/98	11/02/98
SB8 4-8	L8691-27	soil	11/02/98	11/02/98
SB8 8-12	L8691-28	soil	11/02/98	11/02/98
SB9 0-4	L8691-29	soil	11/02/98	11/02/98
SB9 4-8	L8691-30	soil	11/02/98	11/02/98
SB9 8-12	L8691-31	soil	11/02/98	11/02/98

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L8691

Sample Summary

Sample ID	Lab #	Description	Sampled	Received
SB10 0-4	L8691-32	soil	11/02/98	11/02/98
SB10 4-8	L8691-33	soil	11/02/98	11/02/98
SB10 8-11	L8691-34	soil	11/02/98	11/02/98
SB11 0-4	L8691-35	soil	11/02/98	11/02/98
SB11 4-8	L8691-36	soil	11/02/98	11/02/98
SB11 8-12	L8691-37	soil	11/02/98	11/02/98
SB12 0-4	L8691-38	soil	11/02/98	11/02/98
SB12 4-8	L8691-39	soil	11/02/98	11/02/98
SB12 8-12	L8691-40	soil	11/02/98	11/02/98
SB13 0-4	L8691-41	soil	11/02/98	11/02/98
SB13 4-8	L8691-42	soil	11/02/98	11/02/98
SB13 8-12	L8691-43	soil	11/02/98	11/02/98

Definition of Terms

ND Analytical result was below the reporting limit.

Analysts

Initials	Analyst	Title
WB	Wayne Boyle	Analyst

Method Summary

Analysis	Method
Polychlorinated Biphenyl (PCB)	EPA 3540/8081
Polychlorinated Biphenyl (PCB)	EPA 608/8081

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L8691

OAL

Client: *Cascade Earth Sciences*
Contact: *Jeff Freeman*

Project: *8510044*
Multnomah County Corrections

Polychlorinated Biphenyl (PCB)
by EPA 3540/8081

Sample ID	*Matrix*	Analyte	Result	Reporting Limit	Units (ppm)	Comment	*Lab Number*

SB1 0-4 — *Soil* — Sampled: *11/02/98* Extracted: *11/03/98* Analyzed: *11/03/98 by WB* — *L8691-2*

Analyte	Result	Reporting Limit	Units (ppm)
Total PCB in Soil	ND	0.05	mg/kg

Surrogate	Recovery	Limit
Tetrachloro-m-xylene	106.%	50 - 150
Decachlorobiphenyl	106.%	50 - 150

SB1 8-12 — *Soil* — Sampled: *11/02/98* Extracted: *11/05/98* Analyzed: *11/05/98 by WB* — *L8691-4*

Analyte	Result	Reporting Limit	Units (ppm)
Total PCB in Soil	ND	0.05	mg/kg

Surrogate	Recovery	Limit
Tetrachloro-m-xylene	106.%	50 - 150
Decachlorobiphenyl	111.%	50 - 150

SB1 12-16 — *Soil* — Sampled: *11/02/98* Extracted: *11/03/98* Analyzed: *11/03/98 by WB* — *L8691-5*

Analyte	Result	Reporting Limit	Units (ppm)
Total PCB in Soil	ND	0.05	mg/kg

Surrogate	Recovery	Limit
Tetrachloro-m-xylene	105.%	50 - 150
Decachlorobiphenyl	107.%	50 - 150

SB2 0-4 — *Soil* — Sampled: *11/02/98* Extracted: *11/03/98* Analyzed: *11/03/98 by WB* — *L8691-6*

Analyte	Result	Reporting Limit	Units (ppm)
Total PCB in Soil	ND	0.05	mg/kg

Surrogate	Recovery	Limit
Tetrachloro-m-xylene	108.%	50 - 150
Decachlorobiphenyl	109.%	50 - 150

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L8691

OAL

Client: *Cascade Earth Sciences*
Contact: *Jeff Freeman*

Project: *8510044*
Multnomah County Corrections

Polychlorinated Biphenyl (PCB)

by EPA 3540/8081

Sample ID	*Matrix*					*Lab Number*
Analyte		Result	Reporting Limit	Units (ppm)	Comment	

SB2 8-12 — *Soil* — Sampled: *11/02/98* Extracted: *11/03/98* Analyzed: *11/03/98 by WB* — *L8691-8*

Total PCB in Soil	ND	0.05	mg/kg

Surrogate	Recovery	Limit
Tetrachloro-m-xylene	105.%	50 - 150
Decachlorobiphenyl	108.%	50 - 150

SB3 0-4 — *Soil* — Sampled: *11/02/98* Extracted: *11/03/98* Analyzed: *11/03/98 by WB* — *L8691-10*

Total PCB in Soil	ND	0.05	mg/kg

Surrogate	Recovery	Limit
Tetrachloro-m-xylene	105.%	50 - 150
Decachlorobiphenyl	107.%	50 - 150

SB3 8-12 — *Soil* — Sampled: *11/02/98* Extracted: *11/03/98* Analyzed: *11/03/98 by WB* — *L8691-12*

Total PCB in Soil	ND	0.05	mg/kg

Surrogate	Recovery	Limit
Tetrachloro-m-xylene	106.%	50 - 150
Decachlorobiphenyl	108.%	50 - 150

SB4 0-4 — *Soil* — Sampled: *11/02/98* Extracted: *11/03/98* Analyzed: *11/04/98 by WB* — *L8691-14*

Total PCB in Soil	ND	0.05	mg/kg

Surrogate	Recovery	Limit
Tetrachloro-m-xylene	106.%	50 - 150
Decachlorobiphenyl	110.%	50 - 150

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Client: *Cascade Earth Sciences*
Contact: *Jeff Freeman*

Project: *8510044*
Multnomah County Corrections

Polychlorinated Biphenyl (PCB)
by EPA 3540/8081

Sample ID / Analyte	Matrix	Result	Reporting Limit	Units (ppm)	Comment	Lab Number
SB4 8-12	Soil				Sampled: 11/02/98; Extracted: 11/03/98; Analyzed: 11/04/98 by WB	L8691-16
Total PCB in Soil		ND	0.05	mg/kg		
Surrogate		Recovery			Limit	
Tetrachloro-m-xylene		107.%			50 - 150	
Decachlorobiphenyl		108.%			50 - 150	
SB5 0-4	Soil				Sampled: 11/02/98; Extracted: 11/03/98; Analyzed: 11/04/98 by WB	L8691-17
Total PCB in Soil		ND	0.05	mg/kg		
Surrogate		Recovery			Limit	
Tetrachloro-m-xylene		108.%			50 - 150	
Decachlorobiphenyl		109.%			50 - 150	
SB5 8-12	Soil				Sampled: 11/02/98; Extracted: 11/03/98; Analyzed: 11/04/98 by WB	L8691-19
Total PCB in Soil		ND	0.05	mg/kg		
Surrogate		Recovery			Limit	
Tetrachloro-m-xylene		107.%			50 - 150	
Decachlorobiphenyl		109.%			50 - 150	
SB6 0-4	Soil				Sampled: 11/02/98; Extracted: 11/03/98; Analyzed: 11/04/98 by WB	L8691-20
Total PCB in Soil		ND	0.05	mg/kg		
Surrogate		Recovery			Limit	
Tetrachloro-m-xylene		108.%			50 - 150	
Decachlorobiphenyl		108.%			50 - 150	

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L8691

Client: *Cascade Earth Sciences*
Contact: *Jeff Freeman*

Project: *8510044*
Multnomah County Corrections

Polychlorinated Biphenyl (PCB)
by EPA 3540/8081

Sample ID	*Matrix*	Analyte	Result	Reporting Limit	Units (ppm)	Comment	*Lab Number*

SB6 8-12 — *Soil* — Sampled: *11/02/98* Extracted: *11/03/98* Analyzed: *11/04/98 by WB* — *L8691-22*

Analyte	Result	Reporting Limit	Units (ppm)
Total PCB in Soil	ND	0.05	mg/kg

Surrogate	Recovery	Limit
Tetrachloro-m-xylene	108.%	50 - 150
Decachlorobiphenyl	110.%	50 - 150

SB7 0-4 — *Soil* — Sampled: *11/02/98* Extracted: *11/03/98* Analyzed: *11/04/98 by WB* — *L8691-23*

Analyte	Result	Reporting Limit	Units (ppm)
Total PCB in Soil	ND	0.05	mg/kg

Surrogate	Recovery	Limit
Tetrachloro-m-xylene	103.%	50 - 150
Decachlorobiphenyl	108.%	50 - 150

SB7 8-12 — *Soil* — Sampled: *11/02/98* Extracted: *11/03/98* Analyzed: *11/04/98 by WB* — *L8691-25*

Analyte	Result	Reporting Limit	Units (ppm)
Total PCB in Soil	ND	0.05	mg/kg

Surrogate	Recovery	Limit
Tetrachloro-m-xylene	105.%	50 - 150
Decachlorobiphenyl	109.%	50 - 150

SB8 0-4 — *Soil* — Sampled: *11/02/98* Extracted: *11/03/98* Analyzed: *11/04/98 by WB* — *L8691-26*

Analyte	Result	Reporting Limit	Units (ppm)
Total PCB in Soil	ND	0.05	mg/kg

Surrogate	Recovery	Limit
Tetrachloro-m-xylene	105.%	50 - 150
Decachlorobiphenyl	106.%	50 - 150

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L8691

Client: *Cascade Earth Sciences*
Contact: *Jeff Freeman*

Project: *8510044*
Multnomah County Corrections

Polychlorinated Biphenyl (PCB)
by EPA 3540/8081

Sample ID	*Matrix*					*Lab Number*
Analyte		Result	Reporting Limit	Units (ppm)	Comment	

Sampled: *11/02/98*
Extracted: *11/03/98*
SB8 8-12 — *Soil* — **Analyzed:** *11/04/98 by WB* — *L8691-28*

Analyte	Result	Reporting Limit	Units (ppm)
Total PCB in Soil	ND	0.05	mg/kg

Surrogate	Recovery	Limit
Tetrachloro-m-xylene	91.%	50 - 150
Decachlorobiphenyl	106.%	50 - 150

Sampled: *11/02/98*
Extracted: *11/03/98*
SB9 0-4 — *Soil* — **Analyzed:** *11/04/98 by WB* — *L8691-29*

Analyte	Result	Reporting Limit	Units (ppm)
Total PCB in Soil	ND	0.05	mg/kg

Surrogate	Recovery	Limit
Tetrachloro-m-xylene	104.%	50 - 150
Decachlorobiphenyl	108.%	50 - 150

Sampled: *11/02/98*
Extracted: *11/03/98*
SB9 8-12 — *Soil* — **Analyzed:** *11/04/98 by WB* — *L8691-31*

Analyte	Result	Reporting Limit	Units (ppm)
Total PCB in Soil	ND	0.05	mg/kg

Surrogate	Recovery	Limit
Tetrachloro-m-xylene	105.%	50 - 150
Decachlorobiphenyl	108.%	50 - 150

Sampled: *11/02/98*
Extracted: *11/03/98*
SB10 0-4 — *Soil* — **Analyzed:** *11/04/98 by WB* — *L8691-32*

Analyte	Result	Reporting Limit	Units (ppm)
Total PCB in Soil	ND	0.05	mg/kg

Surrogate	Recovery	Limit
Tetrachloro-m-xylene	104.%	50 - 150
Decachlorobiphenyl	107.%	50 - 150

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Client: *Cascade Earth Sciences*
Contact: *Jeff Freeman*

Project: *8510044*
Multnomah County Corrections

Polychlorinated Biphenyl (PCB)
by EPA 3540/8081

Sample ID	*Matrix*	Analyte	Result	Reporting Limit	Units (ppm)	Comment	*Lab Number*

SB10 8-11 — *Soil* — Sampled: *11/02/98* Extracted: *11/03/98* Analyzed: *11/04/98 by WB* — *L8691-34*

Analyte	Result	Reporting Limit	Units (ppm)
Total PCB in Soil	ND	0.05	mg/kg

Surrogate	Recovery	Limit
Tetrachloro-m-xylene	103.%	50 - 150
Decachlorobiphenyl	108.%	50 - 150

SB11 0-4 — *Soil* — Sampled: *11/02/98* Extracted: *11/03/98* Analyzed: *11/04/98 by WB* — *L8691-35*

Analyte	Result	Reporting Limit	Units (ppm)
Total PCB in Soil	ND	0.05	mg/kg

Surrogate	Recovery	Limit
Tetrachloro-m-xylene	97.%	50 - 150
Decachlorobiphenyl	102.%	50 - 150

SB11 8-12 — *Soil* — Sampled: *11/02/98* Extracted: *11/03/98* Analyzed: *11/04/98 by WB* — *L8691-37*

Analyte	Result	Reporting Limit	Units (ppm)
Total PCB in Soil	ND	0.05	mg/kg

Surrogate	Recovery	Limit
Tetrachloro-m-xylene	97.%	50 - 150
Decachlorobiphenyl	103.%	50 - 150

SB12 0-4 — *Soil* — Sampled: *11/02/98* Extracted: *11/03/98* Analyzed: *11/04/98 by WB* — *L8691-38*

Analyte	Result	Reporting Limit	Units (ppm)
Total PCB in Soil	ND	0.05	mg/kg

Surrogate	Recovery	Limit
Tetrachloro-m-xylene	97.%	50 - 150
Decachlorobiphenyl	103.%	50 - 150

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Client: *Cascade Earth Sciences*
Contact: *Jeff Freeman*

Project: *8510044*
Multnomah County Corrections

Polychlorinated Biphenyl (PCB)

by EPA 3540/8081

Sample ID	*Matrix*					*Lab Number*
Analyte		Result	Reporting Limit	Units (ppm)	Comment	

Sampled: *11/02/98*
Extracted: *11/03/98*
SB12 8-12 *Soil* **Analyzed:** *11/04/98 by WB* *L8691-40*

Analyte	Result	Reporting Limit	Units
Total PCB in Soil	ND	0.05	mg/kg

Surrogate	Recovery	Limit
Tetrachloro-m-xylene	97.%	50 - 150
Decachlorobiphenyl	103.%	50 - 150

Sampled: *11/02/98*
Extracted: *11/03/98*
SB13 0-4 *Soil* **Analyzed:** *11/04/98 by WB* *L8691-41*

Analyte	Result	Reporting Limit	Units
Total PCB in Soil	ND	0.05	mg/kg

Surrogate	Recovery	Limit
Tetrachloro-m-xylene	98.%	50 - 150
Decachlorobiphenyl	102.%	50 - 150

Sampled: *11/02/98*
Extracted: *11/03/98*
SB13 8-12 *Soil* **Analyzed:** *11/04/98 by WB* *L8691-43*

Analyte	Result	Reporting Limit	Units
Total PCB in Soil	ND	0.05	mg/kg

Surrogate	Recovery	Limit
Tetrachloro-m-xylene	97.%	50 - 150
Decachlorobiphenyl	103.%	50 - 150

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L8691

Client: ***Cascade Earth Sciences***
Contact: ***Jeff Freeman***

Project: ***8510044***
Multnomah County Corrections

Polychlorinated Biphenyl (PCB)

by EPA 608/8081

Sample ID	*Matrix*					*Lab Number*
Analyte		Result	Reporting Limit	Units (ppb)	Comment	

					Sampled: *11/02/98*	
					Extracted: *11/03/98*	
SB2	*Water*				Analyzed: *11/03/98 by WB*	*L8691-1*
Total PCB in Water		ND	0.5	µg/L		

Surrogate	Recovery	Limit
Tetrachloro-m-xylene	103.%	50 - 150
Decachlorobiphenyl	83.%	50 - 150

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L8691

Client: *Cascade Earth Sciences*
Contact: *Jeff Freeman*

Project: *8510044*
Multnomah County Corrections

Batch Q.C.

Method Blank

PCB/Soil (mg/kg)

Analyte	Result	Reporting Limit *	Q	Date Analyzed
PCB	ND	0.05		11/04/98

Surrogates	% Recovery
Tetrachloro-m-xylene	101
Decachlorobiphenyl	107

Comments: L8691-2,5,6,8,10,12,14,16,17,19,20,22,23,25,26,28,29,31,32,34

* Reporting limit based on individual Aroclors

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OAL

L8691

Client: *Cascade Earth Sciences*
Contact: *Jeff Freeman*

Project: *8510044*
Multnomah County Corrections

Batch Q.C.

Method Blank

PCB/Soil (mg/kg)

Analyte	Result	Reporting Limit *	Q	Date Analyzed
PCB	ND	0.05		11/04/98

Surrogates	% Recovery
Tetrachloro-m-xylene	95
Decachlorobiphenyl	102

Comments: L8691-35,37,38,40,41,43

* Reporting limit based on individual Aroclors

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L8691

Client: *Cascade Earth Sciences*
Contact: *Jeff Freeman*

Project: *8510044*
Multnomah County Corrections

Batch Q.C.

Method Blank

PCB/Water (ug/L)

Analyte	Result	Reporting Limit *	Q	Date Analyzed
PCB	ND	0.5		11/03/98

Surrogates	% Recovery
Tetrachloro-m-xylene	104
Decachlorobiphenyl	99

Comments:

* Reporting limit based on individual Aroclors

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L8691

Client: *Cascade Earth Sciences*
Contact: *Jeff Freeman*

Project: *8510044*
Multnomah County Corrections

Batch Q.C.

MS/MSD

PCB/Soil (mg/kg)

Analyte	% Recovery	% Recovery	RPD	Q	Date Analyzed
	MS	MSD			
PCB	104	105	<1		11/04/98

Surrogates

Tetrachloro-m-xylene	106	104
Decachlorobiphenyl	109	110

Comments: L8691-2,5,6,8,10,12,14,16,17,19,20,22,23,25,26,28,29,31,32,34

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L8691

Client: *Cascade Earth Sciences*
Contact: *Jeff Freeman*

Project: *851004*
Multnomah County Corrections

Batch Q.C.

MS/MSD

PCB/Soil (mg/kg)

Analyte	% Recovery	% Recovery	RPD	Q	Date Analyzed
	MS	MSD			
PCB	104	104	<1		11/04/98
Surrogates					
Tetrachloro-m-xylene	95	95			
Decachlorobiphenyl	102	103			

Comments: L8691-35,37,38,40,41,43

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Client: *Cascade Earth Sciences*
Contact: *Jeff Freeman*

Project: *8510044*
Multnomah County Corrections

Batch Q.C.

LCS

PCB/Water (ug/L)

Analyte	Result	True Value	% Recovery	Q	Date Analyzed
PCB	25.7	25.0	103		10/24/98

Surrogates	% Recovery
Tetrachloro-m-xylene	102
Decachlorobiphenyl	106

Comments:

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CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

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Project: Multnomah County Corrections PN: 85100044
Turn Around: Rush Sampling Date: 11-2-98
Send Report To: Chris Hyatt Location: Portland
QA/QC Requirements: Normal
Provide Preliminary Results: ___ Verbal / Fax (circle) Fax Number: ___
Laboratory Name: Oregon Analytical Laboratory
Address: ___
Contact: Patty Boyden Phone # 590-5300

SAMPLE I.D.	DATE	TIME	LAB I.D.	PRESERV-ATIVE	SAMPLE MATRIX	Volatile Organic GC/MS 624/8240	Semi-Volatile Organic GC/MS 625/8270	Halogenated Volatiles 601/8010	Aromatic Volatiles 602/8020 BTEX	Total Petroleum Hydrocarbons HCID G D (circle)	Total Petroleum Hydrocarbons EPA 418.1 418.1 MOD (circle)	Total Organic Carbon (TOC) 415/9060	Polyaromatic Hydrocarbons (PAH) 8310 8100 8270 (circle)	PCB's 8081		TCLP Metals As,Ba,Cd,Cr,Pb,Hg,Se,Ag	Metals (total or dissolved) List	Extractable Bases Ca,Na,Mg,K (circle)	Ph,Cond,Cl,SO_4,PO_4,F,Br NO_2,NO_3 (circle)	NH_3,N,COD,Total-P,TKN (circle)	HOLD			NUMBER OF CONTAINERS
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2. SB1 0-4		na	-2		Soil									✓										
3 SB1 4-8			-3																		✓			
4 SB1 8-12			-4											✓	✓		Add PCB 11/4/98				✓			
5 SB1 12-16			-5											✓										
6. SB2 0-4			-6											✓										
7. SB2 4-8			-7																		✓			
8. SB2 8-12			-8											✓										
9. SB2 12-16			-9																		✓			
10. SB3 0-4			-10											✓										
11. SB3 4-8			-11																		✓			
12. SB3 8-12			-12											✓										

COMMENTS:

INVOICE INFORMATION
P.O. No.: 3509
Bill To: CES Portland

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Relinquished By:	Company:	Date/Time:	Received By:	Company:

Laboratory:
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( ) Portland 6130 N.E. 78th Ct., Suite C2., OR 97218 (503) 255-2205
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Project: Multnomah County Corrections PN:
Turn Around: Sampling Date:
Send Report To: Location:
QA/QC Requirements:
Provide Preliminary Results: ___ Verbal / Fax (circle) Fax Number:
Laboratory Name:
Address:
Contact: Phone #

SAMPLE I.D.	DATE	TIME	LAB I.D.	PRESERV-ATIVE	SAMPLE MATRIX	Volatile Organic GC/MS 624/8240	Semi-Volatile Organic GC/MS 625/8270	Halogenated Volatiles 601/8010	Aromatic Volatiles 602/8020 BTEX	Total Petroleum Hydrocarbons HCID G D (circle)	Total Petroleum Hydrocarbons EPA 418.1 418.1 MOD (circle)	Total Organic Carbon (TOC) 415/9060	Polyaromatic Hydrocarbons (PAH) 8310 8100 8270 (circle)	PCB's 8081		TCLP Metals As,Ba,Cd,Cr,Pb,Hg,Se,Ag	Metals (total or dissolved) List	Extractable Bases Ca,Na,Mg,K (circle)	Ph,Cond,Cl,SO_4,PO_4,F,Br NO_2-NO_3 (circle)	NH_3-N,COD,Total-P,TKN (circle)	HOLD			NUMBER OF CONTAINERS
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2. SB4-0-4			-14											✓										
3 SB4 4-8			-15																		✓			
4 SB4 8-12			-16											✓										
5 SB5 0-4			-17											✓										
6. SB5 4-8			-18																		✓			
7. SB5 8-12			-19											✓										
8. SB6 0-4			-20											✓										
9. SB6 4-8			-21																		✓			
10. SB6 8-12			-22											✓										
11. SB7 0-4			-23											✓										
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SHIPMENT INFORMATION
Shipped via: Courier
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Temp When Rcd.: 10' °C
Samples Collected By:
Sample Receipt:
Condition: GOOD
Seal No.: N/A

Relinquished By:	Company:	Date/Time:	Received By:	Company:
[signature]	CES	11-2-98 @ 1700	Express it #65	
Relinquished By:	Company:	Date/Time: 11-2-98 18:15	Received By: [signature]	Company: OAL
Relinquished By:	Company:	Date/Time:	Received By:	Company:

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(✓) Portland 6130 N.E. 78th Ct., Suite C2., OR 97218 (503) 255-2205
( ) Spokane P.O. Box 14725, WA 99214 (509) 921-0290

Project: Multnomah County Corrections PN: 8510044
Turn Around: _____ Sampling Date: _____
Send Report To: _____ Location: _____
QA/QC Requirements: _____
Provide Preliminary Results: ___ Verbal / Fax (circle) Fax Number: _____
Laboratory Name: _____
Address: _____
Contact: _____ Phone # _____

SAMPLE I.D.	DATE	TIME	LAB I.D.	PRESERV-ATIVE	SAMPLE MATRIX	Volatile Organic GC/MS 624/8240	Semi-Volatile Organic GC/MS 625/8270	Halogenated Volatiles 601/8010	Aromatic Volatiles 602/8020 BTEX	Total Petroleum Hydrocarbons HCID G D (circle)	Total Petroleum Hydrocarbons EPA 418.1 418.1 MOD (circle)	Total Organic Carbon (TOC) 415/9060	Polyaromatic Hydrocarbons (PAH) 8310 8100 8270 (circle)	PCB's 8081		TCLP Metals As,Ba,Cd,Cr,Pb,Hg,Se,Ag	Metals (total or dissolved) List	Extractable Bases (circle) Ca,Na,Mg,K	Ph,Cond,Cl,SO_4,PO_4,F,Br NO_2,NO_3 (circle)	NH_3,N,COD,Total-P,TKN (circle)	HOLD			NUMBER OF CONTAINERS
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3 SB8 4-8			-27																		✓			
4 SB8 8-12			-28											✓										
5 SB9 0-4			-29											✓										
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ORGANIC ANALYSIS | INORGANIC ANALYSIS | OTHER

COMMENTS:

INVOICE INFORMATION
P.O. No.: 3509
Bill To: _____

SHIPMENT INFORMATION
Shipped via: Courier
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Temp When Rcd: 10 °C
Samples Collected By: _____
Sample Receipt: _____
Condition: Good
Seal No.: N/A

Relinquished By:	Company:	Date/Time:	Received By:	Company:
[signature]	CES	11-2-98 @ 1700	Express #65	
		11-2-98 18:15	[signature]	OAL

Laboratory:
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COMMENTS:

INVOICE INFORMATION
P.O. No.: 3509
Bill To: _____

SHIPMENT INFORMATION
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Seals Intact: YES Condition: Good
Temp When Rcd.: 10 °C Seal No.: N/A
Samples Collected By: _____

Relinquished By: [signature]	Company: CES	Date/Time: 11-2-98 @ 1700	Received By: Emprunid #65	Company:
Relinquished By:	Company:	Date/Time: 11-2-98 18:15	Received By: [signature]	Company: CAL
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Section 5

SECTION 5 - ENGINEERING ASSESSMENT

A. Summary

The engineering portion of this Report focuses on the following disciplines and their relation to the proposed facility and the impact on its function and design:

i Geology and Seismicity of general area and proposed specific site. (See Attachment 5-1)

ii Structural implications.

iii Transportation issues affecting site access. (See Attachment 5-3)

iv Utilities infrastructure - potable water, fire protection, sanitary sewer, storm drainage, electrical power, natural gas, and public streets. (See Attachments 5-4 and 5-5)

B. Introduction

i The analysis of the site primarily focuses on the ability of the site and the existing road, public transportation, and utilities to support the proposed facility in its assumed full-buildout configuration of 2,000 beds. Development costs, where appropriate, focus on the initial phase of the project, the construction of a 225-bed jail.

ii Within each of the summary categories listed above, there are identified difficulties that require resolution before the facility can be well situated at this site. In each case there is either a proposed resolution or an acceptance factor that diminishes the importance of that difficulty. While the challenges uncovered may not present the most desirable of circumstances, there appears to be methods available to mitigate the concerns.

For example in the Transportation Assessment (Attachment 5-3) of this Report it is noted that there are no critical traffic issues other than those created by the existing rail line and planned rail improvements. The facility design will address the potential for delays in emergency vehicle response with features such as sprinklers, strategically located fire-resistant refuge locations, and electronic coordination with rail crossings and rail traffic managers.

C. Geology and Seismicity Analysis

i. General Geology

The Portland basin is a structural depression created by complex folding and faulting of the middle Miocene age lava flows of the Columbia River Basalt Group (CRBG) which form the basement or floor of the basin. CRBG rocks are exposed at the surface in the Tualatin Mountains along the southwest border of the basin where they separate the Portland basin from the Tualatin basin. The Columbia and Willamette Rivers converge within the Portland basin and during the Miocene to Pliocene age have contributed 200 to 400 feet of mudstone, siltstone, claystone, and sandstone beds known as the Sandy River mudstone, then 100 to 350 feet of well consolidated and cemented sandstone and conglomerate known as the Pliocene age Troutdale Formation over the CRBG basement. The upper surface of the Troutdale Formation has been eroded by the ancestral Columbia and Willamette Rivers and

Geology and Seismicity Analysis (cont.)

occurs with some topography.

From as little as 30 to more than 200 feet of unconsolidated Quaternary sediments overlie the Miocene to Pliocene sediments. A large part of these young sediments consists of catastrophic flood sediments that were deposited rapidly as large floods inundated the area during late Pleistocene time. Adjacent to the Columbia and Willamette Rivers, Quaternary alluvium is present, covered in places by artificial fill.

ii. Structure and Age of Faulting

The basalt flows of the CRBG that inundated northwest Oregon during the middle Miocene were later complexly deformed by folding and faulting. Uplift of the CRBG formed the Tualatin Mountains (or "Portland Hills") which are elongated in a northwest southeast direction and bounded on the northeast flank by the Portland Hills/Clackamas River Fault Zone, a right-lateral, strike-slip fault system.

Numerous other faults both parallel and transverse to the northwest trend have been mapped in the Portland Hills. All mapped faults within the Portland basin have cut the CRBG and have therefore been active since at least middle Miocene time (about 17 million years ago). Several faults within the Portland basin are reported to cut the Pliocene age Sandy River Mudstone and Troutdale Formations suggesting that the faulting may be as young as Pleistocene in age (less than 1.6 million years). The youngest faulted rocks in the vicinity of the Portland Basin are probably Boring Lava flows which may be as young as 612,000 ±23,000 years.

Although there is no definitive evidence for activity on the Portland Hills/Clackamas River Fault Zone, the zone was judged by others to be potentially active on the basis of possible deformation of late Pleistocene sediments (inferred from subsurface sediment thickness data) and the topographic expression of the Portland Hills.

iii. Seismicity

The greater Portland Metropolitan area is possibly the most active seismic region in the state. In general, however, the level of seismic activity in Oregon is low compared to Washington and California. Few Quaternary age faults have been mapped by seismicity in Oregon, but the number is obviously increasing with every significant seismic event, and most have been identified only recently with the expansion of recording stations. However, the historical record for the Portland Region is only about 150 years long, and prior to 1980, when the University of Washington expanded its regional network of seismographs into northwestern Oregon, few stations operated in Oregon; and thus, very little direct information is available to determine earthquake recurrence intervals, active fault locations, and probability-based design parameters.

The vast majority of seismic events in Oregon are located within the crust of the North American Plate. Even along the Oregon coast where the Juan de Fuca plate dominates the tectonic setting of the region, less than five percent of observed earthquakes have originated

Geology and Seismicity Analysis (cont.)

from the subducting plate. The Scotts Mills earthquake of March 25, 1993, moment magnitude (M_w) of 5.6, is the largest instrumentally recorded earthquake located in western Oregon. At least 17 events of M_w=4 and larger have occurred in the Portland area in historic time; six events have been M_w=5 or greater.

In the past few years, several studies have been made of potential earthquake sources and/or source zones in the Pacific Northwest. Earthquake specialists at the Oregon Department of Geology and Mineral Industries have selected the following maximum plausible earthquakes for each of the zones:

1. Shallow-focus, crustal earthquakes that could be generated by fault rupture within the crust of the North American plate beneath the Portland area with a magnitude of M_W=6.5 that could occur virtually anywhere in the Portland area. Crustal sources include the potentially active Portland Hills/ Clackamas River Fault Zone.

2. Large subduction zone earthquakes that could be generated along the interface between the Juan de Fuca and North American plates within the Cascadia Subduction Zone with a moment magnitude (M_W) of 8.5 originating 120 kilometers (km) from Portland was selected as the likely maximum plausible event from that part of the subduction zone.

3. Deep-focus, intraplate earthquakes that could originate from within the subducting Juan de Fuca plate could be as large as M_W= 7.5. However, ground shaking produced by intraplate earthquakes would be less intense and less prolonged in the Portland area than ground motions generated by great subduction zone events as noted above, and as a result, this source zone will not be considered further in this report.

iv Site Characterization

The site area is essentially flat-lying and is located on a peninsula jutting southward into Bybee Lake that was covered with a dredged sand fill placed in 1993 by the Port of Portland. A site specific characterization of the site was made with three borings drilled on October 8 and 9, 1998 at the locations shown on Figure 2 of Attachment 5-1 of this Report. All three of the borings encountered the hydraulic sand fill that was placed by the Port of Portland in 1993. The sand fill varies from 13 to 23 feet in thickness and is generally medium dense except near the bottom of the fill where it is loose. The hydraulic sand fill overlies a compressible elastic silt to clay layer that is interpreted for being lake sediments of Bybee Lake. In two of the borings, B-1 and B-3, at the east and north sides of the site, respectively, gravel was encountered at a depth of 24.5 and 20.5 feet, respectively. Borings B-1 and B-3 were terminated in the gravel at 55.5 and 36.5 feet respectively. At boring B-2 at the west side of the site, however, gravel was not encountered. Instead, a very loose sand and silt deposit was encountered beneath the lake sediments from a depth of 36 feet to a depth of 64 feet where dense sand was encountered to the bottom of boring B-2 at a depth of 111.5 feet.

Geology and Seismicity Analysis (cont.)

The regional groundwater was measured at a depth of 20.7 feet in an observation well installed in boring B-3. This level roughly coincides with the level of Bybee Lake. There is an indication from the samples in the hydraulic sand fill, however, that water is perched on top of the lake sediments, roughly at a depth of about 12 to 15 feet within the hydraulic fill sand.

v Seismic Site Hazard Investigation

1. Design Earthquakes

The Design Earthquake referred to in the 1998 Oregon Structural Specialty Code based on the Uniform Building Code (UBC) should, as a minimum, be one having a 10% probability of occurrence in 50 years (1 every 500 years). However, in our opinion, there is insufficient seismic history/data to develop a probability-based design earthquake, and as a result, a deterministic (or subjective) approach has been (and typically is in Portland) used to develop the design earthquakes. For this evaluation, two earthquakes have been considered for design. The first is a crustal earthquake with a magnitude of M_W=6.0 at a distance of 5 km resulting in a mean peak ground acceleration of 0.3 g with a duration of 10 to 20 seconds. The second is a subduction zone earthquake with magnitude of M_W=8.5 at a distance of 120 km resulting in a mean peak acceleration of 0.18 g with a duration of 1 to 4 minutes.

2. Seismic Hazards

Liquefaction and lateral spreading are two of the most damaging earthquake induced hazards affecting engineered structures. Liquefaction occurs as a result of loss of strength during a seismic event in loose, predominantly cohesionless soils such as fine sands and silts that are located below the groundwater level such as encountered at this site. The risk of liquefaction is common to all similar industrial areas.

During the design earthquakes, our studies indicate that the loose sand present at the bottom of the hydraulic sand fill (10 to 13 feet at boring B-1, 15 to 23 feet at boring B-2 and 12 to 14.5 feet at boring B-3) will liquefy as well as the very loose to loose sand and silt encountered at boring B-2 between 36 and 55 feet.

Lateral spreading is a consequence of liquefaction in which lateral displacements occur on a sloping ground surface or where there is a free sloping face adjacent to flat lying ground, such as the dredged sand fill slope that borders the site on all sides except on the north. Where there is a free face, lateral spreading will be greatest at the free face and diminish with distance away from the free face. Our studies indicate that lateral spreading directly under the structure closest to the free sloping face will be about 6 inches for subsurface conditions similar to those encountered at borings B-1 and B-3, and about 18 inches for subsurface conditions similar to those encountered at boring B-2.

Geology and Seismicity Analysis (cont.)

Settlement of loose sand and silt deposits also occur as a result of earthquake shaking. For this site, it is estimated that 2 inches of settlement will occur for subsurface conditions similar to those encountered at borings B-1 and B-3, and that up to 15 inches of settlement will occur for subsurface conditions similar to those encountered at boring B-2.

3. Mitigation of Liquefaction and Lateral Displacement

Measures to mitigate the effects of liquefaction generally include the use of deep foundations such as piles to support the structure and to prevent damaging differential settlement, or densifying the loose soils so that they are not prone to liquefaction. Deep foundations will probably be necessary to support the structure even if liquefaction were not a problem because of the compressible lake sediments underlying the hydraulic sand fill. But, since the site will also undergo lateral spreading, piles are not considered feasible unless the loose soils are densified so that lateral spreading does not occur.

Densification of the loose soils can be done using several techniques such a vibroflotation, in which a vibrating probe is lowered into the ground to densify the loose soil. Another technique is deep dynamic compaction in which the soils are compacted by dropping weights up to about 20 tons from a distance of about 100 feet. This method is limited to a depth of about 35 feet and is suitable in the gravel-laden areas where Phase I will be constructed. It is not suitable where the deeper soils have been determined to be susceptible to liquefaction.

A third method to densify the loose soils consists of driving compaction piles at close spacing. Since piles are needed to support structures of this type in this area, regardless of the liquefaction hazard, this method is likely to be the method most appropriate for future building phases not located in the graveled areas. Based on our studies, a center to center pile spacing of 3 to 4 pile diameters will be required under the structure and for a distance of at least 50 feet beyond the perimeter of the structure on the sides of the structure adjacent to a free face.

It is noted that mitigating the potential for liquefaction and lateral spreading under the structure will not reduce the effects of such spreading beyond the limits of the structure. The infrastructure (sewer, water, power, roads) serving this building, as well as other nearby businesses and industries, could be seriously damaged.

vi Foundation Studies

1. General Area Settlement

The earthquake induced settlements discussed in the previous section will only occur if, and when, the design earthquake occurs. Settlement of the site, however, has occurred as the result of compression of the lake sediments under the weight of the hydraulic sand fill. It is estimated that about 6 to 12 inches occurred initially

Geology and Seismicity Analysis (cont.)

within two or three months after the placement of the fill. Secondary settlement, sometimes referred to as long term settlement, of the fill is continuing at rate that is decreasing with time. Secondary settlement usually occurs in sediments with moderate to high organic content, such as the lake sediments underlying the hydraulic sand fill. It is estimated that secondary settlement will amount to about 2 inches over a period of 20 years.

Additional settlement will also be induced if additional fills are necessary to raise the site grade. The additional settlement could be significant; on the order of 2.5 inches if 5 feet of fill is placed. We anticipate that less than 3 feet of fill will be necessary under the building and roads.

2. Foundation Alternatives

a. Spread footing foundations were reviewed as a foundation alternate, but deep foundations were selected because of liquefaction, lateral spreading, earthquake induced settlement and long term settlement.

b. Deep Foundations - The foundation system for this initial building would consist of driven piles that will support the structure and on-grade floor slab. As mentioned above, these piles will be driven through densified soils into the gravel stratum. In areas where the deep dynamic compaction is not suitable, the structural bearing piles will act along with compaction piles to densify the underlying loose soils and mitigate hazards associated with liquefaction and lateral spreading. This will be expected in future building phases.

The structural load-bearing piles will need to be capable of supporting loads on the order of 70 to 100 kips. The preliminary geotechnical report (Appendix 5-1) provides relationships for depth versus allowable loads for various sizes of driven, closed ended steel pipe piles. The depth - load relationships take into account down-drag loads on the piles resulting from settlement of the hydraulic fill due to consolidation of the lake sediments and from loss of strength due to liquefaction.

c. Cost information for these foundation systems and the accompanying soil compaction may be found in Attachment 5-2.

E. Structural Analysis

i Construction Type: Type 1 Construction

The building will use a combination of concrete beam and slab system supported on concrete columns; tilt-up concrete walls and load bearing and non-load bearing concrete masonry walls and partitions will also be used. The entrance area will use structural steel framing.

Structural Analysis (cont.)

ii Seismic Zone: Zone 3

The structure will be designed to meet the requirements of Seismic Zone 3 as shown in the 1997 edition of the Uniform Building Code.

Importance Factor: I = 1.25

The structure will be designed as an essential facility with an importance factor of 1.25.

iii Wind Loading: 90 mph

The building will be designed for a basic wind speed of 90 mph.

Exposure: Type C

The building will be designed for wind exposure Type C per the 1997 edition of the Uniform Building Code. Exposure C applies to terrain that is flat and generally open.

iv Code Requirements: 1997 Uniform Building Code

The structure will be designed to meet the requirements of the 1997 edition of the Uniform Building Code, as amended by the State of Oregon.

v Conclusions based on preliminary soils and seismic information:

The preliminary results of the geotechnical investigation and discussions with the geotechnical engineer indicate that the site, as it stands, is susceptible to liquefaction and lateral spreading during a seismic event. The geotechnical engineer has recommended measures to mitigate the potential liquefaction and lateral spreading, and hence, stabilize the building site. Based on the geotechnical recommendations the following foundation and structural system will be suitable for this site.

1. Primary Foundation System: Piles and structural slab-on-grade

   The structure will be supported on driven steel or concrete piles driven into the gravel layer with an approximate length of 30 to 35 feet. As mentioned earlier, deep dynamic compaction will be use to densify and stabilize soils for this initial building.

2. Primary Structural System: Concrete Structure

   a. The primary structural system will be a combination of concrete and concrete masonry shear walls.
   b. The lateral force resisting system will be concrete and concrete masonry shear walls.

Structural Analysis (cont.)

3. Secondary Systems for Security:

Non-load bearing walls and security areas will be concrete masonry.

4. Metals:

A structural steel frame with metal deck will be used in the entrance area.

F. Utilities Infrastructure Analysis

i Domestic Water

Water service to MCNCF would be provided by the City of Portland Water Bureau from an existing 12-inch line in N. Ramsey Blvd. (N. Pacific Gateway Blvd.) and N. Leadbetter Road. The 12-inch line in N. Leadbetter would be extended to the 12-inch line in N. Ramsey creating a loop system. A 12-inch ductile iron pipe would extend from the loop to the access cul-de-sac as shown in the "Rivergate industrial Park, Street Extension for Proposed Multnomah County Site" plans prepared by the Port of Portland. The Corrections Facility service would extend from the proposed 12-inch line and a backflow prevention device would be located at the property line as well as a water meter. Conversations with the City of Portland Water Bureau indicate water pressure of this line should be adequate to serve the proposed 2,000-bed facility. The cost of the proposed Port of Portland street water line is given in attached "Public Street Improvements Cost Estimate".

ii Fire Protection

The final fire flow requirements would be based on the size of the building, construction materials, and layout of the fire protection system. A 12-inch line has been proposed by the Port of Portland as described above. There is also an 8-inch non-potable line that the Port has proposed; this line could potentially be used for fire protection. Further analysis of this line will need to occur during final engineering or as the new waterline is completed. Mr. Vern Freeman of the Water Bureau provided pressure and flow values of the existing water lines in the area. Preliminarily, the available pressure of the proposed 12-inch line has been calculated to be 49.2 psi with an assumed fire flow requirement of 2,000 gallons per minute, which should be sufficient to serve the proposed facility. The cost of the proposed Port of Portland street fire water line is given in the attached "Public Street Improvements Cost Estimate".

iii Sanitary Sewer

The City of Portland Bureau of Environmental Services (BES) has an existing 15-inch sanitary line in North Marine Drive. The Rivergate Industrial District Sanitary Sewer Master Plan Update, prepared by Murray, Smith & Associates, Inc. in May 1992, considered both a "wet" and "dry" industry development in the area. The "dry" industry development proposed a new 12-inch line from the new access cul-de-sac at the proposed site extending to the existing 15-inch line in North Marine Drive. The "wet" industry development

Utilities Infrastructure Analysis (cont.)

proposes a new 12-inch line from the new access road to a new 24-inch line in North Marine Drive that would extend approximately 2,100 feet to an existing pump station to the west. The "Rivergate Industrial Park, Street Extension for Proposed Multnomah County Site" plans prepared by the Port of Portland also proposed a 12-inch line to connect to the existing 15-inch line in Marine Drive. If a "dry" industry development occurs in the area it will not be necessary to install the new 24-inch line in Marine Drive, however, if a "wet" industry occurs, these improvements may be required.

The Master Plan indicated that the invert elevation of the 12-inch line at the new access cul-de-sac is at 22 feet elevation. Assuming the same pipe size and slope and extending the service line to the furthest corner of the building, the service line may have sufficient cover and capacity to serve the proposed facility. Final engineering plans, however, will consider exact invert elevations and determine whether or not a pumping station is required. Sewer design and construction should also consider settlement due of the dredge fill material on site and the possible effects of a seismic event.

W&H Pacific, Inc. reviewed the Master Plan in September 1996. The scope of this review included the evaluation of the size and location of the utility conduits required for crossing the existing railroad and the effects of the proposed street/lot layout on the sewer system. The conduits for future utilities crossing at the railroad have been constructed.

iv Storm Drainage

The North Rivergate Industrial Park development area is divided into two drainage basins each with an outfall into the Columbia Slough. The North outfall that has recently been constructed releases the majority of the runoff. The Port of Portland plans locate the South (48") outfall into the Columbia Slough as specified in Figure 5 of the Natural Resources Managements Plan for Smith and Bybee Lakes (NRMP). This outfall will need to be designed according to Policy 22 of the NRMP. This policy outlines the City of Portland policy regarding storm water discharge into the Columbia Slough. The policy also requires the system be designed to minimize potential impact on water quality within the guidelines of the NPDES permit process.

Preliminary conversations with Lee Alverson at the City of Portland Bureau of Environmental Services (BES) determined no on-site detention would be required. However, on-site water quality treatment will be required. Geotechnical Resources Incorporated (GRI) conducted a geotechnical investigation by for the nearby Columbia Sportswear Building and performed infiltrations tests for the possibility of storm water disposal using drywells. Their report recommends a design infiltration rate of 0.5 ft/min. Their report also noted that the effectiveness of drywells might be reduced over time due to the development of a filter cake in the soils surrounding the drywell. Mr. Alverson stated that drywells would not be recommended and would probably not be approved for on-site treatment; no other treatment process was recommended.

The proposed Corrections Facility site is located at the southernmost portion of the development. On-site drainage will be treated by BES approved on-site facilities. Once

Utilities Infrastructure Analysis (cont.)

treated the drainage will be released into the Columbia Slough at the South (48") outfall.

The future road connection between N. Leadbetter Road and North Marine Drive at the intersection with Terminal 6 (not part of this project) is identified in the "Rivergate Industrial Park, Street Extension for Proposed Multnomah County Site" document prepared by the Port of Portland. In this extension there is proposed storm drainage collection from the streets by a subsystem of shallow catch basins piped to "Stormcepter 1200" manholes. The stormcepter then drains into the proposed main storm lines ranging from 36- to 54-inches in the Leadbetter Road connection to North Marine Drive and from 18- to 42-inches in the proposed access road where it is sent to an outfall into the Columbia Slough.

The cost of the proposed Port of Portland street storm sewer system is given in attached Public Street Improvements Cost Estimate. On-site storm drainage treatment costs will vary depending on the approved BES process. Regardless of the process approved by BES, water quality issues can and will be resolved. The storm drainage issues for this site will not prevent the Corrections Facility development.

v Flood Plain

Mr. Ken McGowen was contacted at the Army Corps of Engineers, Flood Plain Management Services, regarding the 100-year flood elevation of the site. The Federal Emergency Management Agency (FEMA) has established the 100-year flood plan for the site at 27 feet based on the National Geodetic Vertical Datum of 1929. The required finished floor elevations will be 29 feet, two feet above the 100-year flood plain. The proposed finished floor elevation will be about 32 feet. Impacts of Title 3 are not applicable based on conversations with the Port of Portland.

vi Electrical Power

Mr. Tom Nimert was contacted at Portland General Electric. He stated that electrical power is available in an existing underground primary line located in either North Marine Drive or Leadbetter Road. PGE would provide 3-phase primary power from the existing line. Electrical power in the area will meet the needs of the Corrections Facility's requirements.

Exterior lighting will conform to the Rivergate Development Standards. The only lighting restrictions imposed by the Portland International Airport would be due to building height. The "h" overlay zone indicates a Federal Aviation Administration height restriction. Conversations with the City of Portland Permit Center have indicated an 850-foot height restriction. The maximum building height allowed by the Rivergate Development Standards is 60 feet. Phase I of this project will have a maximum height of approximately 25 feet above the finished first floor. Subsequent construction would increase the height to approximately 45 feet above the first floor. These are well within the height limitations.

Other lighting guidelines are found in the "Natural Resources Management Plan for Smith and Bybee Lakes". Policy 22 of that plan requires that "Lights adjacent to the natural area will be cut-off type fixtures that do not cast direct light beyond the development/fill

Utilities Infrastructure Analysis (cont.)

boundary". That policy will be honored for all exterior lighting in this project.

vii Natural Gas

Natural gas is provided by NW Natural. Conversations with Mr. Steve Haldorf at NW Natural have indicated an adequate class "D" main is located in North Marine Drive. A service line would be extended from Marine Drive, south, to the proposed facility site.

viii Public Street Improvements

Public improvements will include the extension of N. Leadbetter Road west and north to an new access road which will connect MCNCF to Leadbetter. This extension of Leadbetter will be about 1,300 feet long. It will be a 44-foot wide roadway with a 70-foot wide right-of-way including 6-foot wide sidewalks on each side. An additional public street will head south from the west end of the Leadbetter extension. This 36-foot wide street will be located 50 feet away from the Columbia Slough buffer zone.. It will be approximately 2,100 feet in length and will include a 60-foot right-of-way with 6-foot wide sidewalks on each side, and all applicable utilities as previously described. The final street design and construction should also consider settlement due to the dredge fill material found on the site and the possible subsequent effects of a seismic event. A cost estimate, excluding seismic and settlement protection, of all public street improvements is attached.

Applicable utilities: storm and sanitary sewers, underground power lines, potable and non-potable water lines, gas lines and street lighting would come from North Marine Drive through a utilities corridor that will utilize the utility conduits already in place beneath the tracks at the future railroad crossing. These would then continue to the MCNCF site utilizing the public street improvements noted above.

The Port of Portland will do the final partition plat for this portion of the North Rivergate Industrial Park.

Attachments:

5-1 Seismic Site Hazard Investigation and Preliminary Geotechnical Report

5-2 Cost Estimate to Mitigate the Liquefaction Potential for Phase I

5-3 Transportation Report

5-4 Public Street Improvement Cost Estimate

5-5 Conceptual Site Plan for Street Extension to Proposed Multnomah County Site

Attachments

FHA FUJITANI HILTS & ASSOCIATES, INC.
GEOTECHNICAL CONSULTANTS

October 30, 1998

KMD Architects and Planners, PC
Attn: Mr. Tom Gross
421 SW Sixth Avenue, Suite 1300
Portland, Oregon 97204

SEISMIC SITE HAZARD INVESTIGATION
AND PRELIMINARY GEOTECHNICAL INVESTIGATION
PROPOSED NEW MULTNOMAH COUNTY CORRECTIONS FACILITY
PORTLAND, OREGON

Dear Mr. Gross:

In general accordance with our memorandum to you dated September 24, 1998, which was in response to your draft letter dated September 22, 1998, we have completed a seismic site hazard investigation and a preliminary geotechnical investigation for the referenced project. The purpose of the seismic site hazard investigation is to evaluate, on a site specific basis, the vulnerability of the site to seismic induced geologic hazards. The purpose of the preliminary geotechnical investigation is to more accurately ascertain the appropriateness of the proposed site for the proposed development. This report presents the results of our investigations and presents our recommendations and conclusions for the new Corrections Facility.

This report was prepared for your use in the design of the subject facility and should be made available to potential contractors and/or the Contractor for information on factual data only, i.e., field boring logs and samples. This report should not be used for contractual purposes as a warranty of interpreted subsurface conditions such as those indicated by the formal boring logs, and/or discussion of subsurface conditions contained herein.

SITE AND PROJECT DESCRIPTION

The proposed site is located in the Port of Portland's Rivergate Industrial District on a site that was filled by the Port in 1993 with dredged sand. The site is located about 3,000 feet southwest of N Marine Drive and is on the east side of Columbia Slough as shown on the Vicinity Map, Figure 1.

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The site is flat at an elevation of about 29 feet, and has a fill slope on all sides except the north side. The topography of the site is shown on the Plan of Explorations, Figure 2.

The new Corrections Facility will be Type I construction with the jail housing units constructed with a concrete flat slab floor and roof with bearing and non-bearing concrete masonry unit walls and partitions and with tilt-up concrete exterior walls. At the proposed build-out of this facility, each housing unit will be two stories tall (approximately 45 feet to the parapet) with each story containing a main floor and mezzanine. The initial phase of the facility will be one story tall (approximately 25 feet to the parapet), but structured to support a future floor. Finished floor grade has been set at an elevation of 32 feet. The structure will be constructed in phases starting from the northeast side. A plan of the fully constructed facility is shown on Plan of Explorations, Figure 2.

FIELD EXPLORATIONS AND LABORATORY TESTING

Field Explorations

The explorations made for this project consisted of three borings drilled at the locations shown on the Plan of Explorations, Figure 2. The locations of the borings are approximate and based on measurements using a Brunton compass and tape. Elevations were determined by interpolation from the topography of the site.

The borings, designated B-1, B-2 and B-3, were drilled on October 8 and 9, 1998, by Geo-Tech Explorations, Inc. of Tualatin, Oregon with a truck mounted drill rig using mud rotary drilling techniques. A Fujitani Hilts & Associates, Inc., geologist was present throughout the explorations to collect samples and log the borings. Borings B-1, B-2 and B-3 were drilled to depths of 55.5, 111.5 and 36.5 feet, respectively.

Representative disturbed samples were obtained at 2.5- to 5-foot depth intervals using a standard 2-inch O.D. split spoon sampler. Standard penetration testing (SPT) was performed in conjunction with the disturbed split-spoon sampling in accordance with ASTM D 1586 to measure in-situ relative density and consistency. Three-inch O.D. thin walled Shelby tube samples were also attempted in the borings in lieu of the split spoon samples to retrieve relatively undisturbed samples for testing. All samples were sealed to retain moisture and returned to our laboratory for additional examination and testing.

An observation well was installed in boring B-3 to allow future measurements of groundwater. The observation well consists of a 2-inch O.D. plastic riser pipe with a 10-foot long slotted section at the bottom. The annular space between the wall of the boring and the riser pipe was backfilled with filter sand in the slotted zone and then with bentonite chips. A monument cover was cemented in place over the top of the well.

Summary boring logs are presented in Figures 3, 4 and 5. Soil descriptions and interfaces on the logs are interpretive, and actual changes may be gradual. The left-hand portion of the boring logs presents groundwater information and gives our interpretation of the soils encountered during the field exploration program. The right-hand, graphic portion of the boring logs shows sample locations, the results of the SPT blow counts, and sample water contents.

Laboratory Testing

All samples returned to our laboratory were visually examined in our laboratory to refine the field classifications. Water contents (ASTM D 2216) were determined for all applicable samples, Atterberg limits (ASTM D 4318) were determined for representative samples, and in-place densities were determined from the Shelby tube samples. To assist in the evaluation of liquefaction and lateral displacement, a grain size distribution (ASTM D 422) was determined on one sample, and the minus 200 mesh sieve size (ASTM D 1140) was determined for seven samples. Two consolidation tests (ASTM D 2435) were also performed on Shelby tube samples to assist in settlement studies.

The results of the water contents and density tests are shown on the logs of the borings, Figures 3, 4 and 5, the results of the Atterberg limits are presented on the Plasticity Chart, Figure 6, the results of the grain size distribution are presented on Figure 7, the results of the minus 200 sieve size are presented by Table I at the end of the report, and the results of the consolidation tests are shown plotted as stress versus percent consolidation volume change on Figures 8 and 9.

GEOLOGY AND SEISMICITY

General Geology

The Portland basin is a structural depression created by complex folding and faulting of the basement rocks. The basement, or floor of the Portland basin, refers to middle Miocene age lava flows of the Columbia River Basalt Group (CRBG). CRBG rocks are exposed at the surface in the Tualatin

Mountains along the southwest border of the basin where they separate the Portland basin from the Tualatin basin.

The Columbia and Willamette Rivers converge within the Portland basin and have contributed an extensive sedimentary fill which overlies the CRBG basement. The Sandy River mudstone (SRM) overlies the CRBG throughout much of the basin. The SRM consists of from 200 to 400 feet of mudstone, siltstone, claystone, and sandstone beds of Miocene to Pliocene age. The SRM is overlain by 100 to 350 feet of well consolidated and cemented sandstone and conglomerate of the Pliocene age Troutdale Formation. The upper surface of the Troutdale Formation has been eroded by the ancestral Columbia and Willamette Rivers and occurs with some topography.

From as little as 30 to more than 200 feet of unconsolidated Quaternary sediments overlie the SRM and Troutdale Formation. A large part of these young sediments consist of catastrophic flood sediments that were deposited rapidly as large floods inundated the area during late Pleistocene time. Adjacent to the Columbia and Willamette Rivers, Quaternary alluvium is present, covered in places by artificial fill.

Structure and Age of Faulting

During middle Miocene time, flood basalt flows of the CRBG inundated northwest Oregon and now underlie most of Multnomah, Washington and Clackamas Counties. The CRBG rocks were later complexly deformed by folding and faulting. Uplift of the CRBG formed the Tualatin Mountains (or "Portland Hills"). The Portland Hills are elongated in a northwest southeast direction and bounded on the northeast flank by the Portland Hills/Clackamas River Fault Zone, a right-lateral, strike-slip fault system.

Numerous other faults both parallel to, and transverse to the northwest trend have been mapped in the Portland Hills (Beeson and others, 1989, 1991). All mapped faults within the Portland basin have cut the CRBG and have therefore been active since at least middle Miocene time (about 17 million years ago). Madin (1990) reports that several faults within the Portland basin cut the Pliocene age Sandy River Mudstone and Troutdale Formations suggesting that the faulting may be as young as Pleistocene in age (less than 1.6 million years). The youngest faulted rocks in the vicinity of the Portland Basin are probably Boring Lava flows. Although most of the Boring Lava has not been age dated, Madin (1990) does cite a single Potassium/Argon age date for a faulted Boring Lava flow southeast of the Boring Hills at 612,000 ±23,000 years.

Although there is no definitive evidence for activity on the Portland Hills/Clackamas River Fault Zone, the zone was judged by Geomatrix (1995) to be potentially active on the basis of possible deformation of late Pleistocene sediments (inferred from subsurface sediment thickness data) and the topographic expression of the Portland Hills.

Seismicity

The greater Portland Metropolitan area is possibly the most active seismic region in the state (Jacobson, 1986). In general, however, the level of seismic activity in Oregon is low compared to Washington and California. Few Quaternary age faults have been mapped by seismicity in Oregon, but the number is obviously increasing with every significant seismic event, and most have been identified only recently with the expansion of recording stations. With the exception of the Cascade volcanoes, seismicity in Oregon is generally not clearly aligned with recognized source structures (Geomatrix, 1995). Figure 10 provides a graphical representation of recorded events, as well as estimated sources and magnitudes based on historic accounts of shaking intensity.

The vast majority of seismic events in Oregon are located within the crust of the North American Plate. Even along the Oregon coast where the Juan de Fuca plate dominates the tectonic setting of the region, less than five percent of observed earthquakes have originated from the subducting plate (Geomatrix, 1995).

The Scotts Mills earthquake of March 25, 1993, moment magnitude (M_w) of 5.6, is the largest instrumentally recorded earthquake located in western Oregon. At least 17 events of M_w=4 and larger have occurred in the Portland area in historic time; six events have been M_w=5 or greater (Bott and Wong, 1993). However, the historical record for the Portland Region is only about 150 years long, and prior to 1980, when the University of Washington expanded its regional network of seismographs into northwestern Oregon, few stations operated in Oregon; and thus, very little direct information is available to determine earthquake recurrence intervals, active fault locations, and probability based design parameters.

In the past few years, however, several studies have been made of potential earthquake sources and/or source zones in the Pacific northwest. Earthquake specialists at the Oregon Department of Geology and Mineral Industries have selected the following maximum plausible earthquakes for each of the zones (Mabey and others, 1993):

1. Shallow-focus, **crustal earthquakes** could be generated by fault rupture within the crust of the North American plate beneath the Portland area. Mabey and others (1993) have concluded from their analysis of local geologic features that a crustal earthquake of up to magnitude M_W=6.5 could occur virtually anywhere in the Portland area. We consider this magnitude to be consistent with a Maximum Credible Earthquake (MCE) for this source zone, which is typically only considered for facilities which if damaged, would result in catastrophic loss of life, such as nuclear power plants and large dams. Crustal sources include the potentially active Portland Hills/Clackamas River Fault Zone.

2. Large **subduction zone earthquakes** could be generated along the interface between the Juan de Fuca and North American plates within the Cascadia Subduction Zone (CSZ). The nearest segment of that interface to the Portland area lies approximately 120 km west of Portland. An earthquake with a moment magnitude (M_W) of 8.5 originating 120 km from Portland was selected as the likely maximum plausible event from that part of the subduction zone by Weaver and Shedlock (1989). It is generally believed that the subduction zone thrust fault events are relatively consistent in magnitude (8.0-8.5). Although the CZS has not been seismically active in historic time, several geologic studies have determined similar event dates at relatively distant sites up and down large sections of the Oregon and Washington coast.

3. Deep-focus, **intraplate earthquakes** could originate from within the subducting Juan de Fuca plate. Such events could be as large as M_W= 7.5. However, ground shaking produced by intraplate earthquakes would be less intense and less prolonged in the Portland area than ground motions generated by great subduction zone events as noted above (Mabey and others, 1993), and as a result, this source zone will not be considered further in this report.

SITE CHARACTERIZATION

Site History

Historically, the vicinity of the site was a low lying marshy area at an elevation of about 10 to 12 feet adjacent to the confluence of the Willamette and Columbia Rivers. Over the years, the area has been filled with sand dredged from the Columbia River to bring the area to an elevation of about 30 feet. The reclaimed area is the present Port of Portland's Rivergate Industrial district. The parcel on which the site is located was filled in 1993, and a review of aerial photographs of the area indicates that an arm of Bybee Lake, now buried under the fill, is located under the western part of the site.

Subsurface Conditions

The analyses, conclusions, and recommendations contained in this report are based on site conditions as they presently exist and assume that the exploratory borings are representative of the subsurface conditions throughout the site. If, during construction, subsurface conditions different from those encountered in the exploratory borings are observed or appear to be present beneath excavations, we should be advised at once so that we may review these conditions and reconsider our recommendations where necessary.

The site area is essentially flat-lying and is located on a peninsula jutting southward into Bybee Lake. The area was covered with a dredged sand fill placed in 1993 by the Port of Portland. Site specific characterization of the site is based on the three borings drilled at the site on October 8 and 9, 1998 at the locations shown on Figure 2. All three of the borings encountered the dredged sand fill that was placed by the Port of Portland in 1993. The sand fill varies from 13 to 23 feet in thickness and is generally medium dense except near the bottom of the fill where it is loose. The dredged sand fill overlies a compressible elastic silt to clay layer that is interpreted as lake sediment deposited in Bybee Lake. In two of the borings, B-1 and B-3, at the east and north sides of the site, respectively, gravel was encountered beneath the Bybee Lake sediments at a depth of 24.5 and 20.5 feet, respectively. Borings B-1 and B-3 were terminated in the gravel at 55.5 and 36.5 feet respectively. At boring B-2 at the west side of the site, however, gravel was not encountered. Instead, a very loose sand and silt deposit was encountered beneath the Bybee Lake sediments from a depth of 36 feet to a depth of 64 feet where dense sand was encountered to the bottom of boring B-2 at a depth of 111.5 feet.

The regional groundwater was measured at a depth of 20.7 feet in the observation well installed in boring B-3. This level roughly coincides with the level of Bybee Lake. There is an indication from the samples in the hydraulic sand fill, however, that water is perched on top of the lake sediments, roughly at a depth of about 12 to 15 feet within the hydraulic sand.

The maximum depth of the exploratory holes made at the site for this project is 111.5 feet. For purposes of the seismic site hazards evaluation, the subsurface profile is based on the explorations made at the site, and subsurface information below this depth is based on published geology and water well information. Our interpretation of the subsurface profile at the site, listed from the surface down, is as follows:

Depth, feet	Classification
0 - 20	Dredged sand fill, perched groundwater ~ 12 feet
20 - 35	Holocene lake sediments, groundwater ~20 feet
35 - 250	Quaternary alluvium/Pleistocene flood deposits
250 - 1,000	Pliocene Troutdale Formation/Sandy River Mudstone
>1,000	Middle Miocene Columbia River Basalt

SEISMIC SITE HAZARDS INVESTIGATION

Design Earthquakes

The Design Earthquake referred to in the 1998 Oregon Structural Specialty Code based on the Uniform Building Code (UBC) should, as a minimum, be one having a 10% probability of occurrence in 50 years (1 every 500 years). However, in our opinion, there is insufficient seismic history/data to develop a probability based design earthquake, and as a result, a deterministic (or subjective) approach has been (and typically is in Portland) used to develop the design earthquakes. The design earthquake parameters summarized in the following table are based on the source zones and mapped structures described in the "Geology and Seismicity" section of this report.

Type of Earthquake	Magnitude	Distance	Mean Peak Ground Acceleration	Significant Cycles (Seed & Idriss 1982)	Duration (Seed & Idriss 1982)
Crustal	M_W=6.0	5 km	0.30 g	5	10 - 20 sec
CSZ	M_W=8.5	120 km	0.18 g	26	1 - 4 min

Using the empirical attenuation relationships developed by Sadigh from a database of recorded shallow crustal earthquakes, as reported in Wong, Silva and Madin 1993, it is estimated that local crustal faulting with a source to site distance of 5 kilometers from the site (M_W=6.0, R=5 km) would produce *mean* peak ground accelerations on the order of 0.30g. The subduction zone earthquake selected (M_W=8.5, R=120 km) is estimated to result in peak horizontal ground accelerations of 0.18g in the Portland area, based on the attenuation equations developed by Crouse (1991), from a database of more distant recordings of subduction zone earthquakes.

The crustal source zone includes the Portland Hills/Clackamas River Fault Zone and any other mapped or hidden structures in the vicinity of the site. The distance of 5 kilometers was selected due to the consideration of the depths at which similar magnitude faulting has taken place (between 5 and 12 kilometers), as well as the lack of "active fault" location data.

The following discussion is provided as a comparison to the "deterministic" approach taken for this project.

A state wide or regional "probabilistic" seismic design mapping was completed and published by Geomatrix (1995) to be used for new Oregon Department of Transportation structures. One of the products of the study is a series of state maps that have mean peak bedrock accelerations contoured by combining the contributions of all possibly active sources and source zones. The maps depict the following mean peak bedrock accelerations, which can be considered to be similar to ground surface accelerations for this site.

Return Period	Mean Peak Bedrock Acceleration
500 Year	0.19 g
1000 Year	0.27 g
2500 Year	0.39 g

Ground Response

The mean peak ground surface accelerations tabulated for the crustal design earthquake is consistent with the current UBC Zone 3 requirement of Z=0.3 (g) for western Oregon. We recommend a site coefficient (UBC, Table 16-J) of S_D, assuming foundations are carried to the dense gravel (borings B-1 and B-3) or dense sand (boring B-2).

Seismic Hazards

General - Based on the available information, there is no reason to believe that tsunami (tidal/ocean wave) inundation or fault displacement are seismically induced risks to this site. A seiche, or lake wave, could potentially be induced in Bybee Lake by earthquake ground motions. Because of the

lake's shallow depth, however, the relative risk to the site is small, in our opinion. Liquefaction and resulting lateral displacement and subsidence as discussed in the following sections are seismic hazards at this site, however.

Liquefaction - Liquefaction and lateral spreading are two of the most damaging earthquake induced hazards affecting engineered structures. Liquefaction occurs as a result of loss of strength during a seismic event in loose, predominantly cohesionless soils such as fine sands and silts that are located below the groundwater level. These conditions were encountered at this site. The susceptibility of a site to liquefaction is commonly expressed in terms of a factor of safety against the occurrence of liquefaction. The factor of safety is defined as the ratio between available soil resistance to liquefaction, expressed in terms of the cyclic stresses required to cause liquefaction and the cyclic stresses generated by the design earthquake.

Our studies disclose that during a design earthquake, the loose sand present at the bottom of the hydraulic sand fill (10 to 13 feet at boring B-1, 15 to 23 feet at boring B-2 and 12 to 14.5 feet at boring B-3) will liquefy as well as the very loose to loose sand and silt encountered at boring B-2 between a depth of 36 and 55 feet.

Lateral Spreading - Lateral spreading is a variant of liquefaction in which lateral displacement occurs on a sloping ground surface or where there is a free sloping face adjacent to flat lying ground. Such a free sloping face is present along the dredged sand fill slope that borders the site on the east, west and south sides. Where there is a free face, lateral spreading will be greatest at the free face and diminish with distance. Our studies indicate that lateral spreading will vary from about 6 inches at the edge of the final structure footprint closest to the free sloping face (~150 feet) to about 2 inches at the edge farthest from the free sloping face (~600 feet) for subsurface conditions similar to those encountered at borings B-1 and B-3. For conditions similar to those encountered at boring B-2, the lateral displacements are estimated to vary from about 18 to 12 inches for the closest and farthest points from the free sloping face, respectively.

Subsidence - Subsidence (settlement) of loose sand and silt deposits also occur as a result of earthquake shaking. For this site, it is estimated that 2 inches of settlement will occur for subsurface conditions similar to those encountered at borings B-1 and B-3, and that up to 15 inches of settlement will occur for subsurface conditions similar to those encountered at boring B-2.

Mitigation of Liquefaction and Lateral Displacement

Measures to mitigate the effects of liquefaction generally include: 1) the use of deep foundations such as piles to support the structure and prevent damaging differential settlement, or 2) densifying the loose soils so that they are not prone to liquefaction. Deep foundations will probably be necessary to support the structure even if liquefaction were not a hazard at this site because of the compressible lake sediments underlying the hydraulic sand fill. But, since the site will also undergo significant lateral spreading, piles are not considered feasible at this site unless the loose soils are densified so as to mitigate the potential for liquefaction and resulting lateral spreading.

Densification of the loose soils can be accomplished using several techniques. Vibroflotation is a technique in which a vibrating probe is lowered into the ground to densify the loose soil. Another technique is deep dynamic compaction where the soils are compacted by dropping weights up to about 20 tons from a distance of about 100 feet. This method is limited to a depth of about 35 feet and, as a result, is probably not suitable at this site since the soils to a depth of about 55 feet are susceptible to liquefaction.

A third method to densify the loose soils consists of driving closely spaced, compaction (displacement type) piles. Since piles will be required to support the structure regardless of the liquefaction hazard, this method has been selected by the design team to not only support the structure, but to mitigate the liquefaction, lateral spreading and settlement hazards. Based on our studies, a center to center pile spacing of 3 to 4 pile diameters will be required under the footprint of the structure and for a distance of at least 50 feet beyond the perimeter of the structure. The latter criteria is to protect the perimeter piles needed to support the structural loads of the building from loss of lateral support caused by lateral spreading.

To mitigate the liquefaction and lateral spreading, the compaction piles will need to be driven through the dredged sand fill and at least into the lake sediments for subsurface conditions similar to that encountered at borings B-1 and B-3. For conditions similar to that at boring B-2, the compaction piles will need to be driven through the dredged sand fill, lake sediments and the underlying very loose sand and silt deposit into the dense sand encountered at a depth of about 60 feet. Some of the piles will also be used to support structural loads of the building, and recommendations for the required penetration of these piles are presented in a following section.

It should be noted that mitigating the potential for liquefaction and lateral spreading under the structure will not reduce the effects of lateral spreading beyond the limits of the structure. That is,

the infrastructure (sewer, water, power, roads) to the building could be seriously damaged, if not destroyed.

PRELIMINARY FOUNDATION CONSIDERATIONS

General Area Settlement

The earthquake induced settlements discussed in a previous section will only occur if, and when, the design earthquake occurs. Settlement of the site, however, has already occurred as the result of the compression of the lake sediments under the weight of the dredged sand fill placed in 1993. It is estimated that about 6 to 12 inches occurred initially within several months after the placement of the fill. Secondary settlement, sometimes referred to as long term settlement, of the fill, however, is continuing at a rate that is decreasing with time. Secondary settlement usually occurs in sediments with moderate to high organic content, such as the lake sediments underlying the hydraulic sand fill. Our studies indicate that secondary settlement will amount to about 2 inches over a period of 20 years.

Additional settlement will also be induced if fills are required to raise site grades. Our settlement analysis indicates that the additional settlement could be significant. We understand that the site will be raised from the existing elevation of about 29 feet to a finished grade of 32 feet, and we estimate that the weight of the additional fill will result in additional settlements on the order of 2 to 2.5 inches.

Foundation Design

Spread footing were initially considered as a foundation alternate for this site, but because of liquefaction, lateral spreading, earthquake induced settlement and long term settlement, deep foundations were selected as the foundation of choice. In particular, the foundation system would consist of closely spaced, driven, displacement type piles that would not only support the structure and floor slab on grade, but would also act as compaction piles to densify the underlying loose soils and mitigate the hazards associated with liquefaction and lateral spreading.

Most of the piles will be lightly loaded because of their close spacing. However, those piles that support column and wall loads and to some extent the floor slab on grade will need to be capable of supporting higher loads. Relationships were developed for depth versus allowable loads for various sizes of driven, closed ended steel pipe piles for the subsurface conditions at each of the three

borings drilled at the site. The depth - allowable load relationships, which are presented by Figures 11, 12 and 13, only consider the ability of the soil to support the load, but take into account downdrag loads on the piles resulting from settlement of the hydraulic fill due to consolidation of the lake sediments and from loss of strength due to liquefaction. If desirable, other pile types could be considered for the final design.

ADDITIONAL EXPLORATIONS

For this seismic site hazard investigation and preliminary geotechnical investigation, only three borings were made on the site. Subsurface conditions at a boring on the west side of the site (boring B-2) was significantly different from the other two, and as a result, additional subsurface explorations should be accomplished for final design. We recommend that at least two additional borings be made in the western part of the site, and that a geophysical survey be made to determine the extent of the shallow gravel layer under the site. To confirm the findings of the geophysical survey, we also recommend that a series of Dutch cone probes be made. At this time, we estimate that 5 to 10 probes would be required, but the actual number would depend on the findings of the geophysical survey.

LIMITATIONS

If there is a substantial lapse of time between the submission of this report and the start of work at the site, if conditions have changed due to natural causes of construction operations at or adjacent to the site, or if the basic project scheme is significantly modified from that assumed, it is recommended that this report be reviewed to determine the applicability of the conclusions and recommendations considering the changed conditions and time lapse.

Sincerely,

FUJITANI HILTS & ASSOCIATES, INC.

REGISTERED PROFESSIONAL ENGINEER
5382
OREGON
JULY 9, 1965
K. FRANK FUJITANI

By K. Frank Fujitani
K. Frank Fujitani, P.E.
President

Expires 12/31/99

Attachments: Table I
Figures 1 - 13

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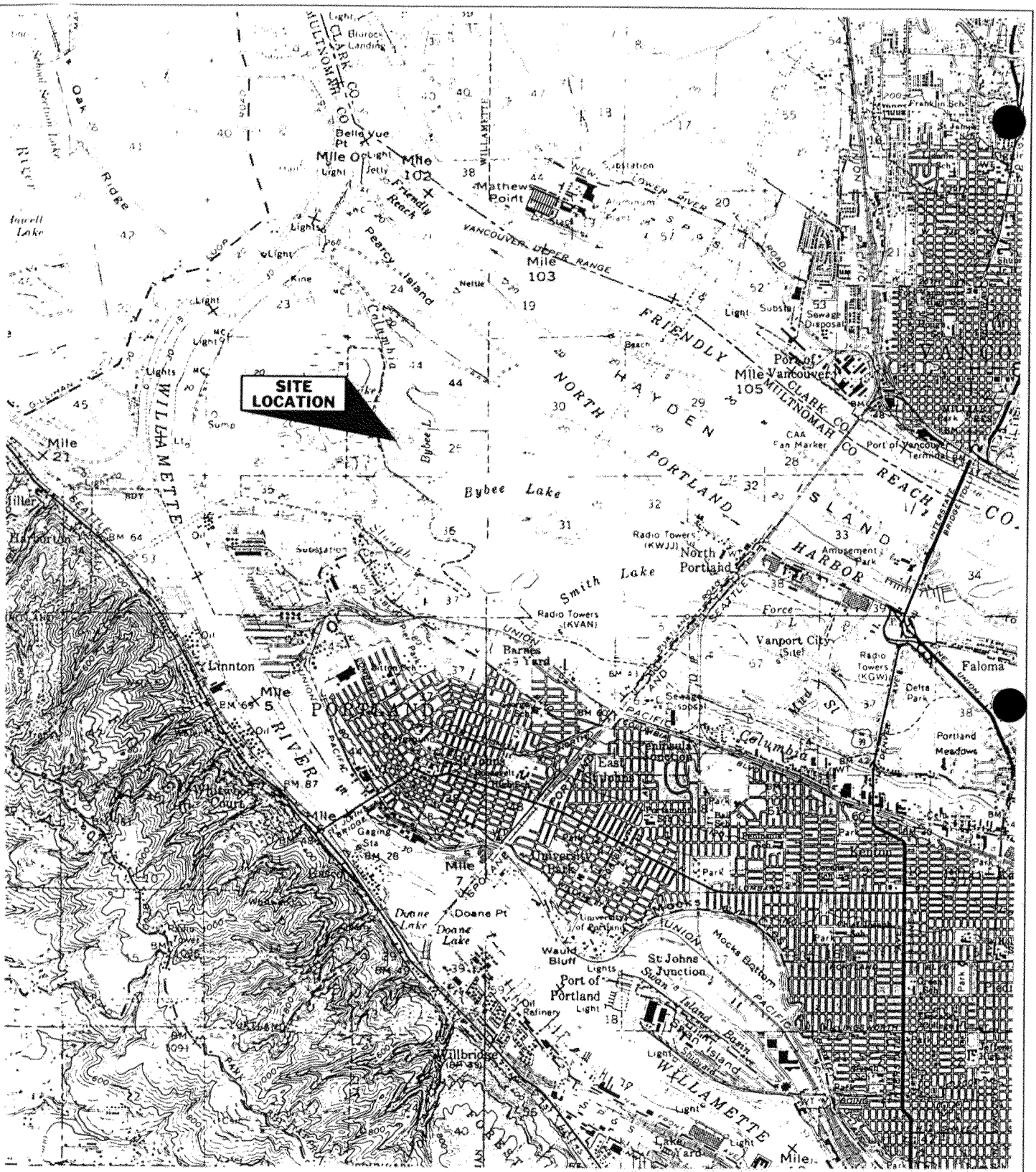
TABLE I
PERCENT PASSING NO. 200 MESH SIEVE

Boring No.	Sample No.	Depth, ft.	Percent Passing No. 200 Sieve
B-2	S-6	15.0 - 16.5	4.8
B-2	S-7	17.5 - 19.0	4.5
B-2	S-8	20.0 - 21.5	4.9
B-2	S-12	35.0 - 36.5	81.5
B-2	S-13	40.0 - 41.5	65.1
B-2	S-14	45.0 - 46.5	22.6
B-2	S-15	50.0 - 51.5	33.6
B-2	S-16	55.0 - 56.5	73.9
B-3	S-5	12.5 - 14.0	9.1



Scale 1" = 1 mile

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VICINITY MAP

October 1998 *F-3003 01*

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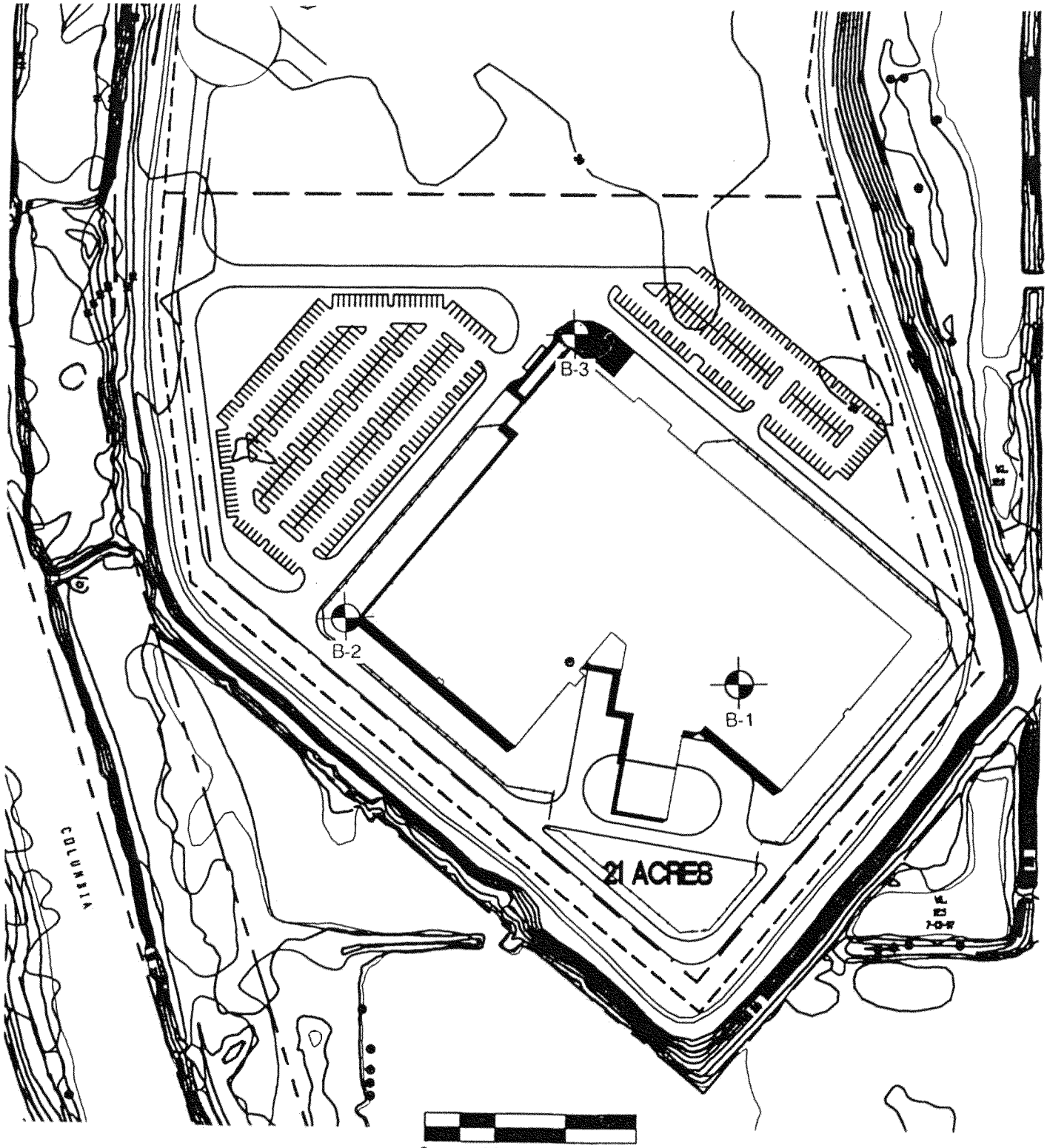
FIG. 1



Legend:

B-1 = Boring Number and Location.

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PLAN OF EXPLORATIONS

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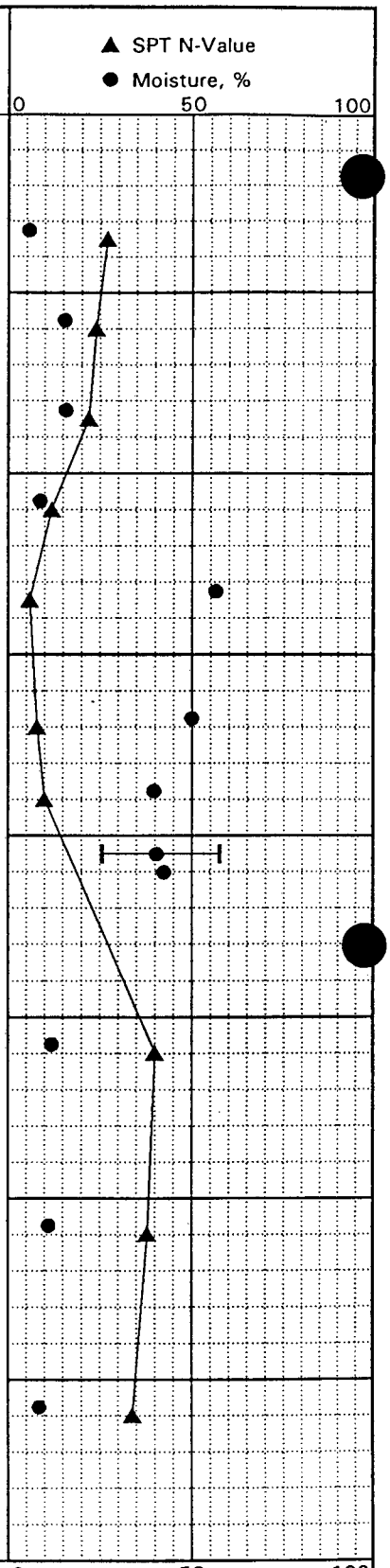
FIG. 2

Ground Water	Remarks	Elev. Depth Feet	CLASSIFICATION OF MATERIAL	Log	Depth In Feet	Samples
		29.3	**Poorly graded SAND FILL**, medium dense, moist, micaceous, fine grained with trace of medium and coarse grained sand and fine gravel, homogeneous becoming layered near base of zone. (Dredged sand fill)		0	S-1
					5	S-2, S-3
					10	S-4
			Becoming loose, gray and wet at 12 feet (possible perched water).			
		16.2				S-5
		13.1	**Elastic SILT** ranging to SILT at upper contact and to fat CLAY from 18 to 22 feet, medium stiff/loose to stiff, mottled gray, moist, medium high to medium plasticity, micaceous, trace to few coarse reedy, woody and carbonaceous and fine disseminated organics.		15	S-6*, S-7
▼	10/8/98					S-8
	Dry wt. = 78.6 pcf				20	S-9
		4.8				
		24.5	**Poorly graded GRAVEL** with interlayered fine brown sand between 30 and 35 feet, dense, gray, wet, low plasticity matrix in places, micaceous, rounded to sub-angular, coarse to fine gravel with trace of cobbles, relatively open-work.		25	S-10
					30	S-11
					35	S-12



LEGEND

- ⌶ = 2.0" O.D. Split Spoon Sample
- ⌶ = 3.0" O.D. Thin-Walled Sample
- • = Sample Not Recovered
- = Grab Sample: Drill Cuttings
- = Core Rock Sample

NOTE:
Lines between soil/rock units are approximate and transition may be gradual.

- Imprevious Seal (Bentonite)
- Cement Grout
- Random Backfill
- Granular Backfill
- Ground Water Level on Date Shown
- Piezometer/Inclinometer Tubing
- Perforated Zone

ATTERBERG LIMITS
- Liquid Limit
- Natural Water Content
- Plastic Limit

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Portland, Oregon

LOG OF BORING B-1

page 1 of 2

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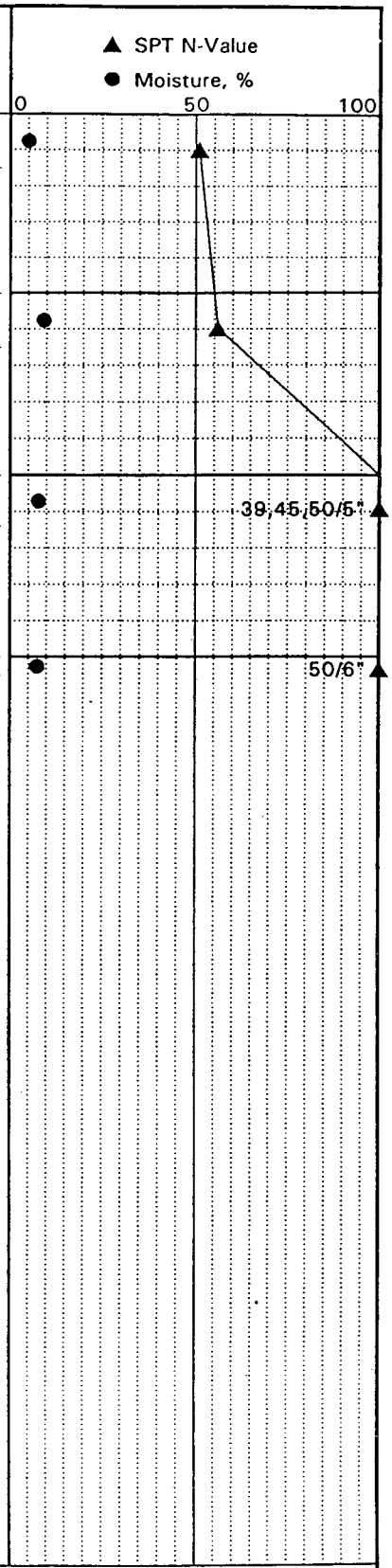
FIG. 3

FHA

WLG MLTCF 10/27/98

Ground Water	Remarks	Elev. Depth Feet	CLASSIFICATION OF MATERIAL	Log	Depth In Feet	Samples
			Very dense, improved circulation. **Poorly Graded GRAVEL** (continued)			S-13
					45	S-14
					50	S-15
		-26.2			55	S-16
		55.5	Bottom of Boring, Completed 10/8/98			



LEGEND

- I = 2.0" O.D. Split Spoon Sample
- II = 3.0" O.D. Thin-Walled Sample
- * = Sample Not Recovered
- Grab Sample: Drill Cuttings
- Core Rock Sample

NOTE:
Lines between soil/rock units are approximate and transition may be gradual.

- Imprevious Seal (Bentonite)
- Cement Grout
- Random Backfill
- Granular Backfill
- Ground Water Level on Date Shown
- Piezometer/Inclinometer Tubing
- Perforated Zone

ATTERBERG LIMITS
- Liquid Limit
- Natural Water Content
- Plastic Limit

0 50 100
Recovery, % RQD, %

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LOG OF BORING B-1

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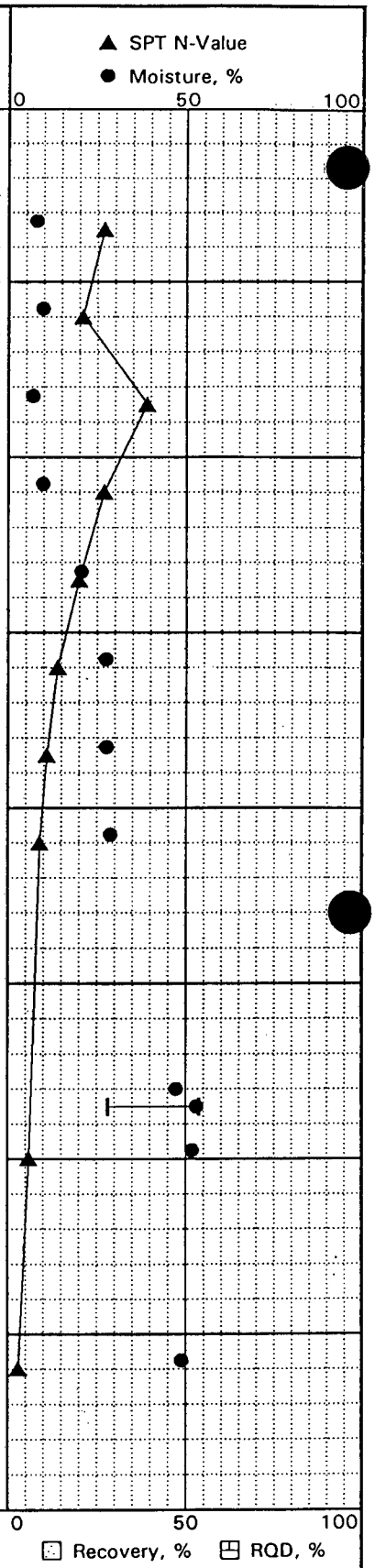
FIG. 3

FHA

WLG MLTCF 10/27/98

Ground Water	Remarks	Elev. Depth Feet	CLASSIFICATION OF MATERIAL	Log	Depth In Feet	Samples
		28.8	**Poorly graded SAND FILL**, medium dense to dense, moist, micaceous, fine grained with trace of medium and coarse grained sand and fine gravel, occasional thin silty or coarser sand layers. (Dredged sand fill)		0	S-1
					5	S-2, S-3
					10	S-4, S-5
			Becoming wet at 15 feet (possible perched water).		15	S-6
			Becoming gray at approximately 17 feet.			S-7
					20	S-8
		5.8 / 23.0	**Fat CLAY grading to Elastic SILT** by 30 feet and SILT with Sand by 35 feet, medium stiff to loose, gray, moist to wet, medium to low plasticity, micaceous, trace of coarse reedy, woody and carbonaceous and fine disseminated organics, transitional contact with underlying material.		25	S-9*
	Dry wt. = 72.3 pcf					S-10
					30	S-11
		-7.2	Very loose.		35	S-12
		36.0	**SAND with Silt** interlayered with and ranging in places to SAND or SILT, very loose, gray, wet, non-plastic to low plasticity, micaceous, fine grained sand with trace of disseminated fine organics, layers 1/4 to 5 inches thick.			



LEGEND

- = 2.0" O.D. Split Spoon Sample
- = 3.0" O.D. Thin-Walled Sample
- * = Sample Not Recovered
- = Grab Sample: Drill Cuttings
- = Core Rock Sample

NOTE:
Lines between soil/rock units are approximate and transition may be gradual.

- Imprevious Seal (Bentonite)
- Cement Grout
- Random Backfill
- Granular Backfill
- Ground Water Level on Date Shown
- Piezometer/Inclinometer Tubing
- Perforated Zone

ATTERBERG LIMITS
- Liquid Limit
- Natural Water Content
- Plastic Limit

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LOG OF BORING B-2

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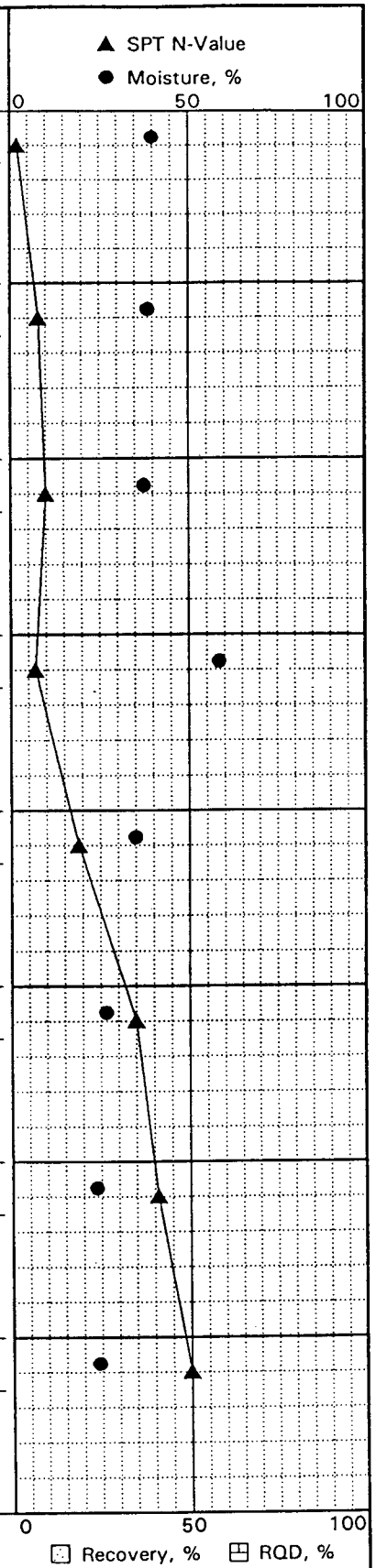
FIG. 4

FHA

WLG MLTCF 10/27/98

Ground Water	Remarks	Elev. Depth Feet	CLASSIFICATION OF MATERIAL	Log	Depth In Feet	Samples
			SAND with Silt (continued)			S-13
			Becoming loose.		45	S-14
					50	S-15
					55	S-16
			Becoming medium dense.		60	S-17
		-35.2				
		64.0	**Poorly graded SAND**, dense, brown, wet, micaceous, fine grained, homogeneous.		65	S-18
					70	S-19
					75	S-20



LEGEND

- ⌶ = 2.0" O.D. Split Spoon Sample
- ⌶ = 3.0" O.D. Thin-Walled Sample
- * = Sample Not Recovered
- ▨ = Grab Sample: Drill Cuttings
- ▮ = Core Rock Sample

NOTE:
Lines between soil/rock units are approximate and transition may be gradual.

- Imprevious Seal (Bentonite)
- Cement Grout
- Random Backfill
- Granular Backfill
- Ground Water Level on Date Shown
- Piezometer/Inclinometer Tubing
- Perforated Zone

ATTERBERG LIMITS
- Liquid Limit
- Natural Water Content
- Plastic Limit

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LOG OF BORING B-2

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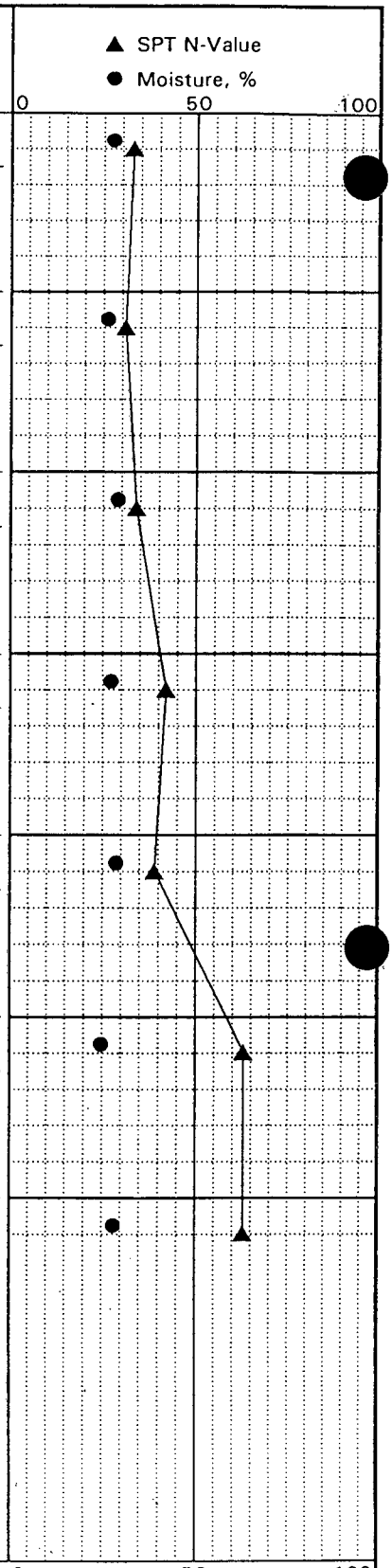
FIG. 4

FHA

WLG MLTCF 10/27/98

Ground Water	Remarks	Elev. Depth Feet	CLASSIFICATION OF MATERIAL	Log	Depth In Feet	Samples
			Poorly graded SAND (Continued)			S-21
					85	S-22
					90	S-23
					95	S-24
			Becoming layered and coarser. Increased fluvial character.		100	S-25
			Becoming very dense.		105	S-26
					110	S-27
		-82.7 / 111.5	Bottom of Boring, Completed 10/9/98			



LEGEND

- I = 2.0" O.D. Split Spoon Sample
- II = 3.0" O.D. Thin-Walled Sample
- • = Sample Not Recovered
- = Grab Sample: Drill Cuttings
- = Core Rock Sample

NOTE:
Lines between soil/rock units are approximate and transition may be gradual.

- Imprevious Seal (Bentonite)
- Cement Grout
- Random Backfill
- Granular Backfill
- Ground Water Level on Date Shown
- Piezometer/Inclinometer Tubing
- Perforated Zone

ATTERBERG LIMITS
- Liquid Limit
- Natural Water Content
- Plastic Limit

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LOG OF BORING B-2

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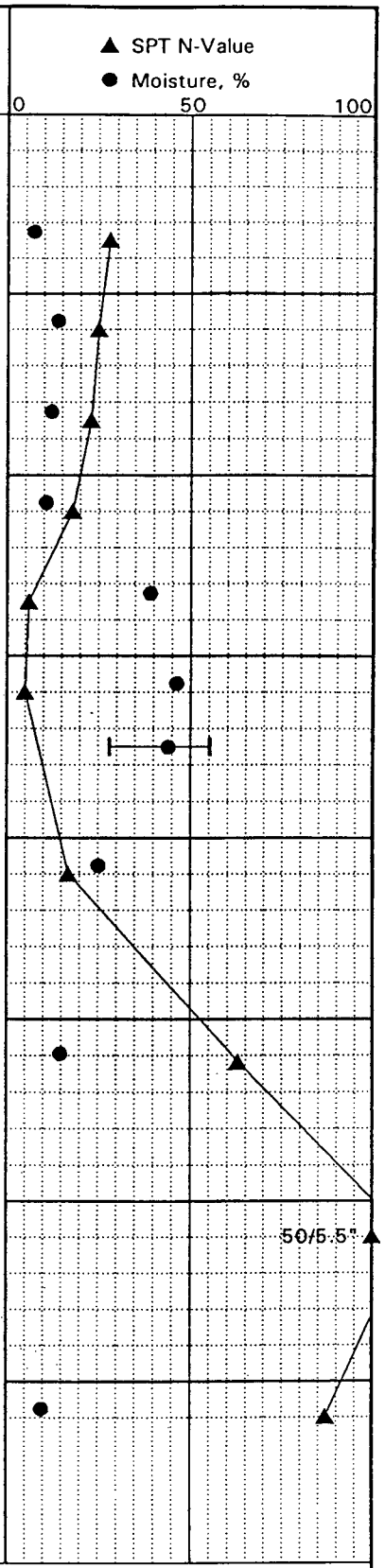
FIG. 4

FHA

WLG MLTCF 10/27/98

Ground Water	Remarks	Elev. Depth Feet	CLASSIFICATION OF MATERIAL	Log	Depth In Feet	Samples
		29.1	**Poorly graded SAND FILL**, medium dense, moist, micaceous, fine grained with trace of medium and coarse grained sand and fine gravel. (Dredged sand fill).		0	
						S-1
					5	
						S-2
						S-3
					10	
						S-4
			Becoming loose and wet at 12 feet (possible perched water), gray at 13.1 feet, some organic debris at basal contact.			S-5
		14.6				
		14.5	**Fat CLAY grading to Elastic SILT**, loose, gray, moist to wet, medium plasticity at upper contact grading to low plasticity, micaceous, trace of coarse reedy, woody and carbonaceous and fine disseminated organics.		15	
						S-6
	Dry wt. = 74.4 pcf					S-7
	10/8/98		Transitional contact with underlying material.			
	10/15/98	8.6			20	
		20.5	**Poorly graded GRAVEL** ranging to with SAND in places, medium dense grading to very dense by 25 feet, gray, wet, low plasticity matrix in places, micaceous, rounded to sub-angular, coarse to fine gravel with trace of cobbles, relatively open-work.			S-8
					25	
						S-9
					30	
						S-10*
					35	
		-7.4				S-11
		36.5	Bottom of Boring, Completed 10/8/98			



LEGEND

- = 2.0" O.D. Split Spoon Sample
- = 3.0" O.D. Thin-Walled Sample
- • = Sample Not Recovered
- = Grab Sample: Drill Cuttings
- = Core Rock Sample

NOTE:
Lines between soil/rock units are approximate and transition may be gradual.

- Imprevious Seal (Bentonite)
- Cement Grout
- Random Backfill
- Granular Backfill
- Ground Water Level on Date Shown
- Piezometer/Inclinometer Tubing
- Perforated Zone

ATTERBERG LIMITS
- Liquid Limit
- Natural Water Content
- Plastic Limit

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LOG OF BORING B-3

page 1 of 1

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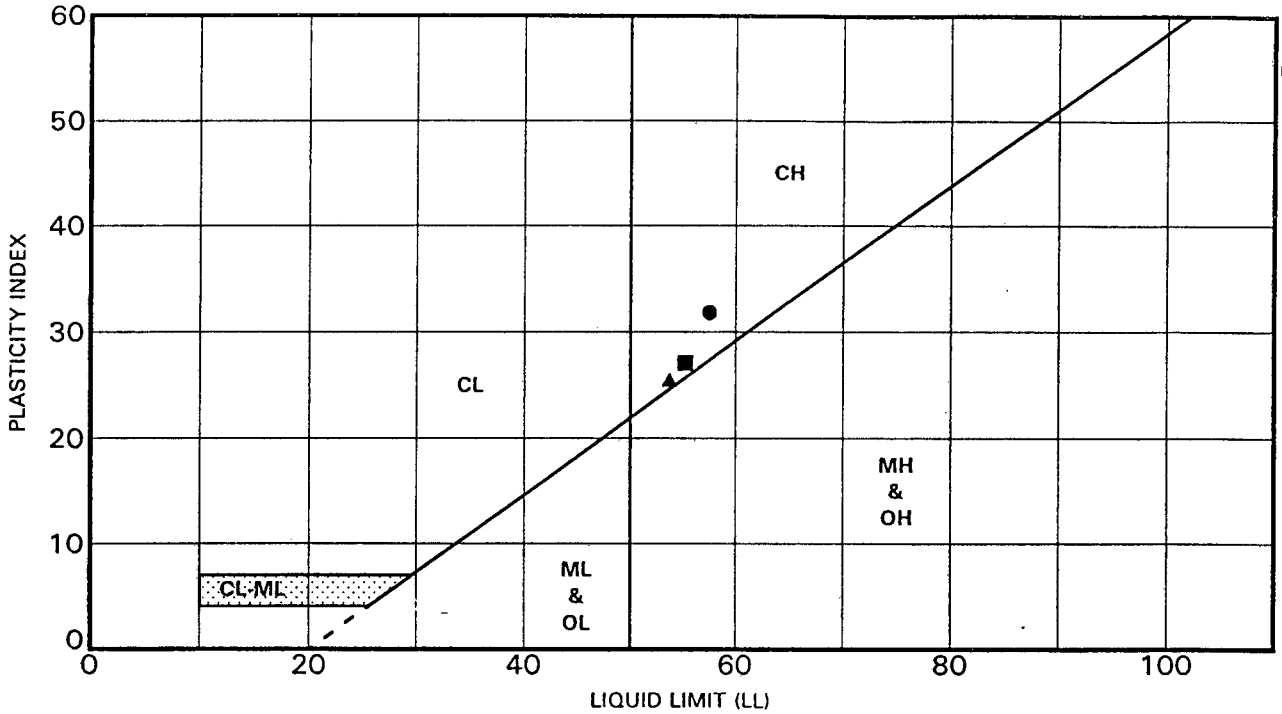
FIG. 5

FHA

WLG MLTCF 10/21/98



	Hole	Depth	LL	PL	PI	wc %	Classification
●	B-1	20.5	58	26	32	40.4	
▲	B-2	28.5	54	28	26	53.0	
■	B-3	17.5	55	28	27	44.0	

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PLASTICITY CHART

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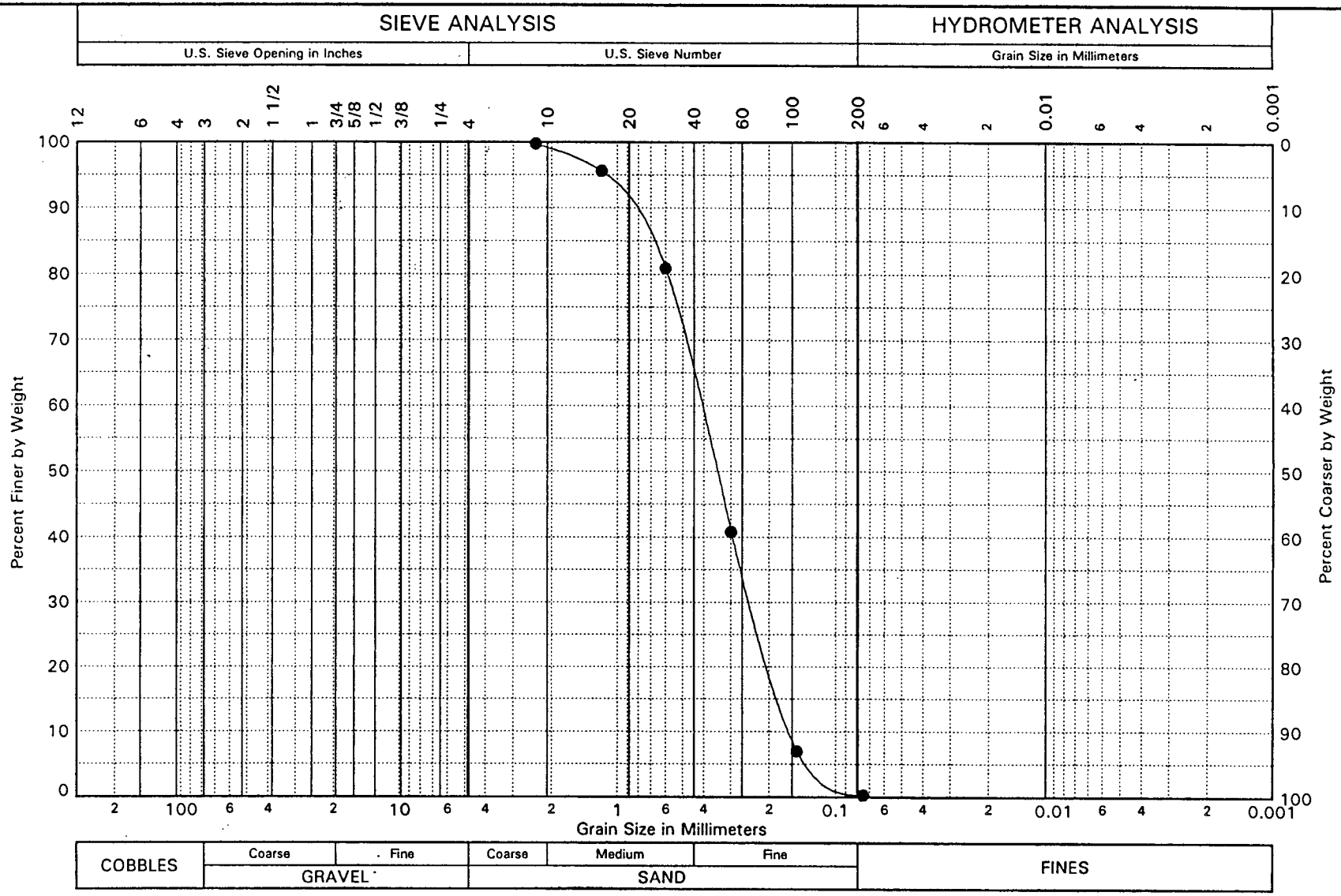
FIG. 6

FHA

ATTCHART MLTCF 10/27/98

GRNSIZE MLTCF 10/27/98



	Hole	Depth	USC	Classification	wc%	LL	PL	PI
●	B-3	7.5	SP	Poorly Graded SAND FILL, medium dense, moist, fine grained.	13.8			

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GRAIN SIZE DISTRIBUTION

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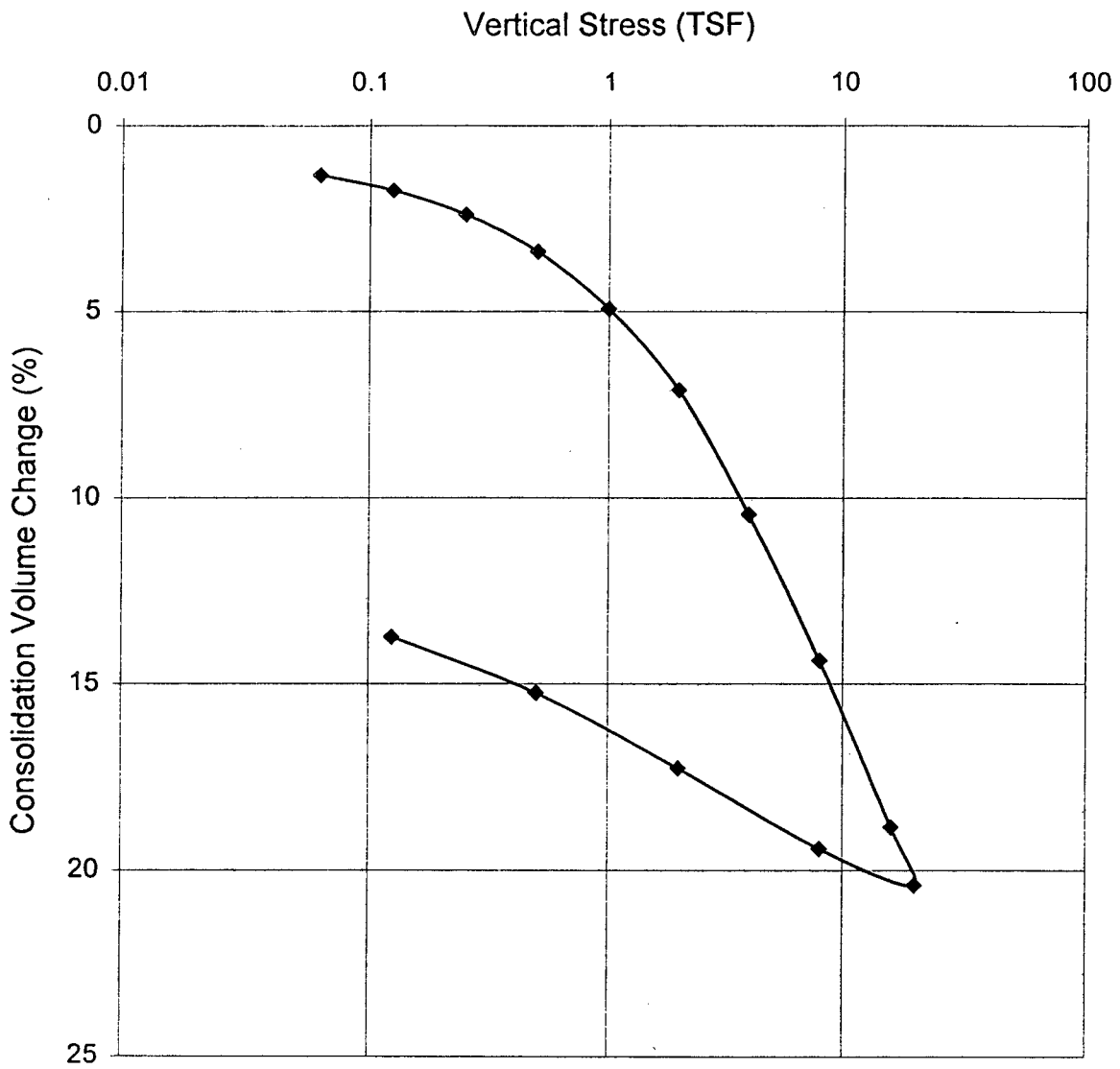
FIG. 7

FHA



SPECIMEN

Boring Number: B-1

Sample Number: S-9

Depth (ft): 21

Diameter (in): 2.50

Initial Height (in): 0.926

Initial Wet Density (pcf): 110.3

Initial Water Content (%): 42.4

DESCRIPTION:
Fat CLAY, medium stiff, mottled light gray and brown, moist.

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CONSOLIDATION TEST

Boring B-1, Sample S-9

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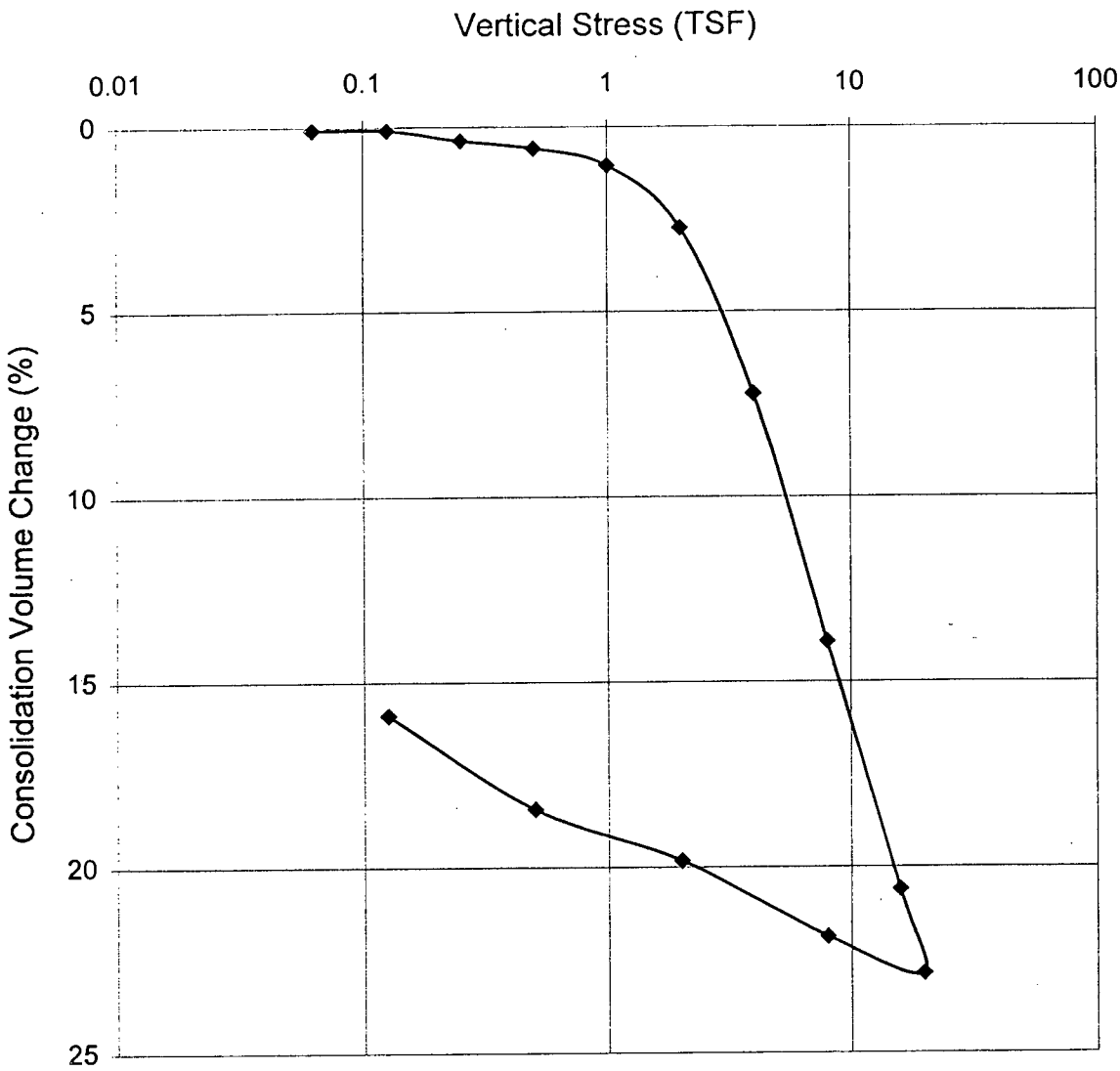
Portland, Oregon

FIG. 8



SPECIMEN

Boring Number: B-2

Sample Number: S-10

Depth (ft): 28

Diameter (in): 2.50

Initial Height (in): 0.929

Initial Wet Density (pcf): 106.5

Initial Water Content (%): 53.0

DESCRIPTION:
Fat CLAY, medium stiff, mottled light gray and brown, moist.

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CONSOLIDATION TEST

Boring B-2, Sample S-10

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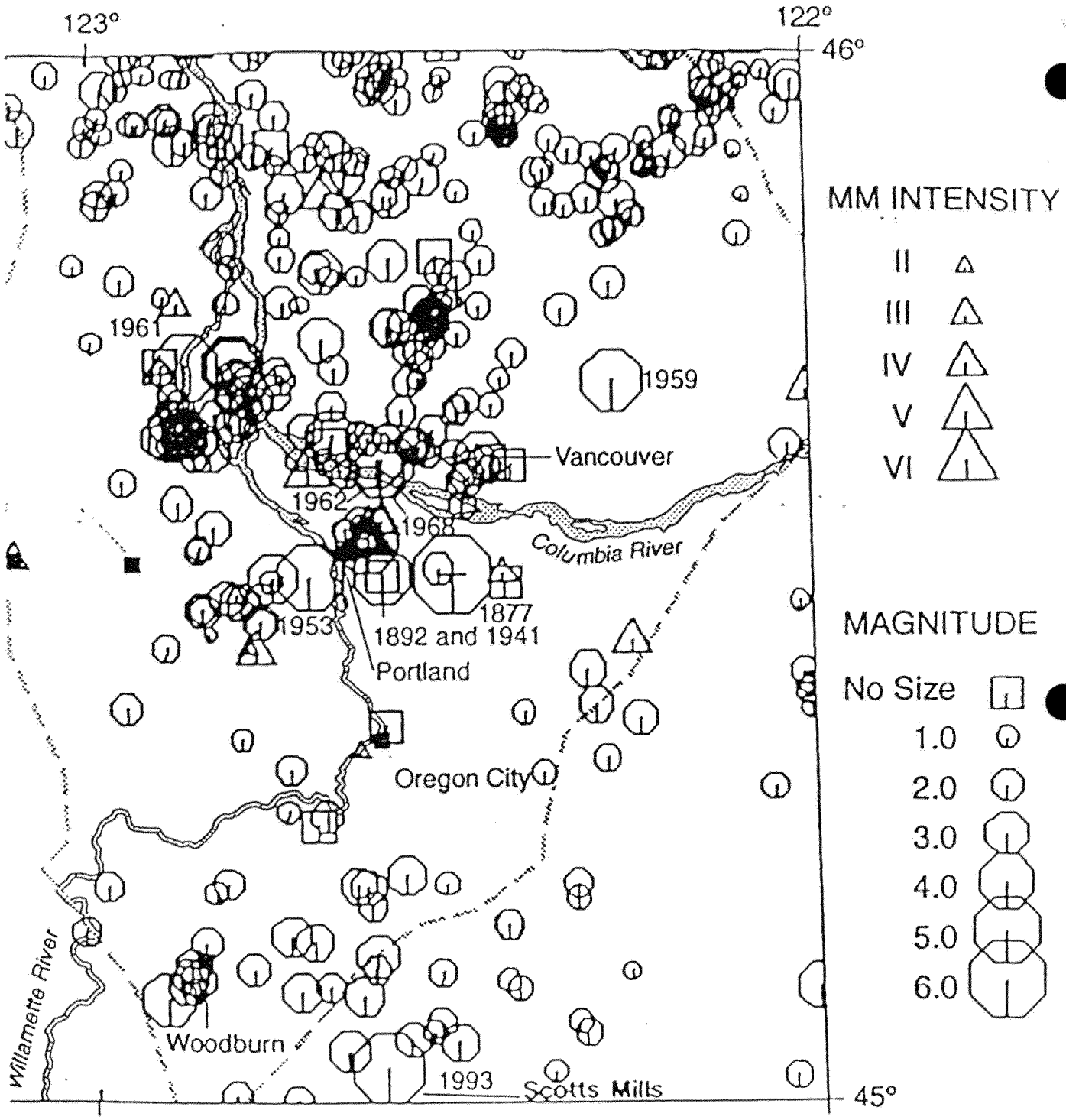
FIG. 9



Not to Scale

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HISTORICAL SEISMICITY OF NW OREGON - 1846 TO PRESENT

October 1998 *F-3003.01*

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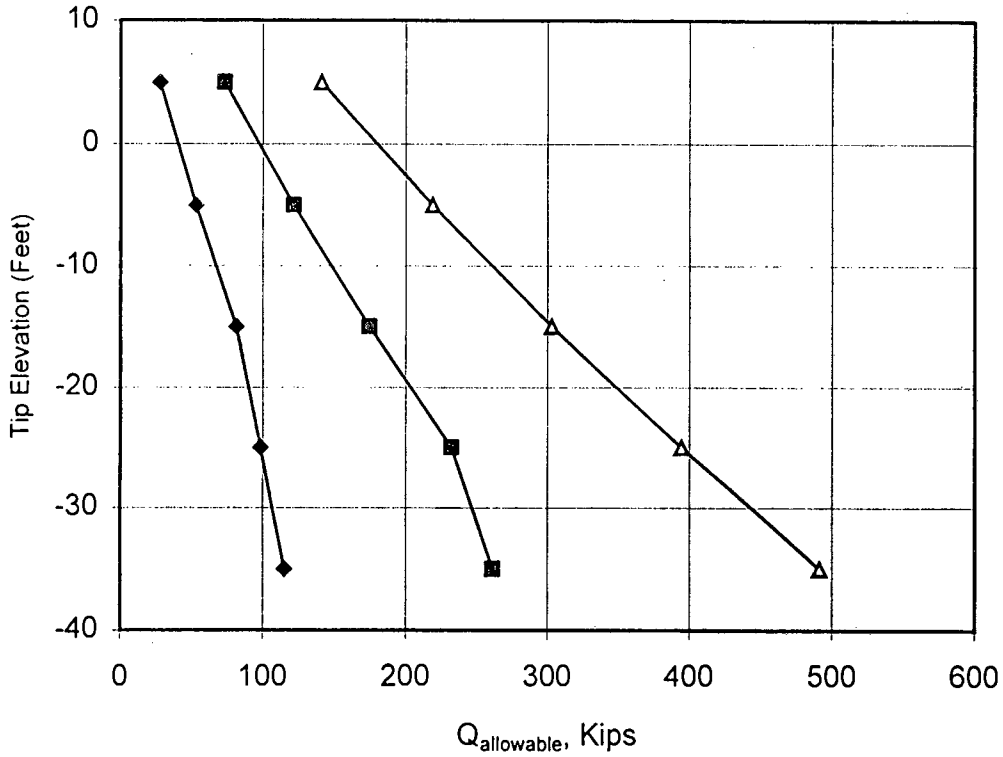
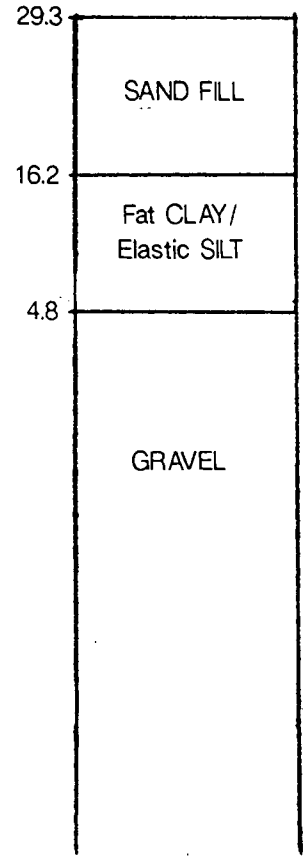
Geotechnical Consultants
Portland, Oregon

FIG. 10

Reprinted from Bott and Wong (1993)

Allowable Pile Capacity
Driven Steel Pipe Piles
Location: B-1





= $Q_{allowable}$ 12" Steel Pipe Pile

= $Q_{allowable}$ 18" Steel Pipe Pile

= $Q_{allowable}$ 24" Steel Pipe Pile

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SINGLE PILE CAPACITY
BORING B-1

October 1998 *F-3003.01*

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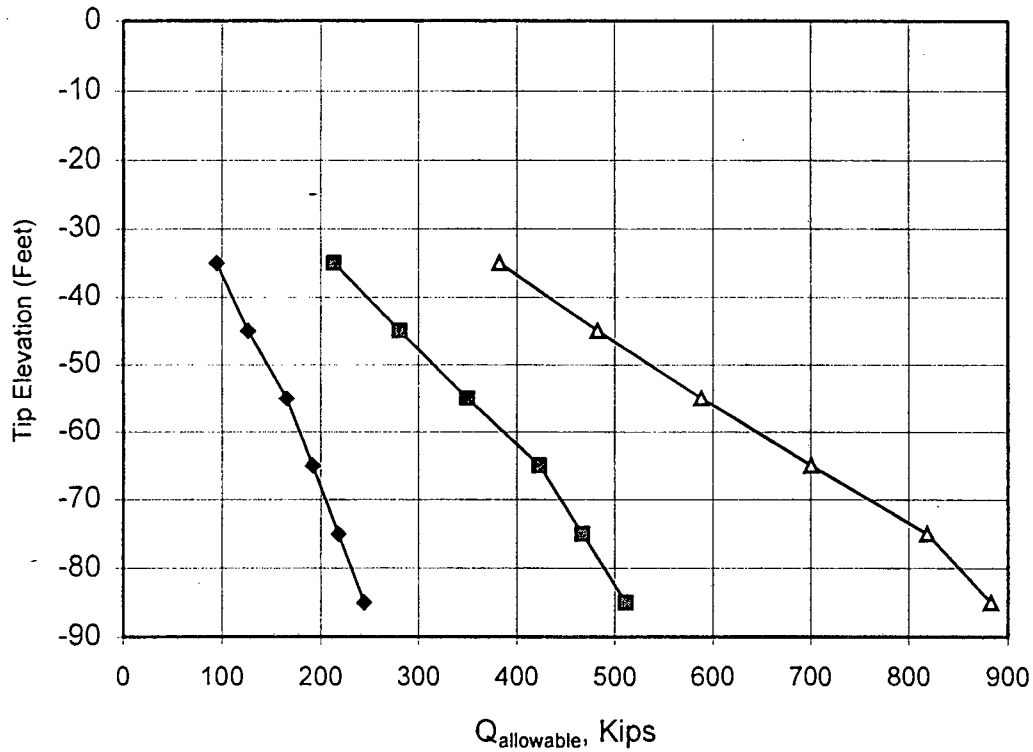
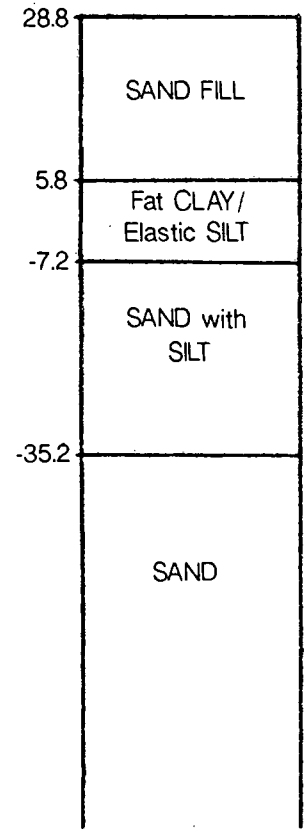
FIG. 11

Allowable Pile Capacity
Driven Steel Pipe Piles
Location: B-2





= $Q_{allowable}$ 12" Steel Pipe Pile

= $Q_{allowable}$ 18" Steel Pipe Pile

= $Q_{allowable}$ 24" Steel Pipe Pile

Multnomah Co. Corrections Facility
Portland, Oregon

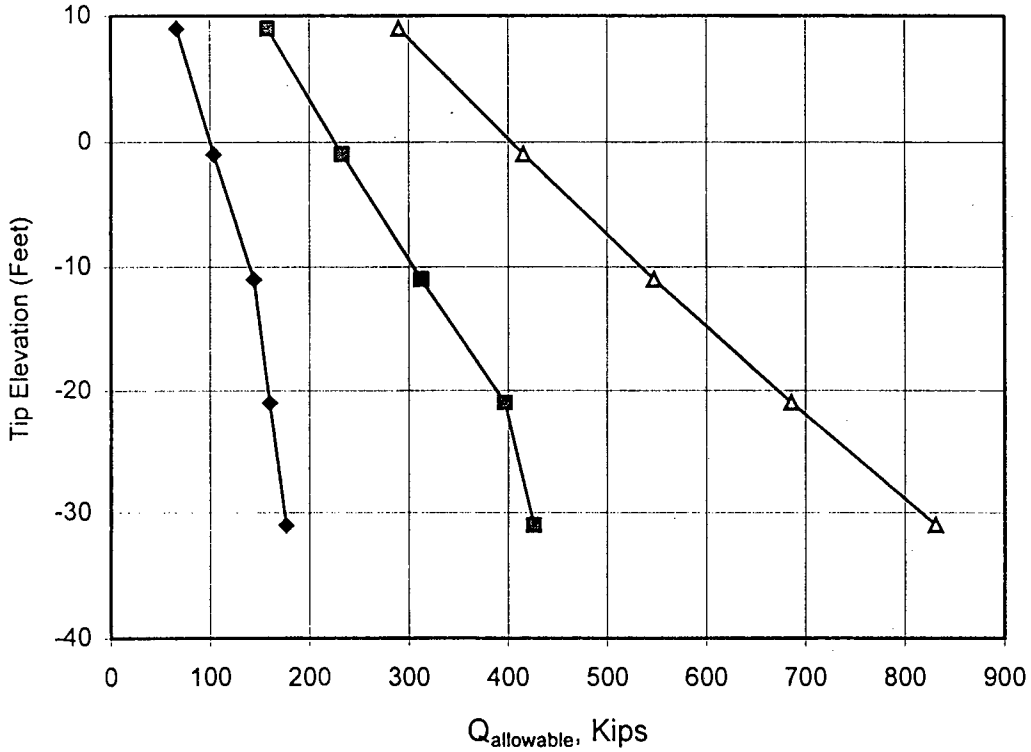
SINGLE PILE CAPACITY
BORING B-2

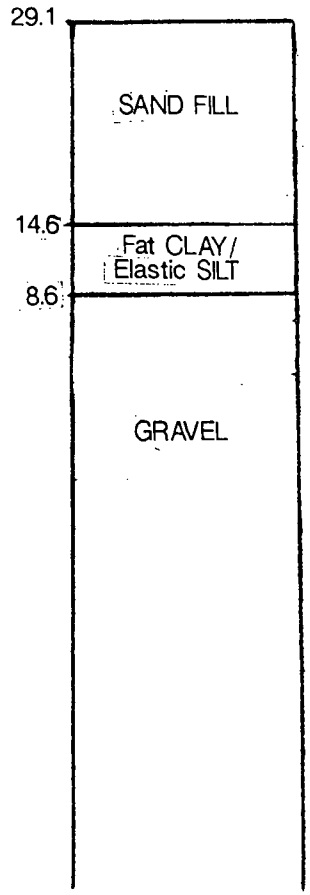
October 1998 *F-3003.01*

Fujitani Hilts & Associates
Geotechnical Consultants
Portland, Oregon

FIG. 12

Allowable Pile Capacity
Driven Steel Pipe Piles
Location: B-3





= $Q_{allowable}$ 12" Steel Pipe Pile

= $Q_{allowable}$ 18" Steel Pipe Pile

= $Q_{allowable}$ 24" Steel Pipe Pile

Multnomah Co. Corrections Facility
Portland, Oregon

SINGLE PILE CAPACITY
BORING B-3

October 1998 *F-3003.01*

Fujitani Hilts & Associates
Geotechnical Consultants
Portland, Oregon

FIG. 13

ATTACHMENT 5-2

FHA

PROJECT MEMORANDUM

To:	**Tom Gross**	Project No.:	F-3003.01
Company:	KMD Architects		
From:	Liane Scull, P.E. LMS K. Frank Fujitani, P.E. KFF		
Project:	Multnomah County Corrections Facility, Rivergate, Portland, Oregon		
Subject:	**Cost Estimate to Mitigate the Liquefaction Potential for Phase 1**		
Date:	November 5, 1998 (Revised November 9, 1998)		

At your request, Fujitani Hilts & Associates has developed this preliminary cost estimate for mitigation of the liquefaction potential at the site for the above-referenced project. The cost estimate was developed based on discussions with local contractors and a review of the following:

- Geotechnical Report entitled *Seismic Site Investigation and Preliminary Geotechnical Investigation, Proposed new Multnomah County Corrections Facility, Portland, Oregon* dated October 30, 1998 by Fujitani Hilts & Associates
- The location, orientation, and building footprint for the Phase I improvements supplied by you.

Three borings were drilled for this preliminary geotechnical report. All of the borings encountered a dredged sand fill material that mantles the site underlain by a compressible silt/clay layer. Two borings were terminated in a gravel layer that underlies the silt/clay layer between 21 and 25 feet below the ground surface. The third boring did not encounter the gravel layer, even at a depth of 111 feet below the ground surface. Evaluation of this data indicates that the soil profile across the site is very variable, and we recommend more subsurface investigations occur as the design process moves forward.

Based on our review, the location and orientation of the Phase 1 improvements are in the vicinity where the two borings encountered gravels at a depth between 21 and 25 feet. Portions of the Phase 2 improvements are located in the area where sand was encountered in the bottom of the boring at a depth of 111 feet.

Our report presented three methods to mitigate the liquefaction potential at this site, and these are briefly described below:

- Vibroflotation - a technique in which a water-jetting, vibrating probe is lowered into the ground to densify the loose soils.

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- Deep dynamic compaction - The soils are compacted by dropping weights up to about 20 tons from a distance of about 100 feet. This method is limited to a depth of about 35 feet, and not viable for the Phase 2 improvements.
- Driving closely spaced compaction (displacement) piles – Based on our studies, a center to center pile spacing of 3 to 4 pile diameters will be required under the footprint of the structure. Our report also indicates that piles need to be driven a distance of at least 50 feet beyond the perimeter of the structure to protect the piles needed to support the structural loads. However, a more detailed evaluation of the closely spaced compaction piles in the **vicinity of the Phase 1 improvements only,** indicates that this 50 foot criteria can be reduced to 15 feet. This 50 foot criteria is still valid for the Phase 2 improvements.

Cost estimate for two alternatives to reduce the liquefaction potential at this site for the **Phase 1 improvements** are presented below.

1. Driving closely spaced compaction piles. We have assumed that 18-inch diameter steel, closed-end pipe piles will be driven through the dredged fill sand material into the underlying elastic silt/clay material. These piles will be spaced at 3.5 pile diameters, a 5.25 foot center to center pile spacing. We have also assumed that the piles will need to be a minimum of 15 feet beyond the perimeter of the footprint and that these piles will not be filled with concrete, but just capped. This system would require 2,650 piles to an average depth of 15 feet.

   In addition, it should be noted that the bearing gravel layer was encountered at a depth of about 21 to 25 feet below the ground surface. Some of the compaction piles could be driven into the gravel layer, filled with concrete and used to support the structural load of the building.

   Based on conversations with you, we understand that 200 piles with a 100 kip capacity will be necessary to support the proposed structure. The following preliminary cost estimate is based on 2,450 piles driven an average of 15 feet into the silt/clay layer to mitigate the liquefaction potential and another 200 piles driven into the gravel layer at an average depth of about 30 feet for a total of 2,650 piles. The cost to install these piles is on the order of $955,000. It should be noted that this cost includes mobilization, profit and overhead. However, it does not include pile caps, filling the piles with concrete, or other reinforcing steel to tie the piles to the pile caps.

2. Deep Dynamic Compaction. This method will be suitable for the Phase I improvements. However, it is not suitable for the Phase 2 improvements due to the depth of the liquefiable soils and the impacts to the Phase 1 improvements. The cost to densify the soils by this method is on the order of $130,000 for the **Phase I improvements only**. This includes mobilization, profit and overhead.

This method of compaction will lower the site by about 12 inches. The preceeding cost estimate of $130,000 includes end dumping and spreading 12 inches of sand material on the site, but no other compaction or site work. This cost includes deep dynamic compaction within 15 feet of the perimeter of the footprint of the building. This cost was developed based on conversations with Haywood Baker, a contractor experienced in deep dynamic compaction.

It should be noted that the deep dynamic compaction method does not include the cost of bearing piles that would be necessary to support the structure. A preliminary cost to install 200 bearing piles to an average depth of 30 feet into the gravels is on the order of $250,000 in addition to the $130,000 for the deep dynamic compaction. Again, it should be noted that this $250,000 only includes on the installation of the piles and includes mobilization, profit and overhead. However, it does not include pile caps, filling the piles with concrete, or other reinforcing steel to tie the piles to the pile caps.

We also recommend that this site be monitored for effectiveness of the densification process for planning the Phase 2 improvements using cone penetration methods or a similar technique. We estimate that $6,500 be budgeted for monitoring.

It should be noted that the cost to mitigate the liquefaction potential for the Phase 2 improvements will be much higher than the Phase 1 improvements due to the depth of the liquefiable soils and the much larger footprint of the structure. We are working with a Contractor experienced with Vibroflotation techniques to estimate the effectiveness of this method for the Phase 2 improvements and the relative cost to implement the methodology for Phase 2. Driving compaction piles for Phase 2 will be much higher than the $900,000 cost estimate for the Phase 1 improvements.

Please call us if you have any questions, or need further clarification.

ATTACHMENT 5-3

TRANSPORTATION REPORT

A. Summary

This section summarizes the primary transportation issues for development of the MCNCF in the North Rivergate Industrial Area at the Leadbetter Peninsula site. The information in this section was obtained through field investigation, analysis, and contacts with staff at the City of Portland, Oregon Department of Transportation, Port of Portland and Burlington-Northern/Sante Fe (B-N/SF) Railroad.

The primary transportation issues include the following:

1. The impact of the adjacent B-N/SF rail line and planned rail system improvements, including the need for a new at-grade crossing of the B-N/SF tracks south of North Marine Drive and west of the existing Leadbetter Road crossing, and if needed, the requirements for a crossing application;
2. Access to the site for daily and emergency vehicle traffic;
3. Likely requirements for transportation improvements by the City of Portland as part of the development review process;
4. Traffic generated by the corrections facility; and
5. Roadways likely to be used for site access.

These issues are summarized in the following sections, with additional detail provided in the body of the report.

1. Adjacent B-N/SF Rail Line Issues

Based on analysis of existing and future rail operations, discussion with the MCNCF Commander, and information provided by City of Portland planning staff, the adjacent rail line does not pose a "fatal flaw" for the site. The project would likely be required to install flashing signals and crossing gates at the existing at-grade Leadbetter Road railroad crossing, at a cost of $80,000 - $100,000. These improvements would benefit other properties in the area.

The B-N/SF North Rivergate rail line passes about 600 feet south of and parallel to North Marine Drive. Leadbetter Road cuts across the rail line at an uncontrolled at-grade crossing southwest of the intersection of North Marine Drive and North Leadbetter Road. This crossing would be used by all vehicular traffic to and from the corrections facility site. Existing rail activity can block the crossing for up to 6 minutes twice each weekday. With planned near-term rail enhancements, the B-N/SF line would accommodate longer 6,500-foot unit trains, which would block the crossing up to 7.4 minutes four times daily. The potential exists for longer blockages if the track is used for switching or maneuvering activity. Existing and potential blockages of the North Leadbetter Road crossing are not considered a "fatal flaw" for the corrections facility site. Architectural site design measures would be incorporated to address fire, safety and security issues. A communication protocol would be

established with the railway to alert train operators in case of an emergency at the facility.

The site lies on an undeveloped peninsula extending into Bybee Lake. To provide vehicular access to the site, North Leadbetter Road would be extended from its existing terminus, and a new roadway constructed connecting the extension of North Leadbetter Road to the site. The Port of Portland circulation plans call for North Leadbetter Road to be extended in a loop configuration to rejoin Marine Drive at the T-6 access drive, about 3,200 feet west of the existing intersection of North Marine Drive with North Leadbetter Road.

An extension of North Leadbetter Road back to North Marine Drive would create a second at-grade crossing. However, it appears that the site would be served adequately with one access point to North Leadbetter Road, thereby avoiding the issue of a second at-grade crossing. According to ODOT Rail Safety staff, the MCNCF project would be responsible for signalizing the existing North Leadbetter Road rail crossing at an estimated cost of $75,000-100,000. Other properties along North Leadbetter Road would also benefit from signalizing the crossing. Any cost sharing would be a private-party arrangement.

2. Emergency Vehicle Access

Emergency vehicle access does not pose a potential "fatal flaw" for the site. Internal sprinklers and a perimeter roadway around the site with room for fire trucks to turn around are included in the facility design and meet the needs of the City Fire Marshal.

A single access roadway would require the facility design to address the potential for delays in emergency vehicle response. Design features would include sprinklers, strategically located fire-resistant locations within the facility, refuge areas outside of the building but within the security perimeter, and electronic and/or video monitoring of the rail crossing. Coordination between MCNCF site operations and rail traffic managers is required by state law.

3. Potential Site-Related Transportation Improvements

Transportation improvements could be required by the City or the Port of Portland as part of the site purchase agreement. Potential transportation improvements would be part of the cost of the project, and would not constitute a "fatal flaw" for the site. The primary transportation costs would be for the extension of North Leadbetter Road and construction of a site access roadway connecting to North Leadbetter Road. Improvements could be required at the intersection of North Marine Drive with North Leadbetter Road. A traffic signal could be required for the expanded project, at a cost of approximately $100,000.

A new site access roadway would connect the site to the extension of North Leadbetter Road. The access road would be built to City standards, consistent with the existing North Leadbetter Road cross-section. There would be no credit for transportation system development charges (SDC) assessed on the new facility. The new roadway would be a local industrial street, and collector or arterial designation

is required for SDC credits. However, the new roadway would provide access for undeveloped industrial parcels in the Port of Portland land immediately north of the jail site.

The unsignalized intersection of North Marine Drive at North Leadbetter Road accommodates low volumes of turning traffic during the morning and afternoon peak periods. No level of service or congestion issues at this location are expected with the initial 225-bed facility. Adequate street lighting would be necessary, if not already present. Additional streetlights would cost approximately $10,000 each. One new street light would be sufficient for the intersection.

The initial facility would generate less than 50 vehicle trips during the p.m. peak hour, compared with an estimated 200 p.m. peak hour trips with an expanded, 2,000-bed facility. Improvements at the North Marine Drive/North Leadbetter Road intersection would likely be necessary to accommodate an expanded 2,000-bed facility at the site, in combination with development of adjacent Port of Portland industrial property. Required improvements could include signalization, if warrants are satisfied with projected traffic from the expanded corrections facility in combination with traffic generated by other development in the area. As discussed above, a traffic signal would cost approximately $100,000. Other improvements could include providing additional left turn storage, which could be accomplished by revising signing and striping at minimal cost (e.g., $2,000-$5,000).

Marine Drive provides access from the North Rivergate site to both the Inverness County Jail and I-5. The I-5/Marine Drive route would be used to transfer prisoners to and from the downtown Justice Center and courts. Columbia Boulevard and Lombard Street provide alternate routes to the site. However, Marine Drive is a more direct route than either Columbia Boulevard or Lombard Street, which runs through the St. Johns community. Site-generated traffic on Lombard Street would be expected to be limited to locally –generated employment and visitor trips to and from the facility.

4. <u>Corrections Facility Traffic Generation</u>

The initial 225-bed facility would generate significantly less traffic than allowed industrial uses such as manufacturing or warehousing. Development of an expanded facility with up to 2,000 beds would generate traffic volumes that would be less than the traffic generated by warehouse use of the site, and comparable to traffic generated by manufacturing use on the site. Traffic generation is not a potential "fatal flaw" for the site. The difference in trip generation between the proposed corrections facility and allowed industrial warehouse or manufacturing use could be used to justify a reduction in the transportation system development charges assessed with a development application.

The initial 225 –bed facility would generate about 200 daily vehicle trips, including about 30 during the AM peak hour and 50 during the PM peak hour. With potential expansion to 2,000 beds, about 800 daily vehicle trips would be expected, including about 100 in the AM peak hour and 145 in the PM peak hour.

In contrast, if developed as warehouse use, the 22 net developable acres on the site

would generate about 1,280 trips per day, including about 220 trips during both the AM and PM peak hours. Manufacturing is also an allowed use on the site. If the site were developed as a manufacturing use, an estimated 855 daily vehicle trips would be generated, including about 165 in the AM peak hour and 185 in the PM peak hour.

The percentage of peak hour, peak direction traffic on Marine Drive that would be generated by the site if the corrections facility is built was compared to the percentage if the site were to be developed as warehouse or manufacturing use, both of which are allowed under current zoning. The estimated peak hour trip generation from a 2,000-bed corrections facility represents about 8 percent of peak direction AM peak hour traffic and 16 percent of peak direction PM peak hour traffic on Marine Drive east of North Leadbetter Road. The comparable trip generation with warehouse development of the site represents 21 percent of peak direction AM peak hour traffic and 22 percent of peak direction PM peak hour traffic on Marine Drive. A manufacturing use at the site would generate about 20 percent of peak direction Marine Drive traffic in the AM peak hour, and 15 percent in the PM peak hour.

According to City staff, the transportation system development charge (SDC), which is based on the potential trip generation of the specific land use, would be assessed based on development of the site as warehouse use. However, the estimated trip generation for the corrections facility indicates that the trip generation rate would be lower than that of warehouse use. A cost savings in the transportation SDC assessment could be realized by collecting actual driveway counts at the Inverness County Jail and submitting the information with the development application to support the determination of the transportation SDC.

5. Likely Facility Access Routes

Marine Drive, Columbia Boulevard and Lombard Street all provide potential access routes to and from the site. Based on travel time surveys, the length of the road segments, posted speed limit, the number of traffic signals and other characteristics, it is clear that most traffic to and from the site would use Marine Drive. Trips to and from the site on Lombard Street or Columbia Boulevard would be a small portion of the total traffic generated by the facility.

B. Introduction and Description of Existing Transportation System

Multnomah County is investigating a site in the North Rivergate Industrial Area as the preferred alternative for Multnomah County's New Corrections Facility (MCNCF). The North Rivergate site is located south of North Marine Drive on a peninsula bordered by the Columbia River Slough to the west, Bybee Lake to the west, south and east, and the Port of Portland's Rivergate Industrial Area to the north. Site access would be provided by a new roadway along the peninsula, which would connect to North Marine Drive via a westerly extension of North Leadbetter Road.

The facility is planned to be built in phases. The initial phase, approved by the voters of Multnomah County in 1996, would be a 225-bed jail. The facility's planning and design addresses a potential build-out, which could expand the facility to some 2,000 beds within a 20-year timeframe. Inmates would be transported to and from Inverness County Jail or the Justice Center for booking and to the downtown Justice Center for release processing. No

inmate booking or release would take place at this facility.

1. Street Network

The proposed site is located on a peninsula just south of North Marine Drive in the Port of Portland's North Rivergate Industrial Area. Access to the site from the regional street system would be provided by Marine Drive, Columbia Boulevard and Lombard Street. Official traffic is expected to use I-5 and Marine Drive. Visitor and employee traffic could use other routes, but Marine Drive would be the primary access route to and from the site. North Leadbetter Road would provide a direct connection from Marine Drive to the facility's access road. These routes and the street network surrounding the site are summarized below, along with the street functions and classifications listed in the 1992 City of Portland Comprehensive Plan Transportation Element.

Interstate 5 (I-5), a designated Regional Trafficway, is located east of the site and provides the most direct route between the project site and the downtown courthouse and Justice Center. The most direct access to the project site from I-5 is via Marine Drive. Other possible routes from I-5 include NE Columbia Boulevard and NE Lombard Street. I-5 has three lanes in each direction with interchanges at Marine Drive, Columbia Boulevard, and Lombard Street. I-5 is a Regional Truck Route and a Regional Transitway. According to the Oregon Department of Transportation's permanent traffic count stations, in 1997, I-5 carried average daily traffic volumes of 115,000 on the Interstate bridge north of Portland, and 129,000 vehicles at Ainsworth Street south of the site. During the morning peak period (approximately 7:00 a.m. – 9:00 a.m.), I-5 is congested in the southbound direction with commuter traffic to downtown Portland. The outbound commute creates delay on northbound I-5 in the afternoon. On weekends, traffic generally moves freely on I-5 near Marine Drive. Limited weekend congestion occurs during the summer due to major events at the various entertainment venues on either side of I-5 between Columbia Boulevard and Marine Drive.

Marine Drive is a Major City Traffic Street, Major Truck Street, and Major City Transit Street which provides access to I-5 for the industrial uses in the Rivergate district. Marine Drive will be the primary route to and from the Inverness County Jail located off NE 122nd Boulevard, and to the downtown courthouse and Justice Center via I-5. Marine Drive has one lane in each direction with a center left turn lane near the site, and widens to a four-lane road before reaching I-5. The intersections of Marine Drive with the I-5 ramps are signalized. Stop sign control for the side streets is in place where North Marine Drive intersects North Leadbetter Road and the T-6 access roadway. No parking is allowed on North Marine Drive, and the speed limit near the site is 45 mph.

Columbia Boulevard is a four-lane facility designated as a Major City Traffic Street, Major Truck Street, and Major City Transit Street. It serves as the southern boundary of the North Portland Truck District designated in the Transportation Element of the City's Comprehensive Plan. Columbia Boulevard offers an alternative, less direct route to the MCNCF site.

Lombard Street, a District Collector and a Major City Transit Street, is another alternative access road to the project site. This route to the site has potential to receive opposition from local neighborhoods if the development causes noticeable increases in through traffic. However, this is highly unlikely based on travel time comparison of Lombard Street compared to Marine Drive. With 19 traffic signals on Lombard Street between I-5 and Marine Drive, many driveways, transit stops and pedestrian activity, the use of Lombard Street to reach the site would be minimal. Travel from I-5 to the site via Lombard Drive takes about 50 percent longer than travel time via Columbia Boulevard, and about twice as long as travel via Marine Drive.

North Leadbetter Road is a Local Service Street that ends at a stop-controlled intersection with Marine Drive. North Leadbetter Road would provide access from Marine Drive to the private roadway serving the MCNCF site. Currently, North Leadbetter Road is a dead-end road serving a number of industrial buildings. The Port of Portland's circulation plans show North Leadbetter Road extended to the west to create a loop which would rejoin North Marine drive at the Terminal 6 access. The existing portion of North Leadbetter Road consists of two 21-foot travel lanes with sidewalks on both sides and no parking allowed.

2. Transit Service

Transit service for the site is indirect, and limited. Tri-Met Bus 6-MLK to and from the North Rivergate Industrial Area along Marine Drive is limited to weekday peak period service, approximately 6 a.m. to 9 a.m. and 2:30 p.m. to 6 p.m. Transit is expected to carry a very small share of site-generated trips because the distance from the site to the nearest transit stop is well over ½ mile, generally considered to be the maximum acceptable distance for transit access. Relocating the transit stop as close as possible to the site on North Marine Drive would still leave it about ¾ mile from the site entrance.

C. Primary Transportation Issues

The primary issues investigated in this transportation assessment are the impacts of rail traffic on site access, the adequacy of emergency vehicle access, potential street improvements, and the primary access routes. A potential transportation demand management program is summarized at the end of the section.

1. Issue - Rail Traffic Activity

The primary B-N/SF rail line to the Rivergate Industrial Area rail facilities runs east-west, parallel to and about 600 feet south of North Marine Drive. There is an uncontrolled at-grade rail crossing with this line on the existing section of North Leadbetter Road. If North Leadbetter Road were extended to loop back to North Marine Drive, an additional at-grade crossing would be created about 3,200 feet west of the existing at-grade crossing. According to B-N/SF staff, the rail line currently carries two unit trains/day traveling at approximately 10 mph. Unit trains on this route average one mile in length. Under these conditions, a unit train would block each crossing on Leadbetter Road for 6 minutes. If North Leadbetter Road were

extended to create a new at-grade crossing 3200 feet west of the existing at-grade crossing, a one-mile long unit train could block both crossings simultaneously for 2.4 minutes. The time of day that the track crossings are blocked is based on the arrival of seagoing freighters, and is therefore somewhat variable. However, trains to the terminal generally run at night, in order to be in place when longshoremen arrive at work in the morning.

The Port of Portland plans to double-track this line within 5-10 years, once freight traffic increases warrant the expansion. Rail traffic on the double-track line could range from six to twelve total train movements per day, including three to four full-size unit trains (6500 ft.). Again, the daily schedule of train movements would vary according to freight movement patterns. Assuming trains continue to move at 10 mph, under worst case conditions (trains arriving at the same crossing concurrently from opposite directions), individual crossings could be blocked for 14.8 minutes, and both crossings could be blocked simultaneously for 7.4 minutes. With low numbers of trains, empty trains arriving generally during the night and loaded trains departing generally during the day, it is unlikely that trains from opposite directions would arrive at the same time.

With the expected level of unit train activity, rail crossings typically would involve only one 6,500 foot unit train, which would block a single crossing for 7.4 minutes, and block both crossings for 3.7 minutes.

According to ORS 824.222 and OAR 741-125-0010, railroads are restricted on the length of time a crossing can be blocked by a stationary train to discourage switching train cars and loading freight on or near an at-grade crossing. Crossing blockage is limited to no more than 10 minutes between 6 a.m. and 10 p.m. There are, however, no restrictions on the length of time a road can be blocked if a train is moving, or if it has an equipment failure or other issue which creates a "legitimate" reason for blocking the crossing. State rail safety staff investigate every allegation of excess blockage time, and fines of up to $3,000 per incident can be assessed. The assessment of a fine is a criminal court proceeding. Railway operators are required under OAR 741-125-0010 to provide emergency response agencies with a contact and a procedure to follow if an at-grade crossing needs to be cleared for emergency vehicle access.

In the 1.5 years that the B-N/SF Rivergate track crossing of North Leadbetter Road has been open, there has been one complaint actually filed, which was dismissed. Discussion with the B-N regional freight supervisor indicates that B-N/SF opposes any new at-grade crossings on North Leadbetter Road, because it would restrict maneuvering room for long unit trains.

The Port of Portland's circulation plans include extending North Leadbetter Road in a loop configuration to intersect North Marine Drive. The second access from North Leadbetter Road to North Marine Drive would not be necessary to serve the project. The discussion is included in this report for informational purposes only. An extension of North Leadbetter Road would require an additional at-grade rail crossing of the B-N/SF rail line. A new at-grade crossing would require state approval, and would be subject to input from B-N/SF. If negotiations with B-N/SF are unsuccessful, it would still be possible to obtain approval for a new at-grade crossing

through the judicial review process, but at additional time and financial costs. The new crossing would require activated crossing signals. However, the extension of North Leadbetter Road and a new at-grade crossing is not critical for site access. The following discussion applies only if a second at-grade crossing is included as part of the project.

Obtaining a permit to construct a road with a new at-grade crossing can be complex and time consuming. The process begins with the road authority (City of Portland) filing an application for the crossing to ODOT's Rail Section. This application must explain in detail why the crossing is needed, and why a grade-separated crossing is not a feasible option. Once the application is reviewed by ODOT staff, meetings will be held with all interested parties including the road authority, the railroad, ODOT, and Multnomah County officials. If an agreement can be reached between all parties at this point, the permitting process will be completed administratively. If an agreement is not reached, or if the administrative decision to approve or deny the permit is appealed, the application advances to a judicial review process through the Circuit Court, Court of Appeals and ultimately the Oregon Supreme Court.

It can be difficult to develop a design alternative for an at-grade crossing that is agreed upon concurrently by all parties. The railroads and ODOT tend to object to the construction of new at-grade crossings unless an application presents strong support for a new crossing, and other alternatives are not available. The at-grade crossing proposed as part of the Leadbetter Road extension may cause particular concern to the railroad. The railroad's objective in adding this line section to the network in the Rivergate Industrial Area was to provide a portion of track that would meet with minimal crossing conflicts.

Presently the B-N/SF rail line crosses Lombard Street at grade. The railroad has adequate distance between the at-grade crossings at Lombard Street and North Leadbetter Road for maneuvering unit trains. If North Leadbetter Road were to be extended to intersect North Marine Drive at the T-6 access with no changes to the Lombard Street at-grade crossing, maneuvering room would be insufficient and B-N/SF would oppose the North Leadbetter Road extension. However, the Port of Portland is actively pursuing implementation of a grade-separated crossing of Lombard Street in the South Rivergate Industrial Area as a near-term improvement (e.g. within 3-7 years). With a Lombard overcrossing in place, the Port would face no significant opposition from the railroad in extending North Leadbetter Road to intersect North Marine Drive. The North Leadbetter Road extension would provide the corrections facility site with a second access to North Marine Drive. A second access, although not necessary, would be beneficial for both daily operations and emergency vehicle access, particularly with the expanded facility.

If the proposed at-grade crossing on the North Leadbetter Road extension is approved, certain design criteria will have to be met. Automatic train-activated signals and crossing gates will be required at the crossing, and if traffic on North Leadbetter increases substantially, active devices will need to be installed at the existing crossing as well. ODOT staff indicated the MCNCF project would warrant installation of signals and crossing gates at the existing North Leadbetter Road at-grade crossing.

2. Issue – Emergency Vehicle Access

The nature of the proposed corrections facility requires that access be open to the site at all times for official and emergency vehicles. Because of the sites' location on a peninsula, however, only one access roadway connecting the site to the external roadway system will be possible. This would not be a "fatal flaw" for the proposed MCNCF site even with the rail crossing delays discussed above. Officials at the City Fire Marshall's Office have commented that it will be possible to secure the site with only one access route to the facility under the conditions that other safety measures are provided on-site. These measures would include sprinkler systems, and an access road circling the facility with enough area for emergency vehicles to turn around and maneuver in and out of the site driveway. Additional measures could include a helicopter landing pad and a secure fire resistant area within the facility to shelter inmates in case of a major fire, or a refuge area outside the building but within the secure perimeter.

In addition to fire and medical emergency vehicle access, a corrections facility could on rare occasions also require external police support in the event of internal disturbances. External police support would face the potential delays for vehicular access described above.

The extension of North Leadbetter Road to intersect North Marine Drive at the T-6 access roadway, which is discussed above, would improve emergency vehicle access to the site by allowing a second connection from North Marine Drive to the site access roadway.

3. Issue - Street Improvement Requirements

The only public road improvement required in developing this proposed MCNCF site is the extension of North Leadbetter Road to intersect a site access roadway, and the extension of the site access road to the site. Both roadway improvements would benefit other undeveloped industrial properties. The City of Portland requires that the extension of North Leadbetter Road be constructed with a cross section identical to the cross section of the existing road. This cross-section includes a curb-to-curb paved width of 42 feet, with sidewalks and streetlights on both sides and no on-street parking allowed.

The extension of North Leadbetter Road across the B-N/SF tracks and back to North Marine Drive is included in the Port of Portland's Transportation Improvement Plan to serve future industrial developments in the North Rivergate Industrial Area. Negotiations are currently under way with the Port of Portland to share the cost of extending North Leadbetter Road.

From the extension of North Leadbetter Road, a new roadway about ½ mile in length would need to be constructed to provide direct access to the MCNCF site. This roadway segment would provide access for industrially zoned parcels significantly larger than the MCNCF site. The economic benefit to the Port in terms of increased land value generated by the creation of roadway access for these properties would be considered in the negotiations for MCNCF site. This roadway segment would need to be constructed to City of Portland standard for eventual dedication as public right-

of-way.

The City of Portland assesses a transportation system development charge (SDC) on new development. In some cases, the cost of new roadways or roadway capacity improvements constructed with development can be credited against the SDC assessment. However, SDC credits are not available for the extension of North Leadbetter Road, or for the new site access roadway connecting to North Leadbetter Road, because both roadways would be Local Streets. SDC credit is available only for improvements to Arterial and Collector streets.

The transportation SDC would be assessed upon submittal of a development application. City of Portland staff indicated that the rate for warehouse/storage would be used, which is currently $0.90/gross square foot (gsf). Warehouse/storage use generates about 60% more traffic on a daily basis than a 2,000-bed corrections facility. For a use such as a jail, which is not well represented in trip generation references, it is possible to use driveway counts from a similar development, or trip generation calculations for the specific development, to calculate the SDC assessment. SDC charges based on trip generation observations or calculations tailored to the corrections facility offer a potential cost savings compared to SDC charges based on warehouse use.

4. Issue - Site Access Routes/Travel Time Survey Results

Marine Drive, Columbia Boulevard and Lombard Street provide alternate routes between I-5 and the site. A PM peak period travel time comparison was conducted on October 29, 1998 to estimate which route or routes would provide the primary site access. Travel time runs were conducted between the site and the I-5/Lombard Avenue interchange. Speed limits on Lombard Street range from 25 mph to 35 mph, compared to generally 45 mph on Marine Drive. Using Marine Drive, the distance to the site from the I-5/Lombard Avenue interchange is about 25 percent less than the distance via Lombard Street, and about 20 percent less than the distance via Columbia Boulevard. Drivers pass through 19 traffic signals on Lombard Street between the site and the I-5/Lombard Avenue interchange, compared to three signals along Marine Drive. These factors combine to make Marine Drive a much more likely route to and from the site, compared to either Lombard Street or Columbia Boulevard.

The travel time survey summary below shows that Lombard Street required over twice the travel time as Marine Drive, while travel time via Columbia Boulevard was from 35 to 50% greater than travel time via Marine Drive.

Table 1
Multnomah County New Corrections Facility
PM Travel Time Survey

Route	From	To	Start	Travel Time
Marine Drive	I-5 / Lombard	T-6 Access / Marine Drive	3:20 PM	9 min, 34 sec
Marine Drive	T-6 Access / Marine Drive	I-5 / Lombard	3:35 PM	9 min, 30 sec
Columbia	I-5 / Lombard	T-6 Access / Marine Drive	4:30 PM	12 min, 55 sec
Columbia	T-6 Access / Marine Drive	I-5 / Lombard	4:45 PM	14 min, 20 sec
Lombard	I-5 / Lombard	T-6 Access / Marine Drive	3:47 PM	18 min, 50 sec
Lombard	T-6 Access / Marine Drive	I-5 / Lombard	4:07 PM	19 min, 45 sec

Note: Travel survey conducted October 29, 1998 by Parametrix, Inc.

5. Potential TDM Measures

Other factors that will contribute to the success of this site include implementing a Transportation Demand Management (TDM) Plan to reduce the vehicle trip generation and potential congestion from the MCNCF site. A TDM plan will be required by the PDOT for project approval, and would also be required for conformance with the State's Employee Commute Option (ECO) program requirements (although the project may be exempt from ECO program requirements). Existing Tri-Met service on Marine Drive is not readily accessible to the facility, but there are other TDM options for the site. A Transportation Demand Management (TDM) Plan could include some or all of the following elements:

- Assign a staff member as transportation coordinator to oversee TDM program.
- Work with Tri-met to extend transit service from Marine Drive around the proposed North Leadbetter Loop Road.
- Provide a sheltered bus stop in front of the site entrance if bus service is extended along the North Leadbetter extension road, or at the nearest Tri-met stop for transit riders leaving the site.
- Conduct a survey of all new employees to determine the potential use of alternative travel modes, particularly carpool/vanpools.
- Post Tri-met and C-Tran bus route information in a highly visible location on site such as the cafeteria.
- Maintain a bulletin board in a highly visible location with carpool matching information.
- Stagger visiting hours to avoid peak commute periods.
- Designate a portion of employee parking next to employee entrances as preferential parking for carpools/vanpools.
- Provide employee showers and changing rooms on site to encourage bicycle commuting.

- Provide sheltered bicycle parking sufficient to meet the City's requirements for location and quantity. Five to ten spaces should be provided as close as possible to the primary employee entrance.
- Install teleconferencing facilities connecting with criminal justice agencies for meetings and video arraignments.

D. Conclusions and Associated Costs

The assessment of potential transportation impacts, mitigation measures and costs associated with Multnomah County's New Corrections Facility at the North Rivergate site disclosed no potential "fatal flaws" relating to transportation. There are several relevant transportation issues; some with associated costs that would be considered part of the site's overall design, and others which would be considered additional project costs. The main issues and associated additional costs are summarized below.

1. Adjacent B-N/SF Rail Line

The adjacent North Rivergate B-N/SF rail line crosses North Leadbetter Road, which is the sole access from the site to North Marine Drive. Based on discussion with ODOT Rail Safety staff, the project would be required to install flashing signals and crossing gates, at a cost of $80,000 - $100,000. The crossing improvements would also benefit other businesses using North Leadbetter Road to access North Marine Drive.

The Port of Portland plans to extend North Leadbetter Road in the future to intersect North Marine Drive at the T-6 access roadway. The extension would serve currently undeveloped Port property, and would provide the corrections facility with a second connection from the site access roadway to North Marine Drive. The extension of the roadway would not be constructed until the Lombard Street overcrossing in the South Rivergate area is in place. The Lombard overcrossing would eliminate the existing Lombard Street at-grade crossing, creating additional maneuvering room for unit trains on the B-N/SF trackway which crosses North Leadbetter Road. Without the Lombard overcrossing in place, B-N/SF would oppose the extension of North Leadbetter Road, which would create an additional at-grade crossing.

2. Emergency Vehicle Access

Located on a peninsula extending into Bybee Lake, the site would have a single access roadway connecting to Leadbetter Road. Existing unit train rail activity blocks the crossing for up to 6 minutes twice a day, typically at night. With planned rail system improvements, including a double track and the use of longer unit trains, potential blockages could increase both in length and frequency, to 7.4 minutes as many as four times daily. These factors - a single access and potential delays created by rail traffic – generate the need to incorporate measures into the design of the facility to enhance emergency vehicle accessibility and protect inmates and staff. The design measures incorporated into the site include:

- A perimeter roadway around the site, with a turnaround for emergency vehicles and other site traffic;
- Internal sprinklers;

- Electronic and/or video monitoring of the rail crossing; and
- Secure refuge areas for staff and inmates either within the facility in fire-resistant areas or outside the building but within the secure perimeter.

In addition, communication protocol between facility operations and the B-N rail line operators would be established to allow the corrections facility to request train operators to clear the Leadbetter Road at-grade crossing in case of emergency.

3. Potential Site-Related Transportation Improvements

A new site access roadway would need to be constructed along the Leadbetter Peninsula from the terminus of Leadbetter Road to the site. The roadway would be constructed to City of Portland standards and dedicated to the public upon completion. No credit would be allowed against the facility's transportation system development charge to offset the cost of the new roadway. However, the roadway would benefit other adjacent properties to the north of the site.

Although it would not be warranted with traffic from the initial 225-bed facility, a traffic signal at the intersection of North Marine Drive with North Leadbetter Road could be required by the City with application for an expanded, 2,000-bed facility. A new traffic signal would cost approximately $100,000.

Adequate street lighting at the intersection of North Marine Drive with North Leadbetter Road would be required with the initial 225-bed facility, if not already present. A single streetlight at the intersection would be adequate, which would cost approximately $10,000.

Transportation system development charges (SDCs) would be assessed with submittal of a development application. The SDC would be assessed using the rate for warehouse use. The County would benefit by submitting driveway count information from a similar facility, e.g. Inverness County Jail, to document a trip generation rate lower than the rate for warehouse use. The cost of gathering the data and submitting the documentation would be minimal (less than $1,000), and could result in a savings of $10,000 or more in transportation SDC charges.

4. Corrections Facility Traffic Impacts

The initial 225 –bed facility would generate about 200 daily vehicle trips, including about 30 during the AM peak hour and 50 during the PM peak hour. With potential expansion to 2,000 beds, about 800 daily vehicle trips would be expected, including about 100 in the AM peak hour and 145 in the PM peak hour. These trip generation totals are less than other potential uses for the site, particularly during AM and PM peak hours.

The site is zoned for industrial use, such as warehouse or manufacturing. If developed as warehouse use, the 22 net developable acres would generate about 1,280 trips per day, including about 220 trips during both the AM and PM peak hours. A manufacturing use would generate an estimated 855 daily vehicle trips, including about 165 in the AM peak hour and 185 in the PM peak hour.

5. Site Access Routes

Marine Drive would be the primary route to and from the site. Columbia Boulevard and Lombard Street also provide connections to the site. However, based on travel time surveys conducted during peak periods, Marine Drive provides significant travel time benefits. These benefits would be greater during off-peak periods.

6. Potential TDM Measures

The facility would be required by the City of Portland to develop and implement a transportation demand management (TDM) program. The TDM options for a corrections facility at this location are limited. There is limited bus service available today, with the nearest bus stop on Marine Drive over ¾ mile from the site. Flextime is not practical for the majority of employees due to the type of operation, which depends on a carefully controlled schedule. A ridesharing program could be implemented at minimal cost, and on-site bicycle racks and showers could be provided for employees bicycling to work.

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ATTACHMENT 5-4

Prepared by: JAL, 10/22/98
KPFF Job No. 97180

Preliminary Engineer's Estimate of Probable Construction Cost

Public Street Improvements for Proposed Multnomah County Site

	Quantity	Unit	Unit Price	Total
General				
Mobilization	1	LS	150,000	$150,000
Traffic Control	1	LS	45,000	$45,000
Rail Road Crossing	1	LS	300,000	300,000
General Subtotal				**$495,000**
Paving and Grading				
Asphaltic Concrete (5" Thick)	6,008	TON	$50	$300,375
Base Rock (12" Thick)	7,120	CY	$30	$213,600
Concrete Curb	9,440	LF	$9.00	$84,960
Concrete Sidewalk (4" Thick)	56,640	SF	$3.00	$169,920
Paving and Grading Subtotal				**$768,855**
Storm Sewer System				
54" Storm Drain	541	LF	$363	$196,363
48" Storm Drain	770	LF	$264	$203,436
42" Storm Drain	397	LF	$186	$73,927
36" Storm Drain	1,039	LF	$179	$185,947
24" Storm Drain	451	LF	$119	$53,642
18" Storm Drain	292	LF	$111	$32,321
12" Storm Drain Laterals	3,568	LF	$35	$124,880
108" Dia. Storm Drain Manholes	1	EA	$15,072	$15,072
84" Dia. Storm Drain Manholes	3	EA	$9,440	$28,320
72" Dia. Storm Drain Manholes	4	EA	$7,218	$28,870
60" Dia. Storm Drain Manholes	4	EA	$4,190	$16,760
48" Dia. Storm Drain Manholes	1	EA	$1,500	$1,500
Catch Basins	48	EA	$900	$43,200
Stormceptor 1200	11	EA	$20,000	$220,000
Outfalls	1	EA	$30,000	$30,000
Dewatering	1	LS	$225,000	$225,000
Storm Drainage System Subtotal				**$1,479,237**
Sanitary Sewer System				
12" CSP	4,230	LF	$60	$253,800
Sanitary Sewer Manholes	13	EA	$3,000	$39,000
Connection to Exist. System	1	EA	$2,000	$2,000
Sanitary Sewer System Subtotal				**$294,800**
Water System				
12" Ductile Iron Pipe, Potable	4,740	LF	$40	$189,600
8" PVC, Non-Potable	4,770	LF	$26	$124,020
Fittings, Valves & Restraints	1	LS	$25,000	$25,000
Fire Hydrants	9	EA	$3,000	$27,000
Water System Subtotal				**$365,620**

ATTACHMENT 5-4

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Electrical and Telephone Systems				
Telephone Conduits	18,880	LF	$5	$94,400
Electrical and Street Light Conduits	18,880	LF	$5	$94,400
Lighting Allowance	1	LS	150,000	$150,000
Electrical Service Allowance	1	LS	100,000	$100,000
Conduit Systems Subtotal				**$438,800**
PROJECT SUB-TOTAL				**$3,885,512**
15% Contingency				$582,827
PROJECT TOTAL				**$4,468,339**

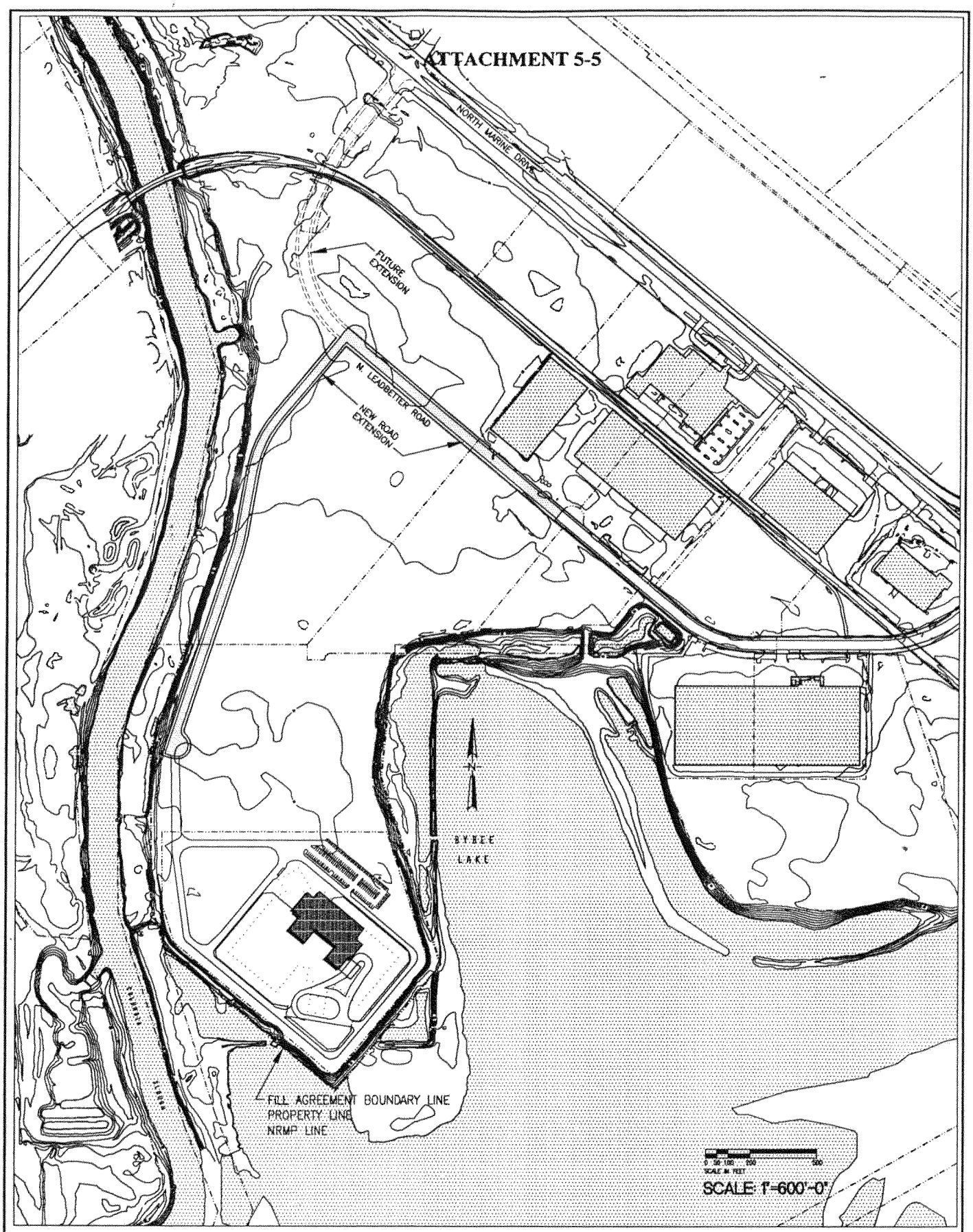
Notes:

1. The quanties and sizes of these estimates are based on the information provided on the Preliminary Plan, Cross Section and Detail (drawing No. RG 98-181 PD1, PD2), dated 10/98 prepared by the Port of Portland for the Rivergate Industrial Park Street Extension for the proposed Multnomah County Site.
2. This estimate does not include:
   a. landscape, irrigation system or Tri-Met improvement costs
   b. City of Portland permit, system development or connection fees associated with work in the public right-of-way
   c. any on-site private improvements
   d. allowance for seismic or settlement upgrades
3. Unit prices are based on 1998 prices for the local area.
4. Adjustments for inflation and bid climate will be necessary depending on the timing of the project.

The above data reflects the roads and infrastructure as proposed by the Port of Portland. Recent developments suggest that the westward extension of N. Leadbetter Road beyond the new southern access road is not needed at this time. The utilities that are in this area and that are required to serve the proposed jail site will follow the proposed extension's right-of-way as it curves to the north and meets North Marine Drive at the intersection with N. Pacific Gateway Blvd. (a.k.a. N. Ramsey Blvd.). The utilities will cross under the railroad tracks in existing conduits previously installed.

It is expected, therefore, that the above estimate for paving, grading, sidewalks and rail road crossing will be significantly reduced.

ATTACHMENT 5-5



CONCEPTUAL SITE PLAN AT PHASE I - PROPOSED RIVERGATE SITE for MULTNOMAH COUNTY'S NEW CORRECTIONS FACILITY

MULTNOMAH COUNTY, OREGON | NOVEMBER 1998 | KMD ARCHITECTS AND PLANNERS - JOB NO. 817-301