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6/27/1986

OREGON
ENVIRONMENTAL QUALITY
COMMISSION MEETING
MATERIALS

DEQ

State of Oregon
Department of Environmental Quality

VICTOR ATIYEH
GOVERNOR

Environmental Quality Commission

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SPECIAL MEETING

OF THE

OREGON ENVIRONMENTAL QUALITY COMMISSION

June 27, 1986

Room 1400
522 SW Fifth Avenue
Portland, Oregon

TENTATIVE AGENDA

10:00 am

A. Metro Request for Review and Approval of Portland Metropolitan Area Solid Waste Reduction Program

B. Informational Report: Identification of 19 Candidate Landfill Sites

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Because of the uncertain length of time needed, the Commission may deal with any item at any time in the meeting. Anyone wishing to be heard on any item not having a set time should arrive at 10:00 am to avoid missing an item of interest.

The next regular Commission meeting will be July 25, 1986 in Salem.

Copies of the staff reports on the agenda items are available by contacting the Director's Office of the Department of Environmental Quality, P.O. Box 1760, Portland, Oregon 97207, phone 229-5395, or toll-free 1-800-452-4011. Please specify the agenda item letter when requesting.

STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY INTEROFFICE MEMO

TO: EQC DATE: June 18, 1986

FROM: Fred Hansen

SUBJECT: Staff Report on Metro Waste Reduction Program

Enclosed is the staff report on the Metro Waste Reduction Program. The report includes the original report adopted by you on February 7, 1986 and a summary of testimony received at the public hearing on the draft staff report. Because the testimony is directed to the draft staff report, we have also included the draft report. The report was revised to respond to the public comments.

FH:m
SM361
Enclosures

VICTOR ATIYEH
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Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207
522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item A, June 27, 1986, EQC Meeting

Metro Request for Review and Approval of Portland Metropolitan Area Solid Waste Reduction Program

Summary of Recommendation

The Department recommends that the Commission approve the Portland Metropolitan Area Solid Waste Reduction Program prepared by the Metropolitan Service District (Metro).

Background

On February 7, 1986, the Commission reviewed the Metro Waste Reduction Program which was submitted by Metro by January 1, 1986 as required by SB 662 (1985 OR Laws, Chapter 679, Section 8). The Commission adopted the staff evaluation and summation as its findings and conclusions. See Attachment 1. The Program was sent back to Metro for 90 days to allow Metro to make modifications to comply with the criteria for approval which are set out in SB 662, Section 8(2).

Metro held a workshop and five public hearings in March, April and May to discuss proposed revisions to the Program. The Program and revisions were adopted by three ordinances. Ordinance No. 86-199 and Ordinance No. 86-200 were adopted by the Council on May 1, 1986. On May 15, 1986, Ordinance No. 86-199 was amended by Ordinance No. 86-201.

On June 9, 1986, the Department held a Public Hearing on the revised Metro Program and the draft DEQ staff report. Seven persons testified, and three submitted written comments. A summary of testimony received and the Department's response is appended as Attachment 2.

Solid Waste Reduction Program Documents Submitted to EQC

Final Report, April 1986, including Ordinances No. 86-199, No. 86-200 and No. 86-201, Solid Waste Reduction Program Policies, Solid Waste Reduction Program Framework, and Background Information, adopted by Ordinance No. 86-199 on May 1, 1986.

Work Plan, including Timeline and Public Education Plan, adopted by Ordinances Nos. 86-199 and 86-200 on May 1, 1986.

Evaluation Criteria for Review of Metro Waste Reduction Program

SB 662, Section 8 requires the Waste Reduction Program to include:

(1) A commitment by the district to substantially reduce the volume of solid waste that would otherwise be disposed of in land disposal sites;

The Department has told Metro both informally and by letters dated August 20 and December 3 and 12, 1985 that "commitment" to implementation includes (1) choosing a particular strategy; (2) stating the method and timeline for accomplishing the strategy; (3) setting performance standards against which the Program's success will be measured; (4) establishing checkpoints for judging the effectiveness of the Program strategies and alternative strategies which will be implemented should the original strategies prove unsuccessful or less successful than anticipated; and (5) formal adoption by Metro Council.

(2) A timetable for implementing each portion of the solid waste reduction programs. At least a part of the program must be implemented immediately;

(3) Energy efficient, cost-effective and legally, technically, and economically feasible approaches to waste reduction;

(4) Approaches which carry out the existing state solid waste management priorities as established by SB 405 in 1983 (ORS 459.015(2)(a)):

First, to reduce the amount of solid waste generated;

Second, to reuse material for the purpose for which it was originally intended;

Third, to recycle material that cannot be reused;

Fourth, to recover energy from solid waste that cannot be reused or recycled; and

Fifth, to landfill waste that cannot be reused, recycled or from which energy cannot be recovered; and

(5) Effective and appropriate methods for waste reduction (i.e., procedures commensurate with the type and volume of solid waste generated within the region).

Explanation of Evaluation Procedure

The DEQ staff report prepared for the February 7, 1986 EQC meeting evaluated the Metro Program component by component. See Attachment 1. Department recommendations for modification were noted for each component which was determined to not comply with SB 662. This staff report should be read in conjunction with the February 7, 1986 staff report.

All the amendments to the Program adopted by Metro during the 90-day revision period were to address EQC's concerns as expressed in the staff report. No amendments were made to components of the Program which were found to be in compliance with SB 662. This review, therefore, adopts the EQC's February 7, 1986 findings and conclusions for those components for which the EQC required no modification.

This review evaluates Metro's responses to the EQC's recommendations for modification to determine whether the Waste Reduction Program complies with SB 662 in one of the following ways:

(1) Metro made the recommended modification;

(2) Metro chose another method of addressing the EQC objection and has demonstrated that the chosen method adequately addresses the objection; or

(3) Metro adequately justified why the recommended modification is not legally, technically or economically feasible.

EVALUATION OF AMENDMENTS TO METRO'S SOLID WASTE REDUCTION PROGRAM

1. EQC Recommended Modifications from February 7, 1986 EQC Staff Report (Promotion and Education):

Metro should submit a comprehensive promotion and education program, including a detailed work plan for a multi-year promotion and education campaign and the financial commitment made to support it. One element of the program should be targeted to teach consumers the need for and how to change consumption habits in order to reduce the amount of solid waste generated and to maximize reuse of products. Another element should include a strategy for development and introduction of a curriculum for the region's public school system.

Metro Response:

After review of bids submitted by eleven advertising public relations firms, Metro has contracted with Coates Advertising, Inc. to undertake Phase I of a solid waste management public education program. Phase I consists of (1) Market Analysis; (2) Logo/Positioning Statement; and (3) Promotional Plan.

The first advertising campaign, "General Waste Reduction", began in June 1986 with television, radio and newspaper (The Oregonian) ads. The second campaign, "Curbside Recycling", will run from July to October 1986 utilizing radio, billboards and Oregonian ads. The budget for the Coates Advertising produced campaigns is $186,000 each year for three years.

In addition, Metro staff will participate in eight community promotions per year. These include: shopping center exhibits, Recycling Week, fall yard debris recycling, telephone book recycling, Christmas tree recycling, Office Products Show, spring yard debris recycling, and Street of Affordable Homes.

Metro will also assist local governments in providing educational information with specifics about recycling pick-up schedules and requirements. Metro's activities to support and coordinate with local governments will include:

1. Monthly calendar of promotion/education activities around the region.

2. Upon request from local governments, developing ready-to-print informational materials.

3. Providing general information and assistance in working with media.

4. Visiting offices of local promotion/education staff to share information.

5. Coordinating periodic meetings of promotion/education staff from the region, if requested.

6. Coordinating with local governments to develop waste reduction exhibits at county fairs.

Metro will also establish a regional task force of educators to develop and introduce a waste reduction curriculum in the region's schools. Metro is currently participating with DEQ in planning the development of curricula for statewide distribution.

Analysis:

Metro has adopted a comprehensive promotion and education plan, including a detailed work plan for the first year of the three-year campaign, and plans to spend a substantial amount of money to carry out the campaign. The plan calls for a campaign which will address the need for waste reduction as well as recycling. Metro has not yet developed a strategy for development and introduction of a curriculum for the region's school system, but the plan has committed to doing so between July and December 1986.

Conclusion:

Metro has prepared a plan which adequately responds to the EQC's concerns about the promotion and education component.

2. EQC Recommended Modifications from February 7, 1986 EQC Staff Report (Salvage Facilities):

Metro should clarify whether it commits to incorporation of salvage facilities at the landfill and transfer stations.

Metro Response:

Metro has clarified that it is not committed to operating a salvage facility by stating that "Metro will examine the need and feasibility of conducting salvage at disposal facilities." Final Report, p. 8. It has indicated that the Recycling Information Center will expand its promotion of reuse and recycling of salvageable materials.

Analysis:

Though Metro has not yet decided whether to operate a salvage facility, it is going to attempt to keep salvageable material out of the waste stream by operating a salvageable material data base out of its Recycling Information Center.

Conclusion:

Metro has adequately responded to the EQC's request for clarification about Metro's degree of commitment to establishing a building materials salvaging operation at its disposal facilities.

3. EQC Recommended Modifications from February 7, 1986 EQC Staff Report (Waste Exchange):

Metro should commit to the establishment of a regional waste exchange. The exchange can be operated privately, with or without Metro assistance, or by Metro.

Metro Response:

Metro has not committed to establishment of a regional waste exchange, but instead "will fully explore the utility and feasibility" of doing so. Framework, p. 8. Metro reasons that it is not feasible or prudent to commit to establishing any particular waste exchange program until it can be determined whether there would be enough users to support it, and whether the exchange should cover Oregon only or be linked to other states in the region. Agenda Item No. 7.2, March 27, 1986, Metro Staff Report, B-4.

Analysis:

There is no doubt that an industrial waste exchange would provide a valuable service by acting as a clearinghouse to match generators of "waste" with potential users of that "waste". The service is especially needed for hazardous waste generators. Since September 1, 1985, hazardous waste generators have been required to certify that the volume and toxicity of their waste has been reduced to the maximum degree that is economically feasible. The generator, by successfully exchanging through a waste exchange, can comply with this new waste minimization requirement.

The most successful exchanges in the country are those that service multiple states. It would be unreasonable to ask Metro to be solely responsible for establishing an exchange which reaches outside the Metro tri-county area. That task is more appropriately shared with DEQ, which as a statewide agency, has the ability to establish a statewide program and to cooperate with other western states. Metro, as the government responsible for waste in the most populous and most highly industrialized part of the state, does however have a responsibility to participate in the study and formation of a waste exchange.

Conclusion:

Though Metro has not amended its Program as suggested by the EQC, Metro has adequately justified why the recommended modifications are not legally, technically, and economically feasible.

4. EQC Recommended Modifications from February 7, 1986 EQC Staff Report (Technical Assistance):

Metro should commit to promote aggressively their technical assistance program.

Metro Response:

Metro has committed to "actively promote" its SB 405 services and assistance program. Framework, p. 9.

Analysis:

Metro has in its Program changed its technical assistance program from a passive to an active program, a change which should increase the chances that local governments and collectors will become aware of Metro's offer of assistance and take advantage of Metro's expertise.

Conclusion:

Metro has adequately responded to the EQC's request that the technical assistance program be aggressively promoted.

5. EQC Recommended Modifications from February 7, 1986 EQC Staff Report (Recycling Information Center):

Metro should commit adequate financial resources to operate RIC (Recycling Information Center) with paid staff so as to most effectively utilize volunteers.

Metro Response:

The Metro 1986-87 budget, adopted on May 1, 1986, provides two full-time staff for the RIC, an increase from the current 1.3 FTE.

Analysis:

In its Program, Metro recognizes that with increased recycling promotion and implementation of SB 405, RIC will receive an increasing number of calls and paid staff must be increased accordingly.

Conclusion:

Metro in its Program and adopted budget has adequately addressed the EQC's concern that RIC be appropriately staffed.

6. EQC Recommended Modifications from February 7, 1986 EQC Staff Report (Certification):

Metro should step up its certification process to initiate standards beyond SB 405 and apply rate incentives for those standards by January 1, 1987. Metro could enact a multi-tiered rate structure in which a rate incentive is offered for compliance with SB 405, and a larger rate incentive is offered for meeting standards beyond the requirements of SB 405. Metro should also indicate in the Program the rates to be applied, or at least the range within which the differential rates will be set. Further rate incentives should be applied by January 1, 1988 to encourage (1) generation of high-grade commercial loads for delivery to materials recovery centers and (2) collection systems for yard debris.

Metro should clarify whether SWPAC or Metro Council will decide whether to grant certification to a certification unit.

Metro should explain how it will resolve the potential problem of penalizing collectors and ratepayers who are meeting the standards of the certification program but are charged the higher disposal rate because they are included within a noncomplying certification unit.

Metro Response:

Metro in its Program has not speeded up the certification process to initiate standards beyond SB 405 in the first year. Metro staff has argued that:

> Certification program requirements are expected to require a substantial effort from local jurisdictions to gear up new waste

reduction activities. Even before new standards are set, they will have to work with the haulers to define certification units and reporting procedures. When new standards are defined, programs will have to be developed. It is unreasonable to expect local jurisdictions to meet the requirements of SB 405, prepare to meet new certification responsibilities, and meet as yet undefined new standards -- all during 1986. It is important to note that Metro has gone beyond SB 405 with its commitment to provide a rate incentive for all jurisdictions to meet DEQ's review standards. Metro does not assume that all jurisdictions will comply with the law and views the certification program as an added incentive to do so.
Metro Council Agenda Item No. 7.2, March 27, 1986, Metro Staff Report, B-7.

Metro has submitted a staff report, "Presentation of a Rate Incentive Approach for the Solid Waste Reduction Program," which discusses several possible waste reduction rate incentive approaches and a general range of rates. This document will be used as the basis for discussing the certification program with local governments and collectors. After review by interested groups, an approach will be chosen and details of the rate incentives will then be developed in the 1987 rate study to be adopted in September 1986, to become effective January 1, 1987.

The incentive proposals include:

(1) Certification rate incentives

It is proposed that non-certified area haulers would pay $7.00 more per ton for disposal than certified area haulers. The $7.00 differential is based on the estimated cost of providing SB 405 level of service. According to Metro, the $7.00 increase in tipping fees translates to approximately $.56 per month to residences for one can per week service.

(2) Materials processing rate incentives

The $5 per ton Regional Transfer Fee and User Fee would be waived for materials recovered at materials processing centers (currently being done.) If that incentive appears inadequate to divert waste from the landfill, Metro would incrementally increase the amount of the differential.

(3) Rate incentives for reuse operations. Metro may consider offering free disposal to nonprofit organizations such as Goodwill Industries and the Salvation Army in trade for their service at transfer stations in removing reusable items from the wastestream.

(4) Yard debris rate incentives

It is proposed that beginning January 1, 1987, source separated yard debris will be accepted for processing at St. John's landfill for between 25 and 75 percent of the equivalent disposal cost.

(5) Flat rate incentive

Metro currently collects a flat rate user fee to fund its waste reduction program, and proposes to continue to do so.

(6) Public recycling rate incentive

Metro currently charges a reduced disposal fee to the public who deliver more than half a cubic yard of source separated recyclables along with their garbage. This incentive will be continued.

Metro has agreed to adopt certification goals in 1987 to address collection systems for yard debris. The rate incentive to enforce the yard debris standards will be applied January 1, 1988. Certification goal-setting responsibility has been shifted from the Solid Waste Policy Advisory Committee to the Metro Council in order to ensure that yard debris collection will be included as a certification goal.

Metro has not agreed to apply rate incentives through the certification program to encourage generation of high-grade commercial loads. Metro will apply rate incentives to encourage collection of high-grade loads only if the Waste Composition Study determines that sufficient material can be removed from the waste stream to warrant such action. Staff argues that:

> DEQ's request to also implement certification rates for high-grade loads will substantially increase the incentive for the collection industry and local regulators of collection to redesign collection routes. Though such actions will be necessary to achieve maximum feasible generation of high-grade loads, they should only be undertaken where the waste composition study determines that it is economically feasible. Metro Council Agenda Item No. 7.2, March 27, 1986, Metro Staff Report, B-10.

Metro has not changed its Work Plan (p. 32) as requested to clarify that SWPAC does not approve certification units, but it has stated that the Metro Council, and not SWPAC, grants certification to a certification unit upon the recommendation of SWPAC.

Analysis:

To have complied with the EQC recommendation to initiate standards beyond SB 405, Metro would have had to begin development of those standards immediately after the EQC decision in February. By choosing not to follow the EQC's recommendation, Metro has now made it impossible to develop

immediately after the EQC decision in February. By choosing not to follow the EQC's recommendation, Metro has now made it impossible to develop standards in time to be enforced by rate incentives beginning in January 1987.

Metro's uncertainty about whether it is worthwhile to apply rate incentives to encourage collection of high-grade loads undermines its program proposition that high-grading commercial loads can assist in achieving substantial waste reduction. Even if rate incentives are applied to high-grade loads, there is no assurance that there will be high-grade loads which can be delivered to materials recovery centers. Collection routes must be revised in order to collect a high-grade load, and Metro's Program does not assure that will happen.

Metro did not amend its Program to indicate how it will equitably apply rate incentives within certification units. But Metro staff has prepared a document called "Certification Units - Background and Guidelines" which is being presented in draft form to SWPAC and to local governments and haulers. It proposes that jurisdictions be responsible to Metro for proposing the certification units. The jurisdiction would be responsible to see that differential rates can be equitably applied within the certification unit. The burden for ensuring equity is thus shifted to the local jurisdictions, effectively sidestepping the issue. There does appear to be adequate review mechanisms to protect complying collectors and generators.

Conclusion:

Metro has come part but not all the way in responding to the EQC's concerns about the workability and amount of waste reduction which can be achieved by the certification program. Metro has strengthened its commitment to use the certification to encourage collection systems for yard debris and has offered an adequate discussion of the range of rates to be applied to the first-year program. It has not adequately responded to the EQC's concerns that using SB 405 as the standard for the first year of the certification program only duplicates what is already law.

7. EQC Recommended Modifications from February 7, 1986 EQC Staff Report (Yard Debris):

Metro should move up the date of initiation of rate incentives for compliance with yard debris certification standards to January 1988 or earlier (or clarify the Work Plan), and should commit to banning source separated yard debris from the landfill by January 1, 1989 when Phase II will be initiated. Source separated yard debris could be banned immediately.

Metro should commit to providing a collection or processing area for yard debris at all its transfer stations, or to diverting source separated loads to a processing center, and to keeping the yard debris piles free of

contaminants. Metro should also commit to adjusting its disposal rates to encourage recycling of yard debris regardless of whether the EQC lists yard debris as a principal recyclable material.

Metro Response:

Metro has moved up the date of initiation of rate incentives for yard debris certification standards to January 1988. It has also committed to banning source separated yard debris from general purpose landfills by January 1989.

Metro will also "collect, process and/or divert (using rate incentives, promotions, education and a ban, if necessary) all source separated yard debris from Metro disposal facilities as processing and marketing capacity is available." Work Plan, p. 18.

Analysis:

Yard debris is the largest single component in the waste stream. Accordingly, Metro has planned an aggressive program to recycle yard debris. Metro's commitment to process or divert yard debris delivered to its disposal facilities is, however, only as good as the systems for collecting source separated yard debris and markets. Metro must continue and expand on its new market development work to ensure that there are markets for processed yard debris. Metro must also ensure that there are adequate incentives to source separate yard debris.

Conclusion:

Metro has adequately responded to the EQC's concerns about its yard debris component.

8. EQC Recommended Modifications from February 7, 1986 EQC Staff Report (Post-collection Materials Recovery):

Metro should indicate the expected date of completion of the materials recovery facility to be built in conjunction with Washington Transfer and Recycling Center (WTRC). Metro should commit to either retrofitting CTRC for materials recovery or allowing a private materials recovery center to be established within easy access of CTRC. Until CTRC is retrofitted or a recovery center is established nearby, Metro should use its flow control authority to require high-grade loads delivered to CTRC to be diverted or transferred to existing materials recovery centers. Metro should also require high-grade loads delivered to St. Johns to be diverted to Oregon Processing and Recovery Center (OPRC).

Metro Response:

Metro chose not to set a date for completion of WTRC. It also has not committed to either retrofitting CTRC for materials recovery or allowing a

private materials recovery center to be built in the area. Instead, the Framework (p. 11) was amended as follows:

> Each portion of the Metro region which is served by a transfer station, and which is determined to generate adequate quantities of high-grade loads such that recovery is economically feasible, will be served with either:
>
> 1. A material recovery facility at the transfer station, or
>
> 2. A private material recovery facility in the area, or
>
> 3. Transfer of material to a material recovery facility.

The determination of economic feasibility will be based on the Waste Composition Study which has yet to be done.

Metro has, however, committed to divert high-grade loads from its facilities if a material recovery processing facility is within a practicable hauling distance.

Metro and Genstar Waste Transfer Inc. (dba Oregon Processing and Recovery Center (OPRC)) have been working together for several months in conducting experimental transfer of select mixed loads of corrugated cardboard from Clackamas Transfer and Recycling Center (CTRC) to OPRC for recycling. The mixed cardboard has been pushed into and stockpiled at one end of the CTRC pit. From there, it is loaded into a transfer trailer for the haul to OPRC.

Metro has amended its Work Plan to include the work task of stationing a spotter at the St. John's Landfill face to identify generation points for high-grade loads, and will soon be implementing that task. In a cooperative effort between Metro and Genstar, a Genstar employee will act as a spotter at St. John's landfill to determine which mixed loads meet the minimum requirements of OPRC and should be delivered there for recycling rather than at the landfill for disposal. The spotter will watch garbage trucks unload, and if the load appears to be clean enough (i.e., mostly paper and cardboard), will explain to the truck driver that such a load could be delivered cheaper to OPRC than to the landfill.

Analysis:

Metro's refusal to indicate an expected date of completion of WTRC is based on its claim that the date is contingent upon local government cooperation (and a successful outcome to a current legal proceeding). Though an accurate statement, the same claim could be made for nearly every date in the Work Plan and Timeline. But dates are needed to guide the implementation of the Program, and surely the date of completion of WTRC is no more problematic than the date of completion of a yet to be proposed

alternative technology facility, for which Metro has stated a completion date.

Recently the Metro Council has indicated that it may give up on siting WTRC at the selected site. The transfer station is important to the Waste Reduction Program because it will also house a materials recovery center. If Metro vacillates and delays on siting WTRC, it postpones the development of a facility crucial to implementation of the waste reduction program.

The success of Metro's Waste Reduction Program is predicated largely on post-collection materials recovery. Yet now Metro is saying that it is uncertain about whether any additional materials recovery centers other than the one planned at WTRC should be built (Oregon Processing and Recycling Center in North Portland is the only one that exists currently). Metro is waiting for the results of its delayed Waste Composition Study to make a decision.

Because it is relying so heavily on post-collection materials recovery to achieve substantial reduction, it is incumbent on Metro to move forward and aggressively plan and develop enough material recovery centers to conveniently serve haulers throughout the region. Metro has chosen only to encourage generation and delivery of high-grade loads, not to require it. Metro should monitor carefully the success of its voluntary diversion approach. If haulers continue to dump high-grade loads at the landfill after they have been encouraged to divert, then Metro should use its flow control authority before 1989.

Conclusion:

Metro has only partially responded to the EQC'c concerns about the post-collection materials recovery component of the Program.

It is already implementing a transfer system from CTRC to a materials recovery center, and will allow a spotter on the face of the landfill to attempt to teach haulers when to deliver their loads to a material recovery center. It has not yet committed to retrofitting CTRC or allowing the establishment of additional material recovery centers.

9. EQC Recommended Modifications from February 7, 1986 EQC Staff Report (Market Development):

Metro should commit to actively approaching institutional purchasers with the message that purchasing of recycled products can assist recycling markets, rather than wait to be asked for assistance as the Work Plan contemplates (Work Plan, Page 43).

Metro Response:

The Work Plan was amended to indicate that Metro will conduct a promotion tour of potential major users for recycled products, advocating use of recycled products.

Analysis:

The promotion of institutional purchasing policies will include actively approaching institutions and advocating new practices where appropriate. Technical assistance, however, will be provided only on request.

Conclusion:

Metro has adequately responded to the EQC's recommendation that Metro state in their Program that they will actively rather than passively encourage institutional purchasers to provide markets by buying recycled products.

10. Recommended Modifications from February 7, 1986 EQC Staff Report (Alternative Technology):

Metro should either commit approximately 1,300 tons per day of waste to alternative technology, or commit to allocating as much of the 1,300 tons as can be processed by an alternative technology or combination of technologies within a price per ton cap to be determined by Metro. The price cap must at a minimum reflect the true cost of landfilling plus an adequate premium for resource recovery's higher position in the state solid waste management hierarchy, and be within the price range of alternative technology facilities built and being built by local governments throughout the country. If Metro chooses to establish a price cap for selecting alternative technology rather than to commit 48% of the waste to alternative technology, then Metro must by ordinance adopt the price cap as an amendment to the Waste Reduction Program and submit it by June 13, 1986 to the EQC for approval.

Metro Response:

On May 15th the Metro Council adopted Ordinance No. 86-201 which amends Ordinance No. 86-199. The Ordinance establishes criteria to be used by the Council in its determination about whether to proceed with acquisition of alternative technology, and which technology to choose. The criteria are:

Metro will proceed with resource recovery and allocate up to 48% of the waste to that project(s) which best meets the following criteria:

a. project(s) will not increase the disposal system cost more than 20% over a landfill-based disposal system. (The disposal system costs described in this section include costs associated with operating transfer stations, resource

recovery facilities and landfills; it does not include collection costs. Determination of whether a proposal(s) meets this criterion will be based on disposal system cost figures available from Metro at the time of evaluation);

b. project(s) will utilize one, or a combination of the following technologies: materials recovery (including composting), RDF, and mass burn;

c. project(s) will demonstrate compliance with all applicable environmental protection regulations;

d. project(s) will minimize the financial risk to the public in terms of project(s) funding and general management;

e. marginal costs per ton will maximize amount of waste processed relative to the total project cost;

f. project(s) will maximize flexibility by minimizing capital costs and limiting construction time;

g. over the financial life-cycle project(s) will minimize increases in disposal system costs compared to a landfill-based system; and

h. proposal(s) will demonstrate the financial strength and corporate commitment to resource recovery by the vendors; and

i. project(s) technology, cost and location gain regional public acceptability.

Metro has also allowed itself the option of proceeding with a resource recovery project(s) that increases the disposal system cost more than 20% over a landfill-based system.

Analysis:

Metro's decision to be willing to pay up to 20% more (on a systemwide basis) to process garbage in a resource recovery facility rather than to dispose of the garbage in a landfill means that Metro will likely, though not with absolute certainty, be able to establish a resource recovery facility. Studies prepared by Metro with assistance from Metro consultants Gershman, Brickner and Bratton, Inc. indicate that total system costs with alternative technology will range between $38 and $61 per ton in 1990. The

system cost for landfill and transfer stations only is estimated to be $31 per ton in 1990. Applying the 20% premium, Metro could spend up to $37.20 per ton. This amount is just below the least cost estimate given by Metro staff and consultants. If strictly applied, therefore, the chosen premium would not allow establishment of any resource recovery facility. Metro claims, however, that by varying such assumptions as amount of equity participation and cost of operation and maintenance, the prices could be within the price allowed by the premium. See chart on next page.

At a 20% premium, residential garbage service cost would be approximately $.54 a month more than a landfill based system, a 5% increase. Costs to commercial customers would increase 8%; cost to industrial customers would increase 10%. This amount of increase is reasonable considering the gain in resource conservation and land and groundwater protection.

Conclusion:

Metro has recently received thirteen responses to its Request for Qualifications/Information from prospective resource recovery project contractors. The proposals are in many cases incomplete and Metro staff have not yet attempted to calculate the effect each proposal would have on the solid waste management system costs. The Department is therefore unable to determine with any certainty whether the 20% premium is enough to allow Metro to contract for one or more of the proposed alternative technology facilities. Rough guesstimates indicate that the costs of many of the proposals are similar to those in the Gershman, Brickner and Bratton study.

11. EQC Recommended Modifications from February 7, 1986 EQC Staff Report (Developmental Technologies):

Metro should clarify whether cellulose conversion to ethanol is a process which is to be evaluated through the RFQ/RFP process.

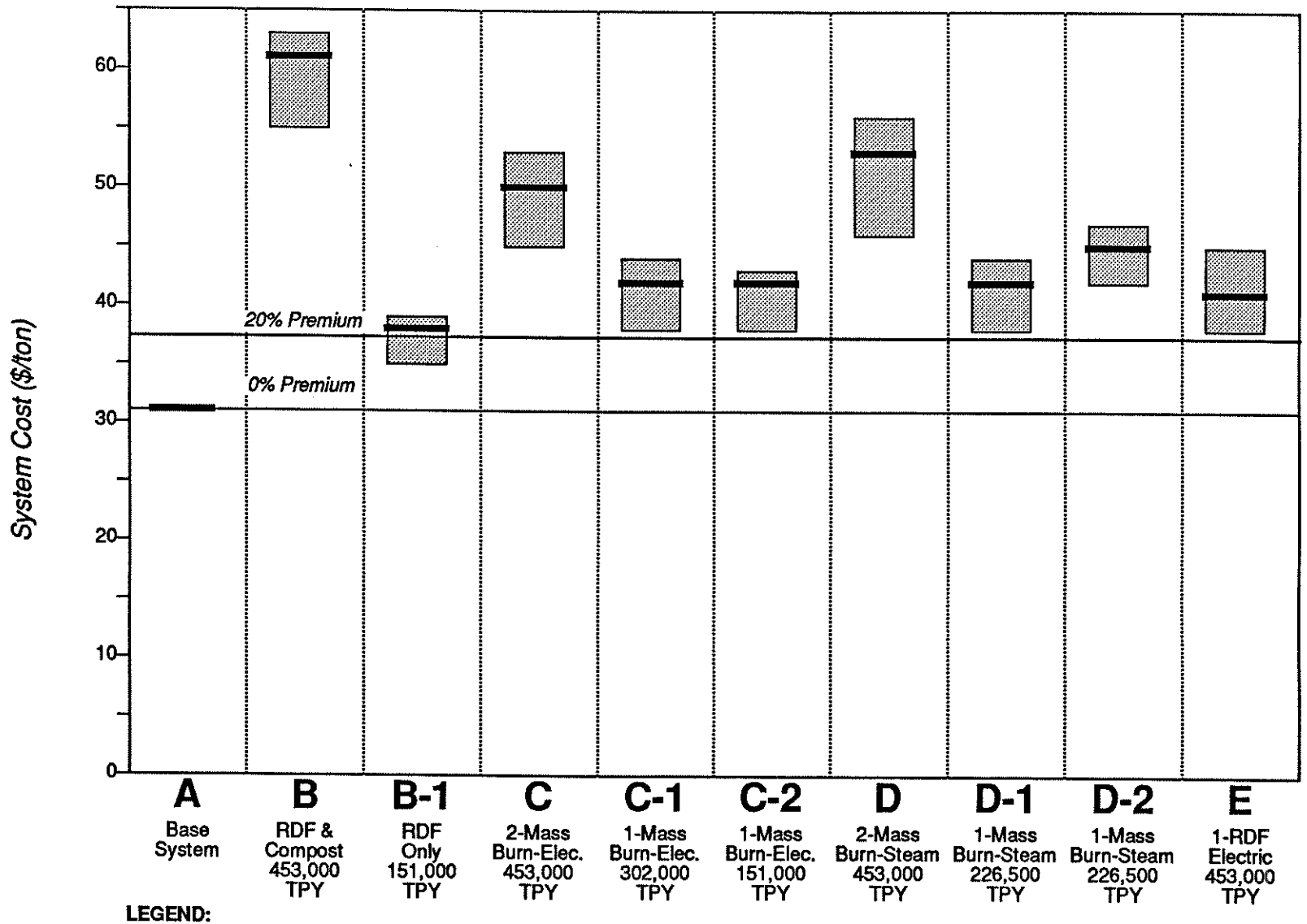
Metro Response:

Metro has clarified that cellulose conversion to ethanol is considered a developmental technology and is not to be considered in the RFQ/RFP process for resource recovery facilities.

Analysis:

The clarification means that if Metro chooses to commit up to 50 tons per day of waste to a developmental technology, cellulose conversion to ethanol will be considered in that separate competition.

System Cost Comparison with Various Alternative Technology Projects



LEGEND:

Range of system cost with Alternative Technology projects under various assumptions of operating costs and revenues.

Black line indicates principal case figure for each system.

86189

Conclusion:

Metro has adequately responded to the EQC's request for clarification.

12. EQC Recommended Modifications from February 7, 1986 EQC Staff Report (Phase II):

Metro should revise Phase II to commit to seek sufficient authority from the Oregon Legislature to ensure that the solid waste system will be managed to accomplish the waste reduction goals established by Metro.

Metro Response:

The Program has been amended to indicate that "If the exercise of existing Metro authorities is determined to be ineffective in achieving the waste reduction goals, Metro will seek appropriate changes in the law from the Legislature." Framework, p. 14.

Analysis:

The amendment recognizes that implementing an aggressive waste reduction program through rate-setting and flow control authority only is problematic and, depending on the cooperation of local governments who hold collection authority, may or may not succeed. If the indirect management tools are not enough to achieve substantial reduction, then Metro can either ask the Legislature for enough authority for Metro to accomplish the task or ask that local jurisdictions be required to participate in accomplishing the task.

Conclusion:

Metro has adequately responded to the EQC's request that it seek sufficient authority to accomplish substantial waste reduction.

13. EQC Recommended Modifications from February 7, 1986 EQC Staff Report (Phase III):

Metro should revise Phase III to delete the possibility of implementation before January 1, 1993.

Metro Response:

The Framework was amended so that Phase III cannot begin before 1993.

Analysis:

There can be no allocation of waste to alternative technology beyond the 48% already allocated until the recycling and post-consumer materials recovery systems have been thoroughly tested. If these efforts are as successful as hoped, then additional allocation of waste will be unnecessary.

Metro has acknowledged that the proposed recycling and resource recovery systems will need at least until January 1993 to change behavior and design systems to meet waste reduction potentials.

Conclusion:

Metro has adequately responded to the EQC's request to not allow implementation of Phase III until 1993.

14. EQC Recommended Modification from February 7, 1986 EQC Staff Report (Adoption by Ordinance):

SB 662, Section 8 requires a "commitment by the district to substantially reduce the volume of solid waste" and a "timetable for implementing each portion of the solid waste reduction program." The Metro Council must consistent with Program objectives.

Analysis:

Metro has demonstrated its commitment to implement the Waste Reduction Program by adopting it by ordinance and incorporating the policies and Framework into the Solid Waste Management Plan. The Program is now law which the Council and Executive Officer must follow. If they choose to deviate from the Program, the Program must be amended by ordinance. Such a process alerts the public to the proposed change and allows them the opportunity to be heard at a public hearing.

Conclusion:

Metro has adequately responded to the EQC concern that Metro demonstrate a "commitment by the district to substantially reduce the volume of solid waste" as required by SB 662, Section 8.

Evaluation of the Metro Waste Reduction Program as a Whole:

Though Metro has not amended its Program to meet all the concerns expressed by the EQC at its February 7, 1986 meeting at which the EQC allowed Metro 90 days to modify its Program to comply with SB 662, it has done enough so that the Program as a whole has the potential to achieve substantial waste reduction.

The Program is still to some extent a plan to plan rather than a plan for implementation. But the planning process is further along than it was in January when the Program was first submitted, and several of the Program components are now being developed beyond the conceptual stage or are actually being implemented. In addition, the Council has taken a major step by establishing by law its commitment to implement the Program.

Where clarification was requested, it was given. The Program is clear and concise enough for the Council, Metro staff and public to have a good understanding of what is to happen and when. This will be important as faces change both on the Council and on staff, and institutional memory is diminished.

Though the certification and rate incentive components have been further explained since the January submittal, both are still in draft form and far from being implemented. Because they remain untested, it is difficult to predict their success in achieving substantial waste reduction. Since Metro has chosen these methods to achieve its goals, it must make an all-out effort to ensure that they succeed. Only time will tell whether in the end they are useful management tools.

The real test of the Program will be in its implementation. If this Program is treated as no more than a plan on the shelf, it will achieve nothing. If it is half-heartedly implemented, it will not achieve substantial waste reduction as envisioned by the drafters of SB 662. Substantial reduction will be achieved only if the Council and staff move forward enthusiastically and aggressively, follow the tasks and timelines, and gain the confidence and cooperation of local governments, garbage haulers, recyclers and other affected persons.

Implementation of much of the Program awaits completion of the Waste Composition Study. According to Metro, the following Program components all hinge upon the waste composition study:

Establishment of waste reduction performance goals

Measurement of system performance

Determination of what materials are available for alternative technology

Decision as to whether to establish a material recovery facility(ies)

Metro is behind the schedule it set for itself to do the study, but has stated that it will have the RFP issued by June 25, 1986. Because the study is the building block upon which much of the Program is to be based, it is critical that Metro move forward with it as planned.

Finally, in February the EQC allowed Metro to prepare a separate plan for disposal of household and small quantity hazardous waste, so long as it is submitted to DEQ by August, 1986 and the Department is assured, prior to the EQC's final evaluation of the Waste Reduction Program, that such a plan will be developed. Metro has appointed a 15 member Hazardous Waste Task Force which has met monthly since March to examine the issue and to determine the best method for collection and disposal of hazardous waste in the municipal waste stream. Based on the existing work to date of the Task Force, the Department is confident that a plan will be developed and implemented.

Alternatives:

The following potential alternatives for Department action are identified:

(1) Approve the Metro Program, with findings that the Program meets the criteria set out in SB 662, Section 8.

(2) Disapprove the Metro Program, with findings that the Program does not meet the criteria set out in SB 662, Section 8. All the duties, functions and powers of Metro relating to solid waste disposal will automatically transfer to the Department on July 1, 1986.

(3) Take no action. All the duties, functions and powers of Metro relating to solid waste disposal will automatically transfer to the Department on July 1, 1986.

Findings for Approval:

Based on the above evaluation, the Department finds that:

(1) If aggressively implemented in cooperation with local governments and collectors, the Metro Waste Reduction Program can reduce dependence on land disposal.

(2) If aggressively implemented, the proposed Program will substantially reduce the amount of solid waste that must be disposed of in land disposal sites. The Program foresees a major reduction effort by the generator who will be afforded recycling

opportunities. At least a portion of the waste which cannot be recycled will be processed in material recovery centers, composted, or burned to produce energy.

(3) At least a part of the Program can be and is being implemented immediately. A timetable for implementing each portion of the Program will ensure timely implementation.

(4) The Program follows the state's solid waste management priorities (ORS 459.015(2)(a).

(5) The Program is legally, technically and economically feasible under current conditions.

(6) The Metro Council has by ordinance made a commitment to achieve substantial waste reduction through implementation of the Program.

Director's Recommendation:

It is recommended that the Commission adopt the above evaluation and Findings for Approval as its findings and conclusion that the Metro Waste Reduction Program complies with the criteria for approval of SB 662, Section 8, and that the Program be approved.

Fred Hansen

Attachment 1. Staff Report, Agenda Item B, February 7, 1986, EQC Meeting
2. Summary of Testimony and Department Responses

Lorie Parker:m
SM300
229-5826
6/18/86

ATTACHMENT 1

VICTOR ATIYEH
GOVERNOR

Environmental Quality Commission

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MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item B, February 7, 1986, EQC Meeting

Metro Request for Review and Approval of Waste Reduction Program

Summary of Recommendation:

The Department recommends that the Commission allow Metro 90 days to modify its Waste Reduction Program to comply with the requirements of SB 662.

Background

The Metropolitan Service District (Metro) estimates that 962,000 tons of solid waste is generated annually by the people living in the Portland tri-county area. Approximately 22% of that waste is recycled, one of the highest recycling rates in the nation. But it is still necessary to landfill nearly 755,000 tons of garbage each year. Most of that waste is buried at St. Johns Landfill in North Portland. St. Johns has been in operation since 1934 and is nearly full. It is scheduled to close in June 1989.

Metro's attempts in the past eight years to site a general purpose landfill and waste-to-energy facility have failed. Because of these failures and the imminent closure of the only metropolitan all-purpose landfill, the 1985 Oregon Legislative Assembly intervened to avert a regional garbage crisis.

The 1985 Legislative Assembly passed SB 662 (Attachment 1) which gave the Environmental Quality Commission (EQC) the authority to locate and establish a disposal site(s) for Clackamas, Multnomah and Washington Counties. The legislature also directed Metro to prepare a waste reduction program to be submitted by January 1, 1986 for review and approval by the EQC. If the EQC does not approve this Program as submitted, the Commission shall allow Metro not more than 90 days to modify the Program. If the EQC does not approve the

Program by July 1, 1986, Metro's solid waste management functions and powers transfer to DEQ.

The direction to Metro to prepare a waste reduction program is not a new task for Metro. ORS 459.017(1)(b) assigns primary responsibility for developing a solid waste management plan to local government, which includes Metro. In addition, in response to Resource Conservation and Recovery Act requirements, Governor Straub issued Executive Orders in November 1977 and May 1978 which designated Metro as the solid waste planning and implementing authority for the tri-county area. At the time that SB 662 was passed, Metro was already in the process of updating the out-of-date 1974 Metropolitan Service District Solid Waste Management Action Plan (COR-MET Plan) and 1981 Waste Reduction Plan which set a goal of reducing waste through resource recovery (mass burn).

Metro has direct authority for the operation of solid waste disposal facilities in the Metropolitan Service District region. This includes the authority to set disposal rates, to control the flow and destination of waste materials, and to ban certain materials from disposal. Metro also has direct authority for solid waste planning in Multnomah, Clackamas, and Washington counties.

However, Metro does not have direct authority over the collection of wastes. This means that certain direct waste control measures are not available to Metro, including the authority to require garbage collectors to provide recycling programs or to reorganize their collection of commercial wastes in order to produce "high-grade" loads (loads containing large quantities of recyclable material), and to take the loads to processing centers where the materials can be recovered. This lack of authority to regulate collection has made it necessary for Metro to use indirect methods such as rate incentives and the certification program rather than direct regulatory methods in order to attempt to change the existing collection systems.

After SB 662 was signed into law on July 13, 1985, Metro speeded up its planning process for development of a new waste reduction plan. The planning and public involvement process included a resource recovery symposium, opinion leader interviews, a public opinion survey, preparation and distribution of a program summary and a series of seven fact sheets on waste reduction options, a full-page newspaper ad in five regional newspapers, nine informational meetings for special interest groups, three open houses, an informal workshop, and a public hearing before the Metro Council on December 5, 1985.

The Department Director and staff met regularly with and worked cooperatively with Metro staff during the months that the Waste Reduction Program was being developed by Metro. In addition, the Director wrote three letters to Metro Executive Officer Rick Gustafson and the Metro Council outlining what the Department expected the Program to include. Fred Hansen letters dated August 20, December 3 and December 12, 1985 (Attachment 2). Most of the Department's concerns discussed in the following evaluation of the Waste

Reduction Program were raised in these letters and in informal discussions with Metro staff.

The Metro Council held a work session on December 12, 1985 to debate a proposed resolution which states nine general waste reduction policies and directs Metro's Executive Officer to prepare a waste reduction program consistent with the resolution policies and to submit it to the EQC. On December 19, 1985, the Metro Council adopted Resolution No. 85-611-A. (Included in Final Report).

Metro submitted its Waste Reduction Program to the EQC on December 31, 1985. It is that Program which is the subject of this staff report.

The Department held a Public Hearing on the Metro Program on January 16, 1986. Nineteen persons testified, and several others submitted written comments. The Hearings Officer report is Attachment 3.

Waste Reduction Program Documents Submitted to EQC
(All documents are dated December 31, 1985)

Resolution No. 85-611-A, Adopting Solid Waste Reduction Policies: Adopted by Metro Council on December 19, 1985.

Final Report, including transmittal letter, the above Resolution, Summary of Program, Framework and Background Information: Not adopted by Metro Council.

Work Plan and Timeline: Not adopted by Metro Council.

Appendices:

Alternative Technologies Chapter

Source Reduction and Recycling Chapter

Metro Region Recycling Conditions

Public Involvement and Comment

Introduction to Metro's Waste Reduction Program

Metro's Waste Reduction Program is structured on the concept of maximum feasible reduction and on the state's solid waste management priorities of reduce, reuse, recycle, recover energy, and lastly, landfilling. ORS

459.015(2)(a). The Program is divided into three phases, with implementation of each phase dependent on the success of previous phases.

Phase I depends upon indirect measures such as education, disposal rate incentives and certification programs, as well as on compliance with the requirements of SB 405, the Oregon Recycling Opportunity Act, to maximize the reduction and recycling of wastes. Residents and businesses would have the opportunity to recycle through curbside collection programs and depots at disposal sites. (Opportunity to Recycle Act). Commercial waste collection systems would be reorganized to collect loads that contain high amounts of recyclable materials. These "high-grade" waste loads would then be taken to waste processing centers where office paper and cardboard would be removed for recycling. The wastes remaining after source separation and other material recovery would then be processed further through "alternative technology" for the production of fuel or compost, or for direct energy recovery through mass burning. In Phase I, Metro sets the maximum amount of wastes to be allocated to these alternative technologies at 1,300 tons per day, which equals 48% of the total waste stream including recycled materials or 61% of the waste stream presently going to landfills.

Phase II would begin January 1, 1989, if the recycling goals that Metro plans to set are not achieved by that date. In this phase, loads of wastes containing a high percentage of recyclable materials would not be accepted at disposal facilities, but would be required to go to materials recovery facilities if such facilities are available.

Phase III would begin on January 1, 1993, or possibly earlier. In this phase, Metro would re-evaluate the amount of waste that continues to be landfilled, and would allocate further amounts of wastes to energy recovery if the recycling goals of Phases I and II are not achieved. At this point, theoretically all wastes would be processed for materials and/or energy recovery. Only the ash from the energy recovery facility(s) would be landfilled.

Evaluation Criteria for Review of Metro Waste Reduction Program

SB 662, Section 8 requires the Waste Reduction Program to include:

(1) A commitment by the district to substantially reduce the volume of solid waste that would otherwise be disposed of in land disposal sites;

The Department has told Metro both informally and by letters dated December 3 and 12, 1985 (Exhibit C) that "commitment" to implementation includes (1) choosing a particular strategy; (2) stating the method and timeline for accomplishing the strategy; (3) setting performance standards against which the Program's success will be measured; (4) establishing checkpoints for judging the effectiveness of the Program strategies and alternative

strategies which will be implemented should the original strategies prove unsuccessful or less successful than anticipated; and (5) formal adoption by Metro Council.

(2) A timetable for implementing each portion of the solid waste reduction programs. At least a part of the program must be implemented immediately;

(3) Energy efficient, cost-effective and legally, technically, and economically feasible approaches to waste reduction;

(4) Approaches which carry out the existing state solid waste management priorities as established by SB 405 in 1983 (ORS 459.015(2)(a)):

First, to reduce the amount of solid waste generated;

Second, to reuse material for the purpose for which it was originally intended;

Third, to recycle material that cannot be reused;

Fourth, to recover energy from solid waste that cannot be reused or recycled; and

Fifth, to landfill waste that cannot be reused, recycled or from which energy cannot be recovered; and

(5) Effective and appropriate methods for waste reduction (i.e. procedures commensurate with the type and volume of solid waste generated within the region).

Evaluation:

The following evaluation describes each component of the Program following the order of its position in the solid waste management hierarchy. It also notes any public comments related to the component. It evaluates the component against the criteria for approval established in SB 662. Finally, it notes the Department recommendation for modification to the component in order to comply with SB 662.

At the end of the Program components discussion, the Program is analyzed as a whole to determine whether it meets the requirements of SB 662 and should be approved, or whether it does not meet the requirements and Metro should be allowed up to 90 days to modify the program.

METRO WASTE REDUCTION PROGRAM FRAMEWORK AND WORK PLAN PHASE I

Reduce and Reuse (Framework, Page 7)

1. **Promotion and education. Metro commits to education and promotion in both the Reduce, Reuse Component and the Recycling component.**

   Public Comments:

   Mike Durbin, Portland Area Sanitary Service Operators (PASSO) and Ken Spiegle, Clackamas County, both felt that Metro should put a major emphasis on recycling education/promotion.

   John Trout, Teamsters Local Union #281, felt that Metro improperly assigned itself the control of and responsibility for recycling education, promotion and notification. He felt that supervision of this task rests with the cities and counties.

   Analysis:

   A multi-year campaign is to be developed by February 1986 and adopted by the Metro Council in March 1986. The Work Plan does not discuss any education activities specifically targeted at convincing the public to reduce the amount of solid waste it produces or to reuse products, nor does it address education in schools. (Work Plan, Page 4.)

   Recommended Modifications:

   Metro should submit a comprehensive promotion and education program, including a detailed work plan for a multi-year promotion and education campaign and the financial commitment made to support it. One element of the program should be targeted to teach consumers the need for and how to change consumption habits in order to reduce the amount of solid waste generated and to maximize reuse of products. Another element should include a strategy for development and introduction of a curriculum for the region's public school system.

2. **Possible plastics reduction legislation. Metro will explore possible plastics reduction legislative action by participating in meetings of DEQ's Plastics Task Force which is currently being established. (Work Plan, Page 10.)**

   Public Comments: None

Analysis:

Working with the DEQ plastics task force would be an acceptable first step in developing alternatives for reducing plastic waste.

Recommended Modifications: None

3. **Possible legislative actions for packaging reduction, including expansion of the Bottle Bill. (Work Plan, Page 8).**

Public Comments: None

Analysis:

As a regional government, Metro cannot implement statewide legislative solutions, but can use its influence to affect the development, passage, and implementation of legislative solutions.

Recommended Modifications: None

4. **Possible salvage of building materials and other items at disposal facilities. (Work Plan, Pages 8 and 10).**

Public Comments: None

Analysis:

The Framework indicates that Metro will consider salvaging building materials at the landfill and transfer stations. The Work Plan indicates it will be done.

Recommended Modifications:

Metro should clarify whether it commits to incorporation of salvage facilities at the landfill and transfer stations.

5. **Possible Waste Exchange. Metro will explore the possibility of an information clearinghouse for industrial and manufacturing waste, with a decision to be made by May 1987.**

Public Comments: None

Analysis:

According to the Association of Oregon Recyclers, the Northwest is the only region of the country without an industrial waste exchange service.

Though there can be debate about whether such an exchange should be operated by a private or governmental entity, a regional waste exchange is needed.

Recommended Modifications:

Metro should commit to the establishment of a regional waste exchange. The exchange can be operated privately, with or without Metro assistance, or by Metro.

Recycle (Framework, Pages 7 - 11).

1. **Technical assistance. Metro commits to offering technical assistance to assist in implementation of SB 405, the Recycling Opportunity Act. (Work Plan, Page 14).**

Public Comments: None

Analysis:

Technical assistance has the potential to help local governments and collectors implement recycling programs if persons are made aware that assistance is available.

Recommended Modifications:

Metro should commit to promote aggressively their technical assistance program.

2. **Education and Promotion Campaign. Metro commits to a multi-year education and promotion campaign, to be developed by February 1986 and adopted by Metro Council in March 1986. (Work Plan, Pages 4 - 7).**

Public Comments, Analysis and Recommended Modifications: See discussion on Page 6.

3. **Recycling Information Center (RIC) enhancement. Metro commits to further enhancing their Recycling Information Center, by developing (1) a computerized information storage and retrieval system; (2) a series of educational flyers and handbooks; (3) a library on recycling and waste reduction; (4) a volunteer program; and (5) a network with community organizations. (Framework Page 8 and Work Plan Page 11).**

Public Comments: None

Analysis:

Metro plans to train and use volunteers to staff RIC. Though the enthusiasm of volunteers will be invaluable to the Program, Metro should not expect RIC to be run entirely by volunteers.

Recommended Modifications:

Metro should commit adequate financial resources to operate RIC with paid staff so as to most effectively utilize volunteers.

4. Local collection service certification. Metro commits to a certification program to encourage:

   (a) Optimally effective curbside collection programs for SB 405 materials.

   (b) A collection system for yard debris (if EQC does not list yard debris as a principal recyclable material).

   (c) Collection and delivery to materials recovery centers of high-grade loads (paper and cardboard) from commercial waste.

   "Standards and measurements will be developed to assure effective local collection programs which meet source separation goals for principal recyclable materials, remove yard debris from the waste stream, and provide high-grade loads of mixed waste" (Work Plan, Page 28).

The incentive for local jurisdictions, collectors and recyclers to be certified will be differential disposal rates. Metro's existing Solid Waste Planning Advisory Committee (SWPAC) will decide or recommend to Metro Council whether an entity should be certified. (Work Plan, Pages 29 - 31).

In the first year of the certification program, beginning January 1, 1987, Metro will reward with a lesser disposal rate those who have passed DEQ's review of their Recycling Report indicating compliance with SB 405.

Metro will add as yet undecided requirements beyond the minimum requirements of SB 405 in the following years. However, a rate differential for those standards will not be applied until either January 1988, (Work Plan Timeline) or January 1989. (Work Plan, Page 32).

Public Comments:

Merle Irvine, Oregon Processing and Recovery Center, supported the concept of using economic rate incentives to reward those who participate in recycling programs.

Jeanne Robinette, Oregonians for Cost-Effective Government, felt the certification program would increase Metro's bureaucracy and costs and was unnecessary.

John Trout, Teamsters Local Union #281, testified that Metro had no authority to establish a certification program because it usurps local government's authority over collection. He also felt that collection service must be franchised throughout the Metro district in order for the Metro program to work.

Estle Harlan, Oregon Sanitary Service Instituite, testified against the certification program because it is a duplication of the wasteshed reports required by SB 405. She also said that the DEQ Wasteshed reports need to be more encompassing to recognize the total volume of recycling from all sources.

Ken Spiegle, Clackamas County, considered the certification program an interference in local franchise control.

Kathy Cancilla, Portland Recycling Refuse Operators, Inc. (PRROS), supported the idea of a certification program, but wanted more definition of the process and how it would work.

Brian Lightcap, West Multnomah Soil and Water Conservation District/Oregon Association of Conservation Districts, suggested that Metro and local governments, including the SWCD, work together to set up recycling programs and motivate the public interest.

Analysis:

If one assumes that not all jurisdictions will comply with SB 405, then the certification program, by punishing the non-compliers or rewarding the compliers, depending on one's viewpoint, will help to convince the noncompliers that there are economic reasons to comply with the law. If one assumes that all jurisdictions will comply with the law which requires education and promotion and curbside collection of recyclable materials, then the certification program is unnecessary duplication until additional requirements beyond SB 405 requirements are added.

Recommended Modifications:

Metro should step up its certification process to initiate standards beyond SB 405 and apply rate incentives for those standards by January 1, 1987. Metro could enact a multi-tiered rate structure in which a rate incentive is offered for compliance with SB 405, and a larger rate incentive is offered for meeting standards beyond the requirements of SB 405. Metro should also indicate in the Program the rates to be applied, or at least the range within which the differential rates will be set. Further rate incentives should be applied by January 1, 1988 to encourage (1) generation of high-grade commercial loads for delivery to materials recovery centers and (2) collection systems for yard debris.

Metro should clarify whether SWPAC or Metro Council will decide whether to grant certification to a certification unit.

Metro should explain how it will resolve the potential problem of penalizing collectors and ratepayers who are meeting the standards of the certification program but are charged the higher disposal rate because they are included within a noncomplying certification unit.

5. **Yard debris. Metro commits to a program of yard debris processing and collection, to include (Work Plan, Pages 16 - 18):**

   (a) Establishing a yard debris processing facility at St. John's Landfill capable of processing up to 200,000 cubic yards annually.

   (b) Promoting home composting and use of processed yard debris.

   (c) Providing analysis to the EQC on including yard debris as a principal recyclable material in the Metro region.

   If the EQC does not list yard debris as a principal recyclable material, then in addition Metro will:

   (d) Adjust disposal rates to encourage recycling of yard debris.

   (e) By January 1, 1989, use the certification process to offer a lower disposal fee to those who implement yard debris collection and/or processing systems.

   (f) By July 1988, ban disposal of yard debris if the recycling goal is not met by above methods. The recycling goal has not yet been established.

Public Comments:

John Trout, Teamsters Local Union #281, testified that inclusion of yard debris as a recyclable material under SB 405 will create public opposition and jeopardize Metro's solid waste program.

Estle Harlan, Oregon Sanitary Service Institute, testified that it is industry's position that only dropbox loads or greater of yard debris can be economically collected and diverted to a processor. Rather than requiring an unsightly residential yard debris collection system, Metro should concentrate on education and market development.

Jeanne Roy, Portland citizen, supported the yard debris component but stated that Metro should set a lower disposal fee for source separated yard debris than for nonrecyclable waste. She also suggested that Metro provide a collection area for yard debris at the Washington Transfer and Recycling Center.

Analysis:

Yard debris is the largest single component in the waste stream. Metro estimates that at a 75% recovery rate of yard debris, the volume of waste going into the landfill would be reduced 10%. Accordingly, Metro must plan an aggressive program to recycle yard debris.

The timeline in the Work Plan allows banning of yard debris from the landfill in July 1988 based on the failure of the local collection service certification program and other methods for encouraging source separation and processing of yard debris. But the certification program will not be implemented until January 1, 1989 or January 1, 1988, depending on whether one reads the Work Plan, Page 32 or Timeline.

Recommended Modifications:

Metro should move up the date of initiation of rate incentives for compliance with yard debris certification standards to January 1988 or earlier (or clarify the Work Plan), and should commit to banning source separated yard debris from the landfill by January 1, 1989 when Phase II will be initiated. Source separated yard debris could be banned immediately.

Metro should commit to providing a collection or processing area for yard debris at all its transfer stations, or to diverting source separated loads to a processing center, and to keeping the yard debris piles free of contaminants. Metro should also commit to adjusting its disposal rates to encourage recycling of yard debris regardless of whether the EQC lists yard debris as a principal recyclable material.

6. Post-Collection Recycling/Materials Recovery. Metro commits to programs to recover recyclable materials by processing commercial waste with few contaminants, to include:

   (a) Using rate incentives and the certification program to encourage redesign of collection routes so that loads contain a high percentage of recyclables and will be delivered to a materials recovery center (see Page 15 for further discussion).

   (b) Establishing private, franchised or public high-grade material recovery centers at transfer stations "when feasible". (Framework, Page 9.) Metro seems to commit to designing a materials recovery center into the yet-to-be-established Washington Transfer and Recycling Center (WTRC). WTRC start-up date is not indicated. It is unclear whether Metro is committed to retrofitting the Clackamas Transfer and Recycling Center (CTRC) -- "CTRC will be redesigned", (Framework, Page 9 and Work Plan, Page 19), -- versus, "Determine appropriate design modifications for CTRC...if indicated." (Work Plan, Page 22.)

Public Comments:

Representative Mike Burton, District 17, Oregon Legislative Assembly, commented that the Program conflicts with itself on the role of the private sector in operating materials recovery facilities. Work Plan, Page 20 implies that Metro will operate the transfer station materials recovery facilities. Metro should allow private industry to operate such a facility if industry so proposes.

Merle Irvine, Oregon Processing and Recovery Center, testified that he supports the concept of high-grading waste and using economic incentives to reward those who participate. He noted problems with providing economic incentives to collectors who operate under a franchise which requires a pass-through of all disposal savings, and stated that the certification program should address the problem. His major concerns with the Program were: (1) Metro not allowing private ownership of materials recovery facilities; and (2) Metro acting too hastily to change the system and hurting existing recycling operations. He suggested that Metro test its concepts by using his materials recovery center by transferring high-grade loads from CTRC and banning high-grade loads from the landfill.

Jeanne Robinette, Oregonians for Cost-Effective Government, testified orally that material recovery facilities were not going in soon enough. Privately operated processing centers coupled with rate incentives would be enough to achieve substantial reduction.

Analysis:

The success of Metro's Waste Reduction Program is predicated largely on this component, operating in conjunction with the certification program and rate incentives. According to Metro estimates, processing of commercial waste for materials recovery could reduce the amount of commercial waste being landfilled by 18.4%. It is important that materials recovery facilities be available early in the Program, and that incentives be large enough to encourage collectors to high-grade loads and deliver them to such facilities.

Metro seems to commit to designing a materials recovery center into the yet-to-be-established Washington Transfer and Recycling Center (WTRC). WTRC start-up date is not indicated. It is unclear whether Metro is committed to retrofitting the Clackamas Transfer and Recycling Center (CTRC) -- "CTRC will be redesigned", (Framework, Page 9 and Work Plan, Page 19), -- versus, "Determine appropriate design modifications for CTRC...if indicated" (Work Plan, Page 22).

Recommended Modifications:

Metro should indicate the expected date of completion of the materials recovery facility to be built in conjunction with WTRC. Metro should commit to either retrofitting CTRC for materials recovery or allowing a private materials recovery center to be established within easy access of CTRC. Until CTRC is retrofitted or a recovery center is established nearby, Metro should use its flow control authority to require high-grade loads delivered to CTRC to be diverted or transferred to existing materials recovery centers. Metro should also require high-grade loads delivered to St. Johns to be diverted to Oregon Processing and Recovery Center (OPRC).

7. Rate incentives. Metro commits to the concept of adopting rate incentives, to include:

(a) Incentives for operation of materials recovery centers. Metro will revise its ordinances by July 1, 1986 to provide incentives for start-up and operation of materials recovery centers. (Work Plan, Page 33). Currently these incentives are granted through a variance. Metro will consider various strategies to encourage garbage collectors to high-grade their loads and deliver them to materials recovery centers. The Work Plan lists potential strategies, but it will be January 1987 before a rate mechanism is selected and enacted.

(b) Incentives to encourage local collection services to comply with the standards of the certification program. No specific incentive has been chosen, although differential rates to haulers within a certification unit and a local government grant program are options discussed (Work Plan, Pages 37 - 38). A program approach is to be adopted by September 1986. According to Metro, rate modifications "should be implemented on or after January 1, 1987" (Work Plan, Page 38).

(c) User fee rates to fund Work Plan commitments. (Work Plan, Page 33).

Public Comments:

Jeanne Robinette, Oregonians for Cost-Effective Government strongly supported rate incentives, stating that rate incentives by themselves will change recycling and disposal behavior.

John Trout, Teamsters Local Union No. 281, testified that Metro has no authority to establish disposal rates based on performance of the solid waste generator or collector. According to Trout, Metro's authority to fix rates at disposal sites is limited to payment for services performed by Metro and repayment of its investment in solid waste facilities.

John Drew, Association of Oregon Recyclers, supported rate incentives to encourage recycling for high percentage recyclable materials, but was concerned about the mechanics of the program as described in the Work Plan, Pages 34 - 38.

Analysis:

A major portion of the Metro Program for recycling relies on rate incentives to bring about the changes which will make the Program work. Because Metro has not decided on the types of rate incentives to be used, or the spread in differential rate structures, it is difficult to assess whether rate incentives can produce the results Metro plans.

There is some evidence from other cities that charging more for garbage has a modest effect on recycling behavior. It is not entirely clear, however, that reduced disposal fees to garbage haulers will be enough to convince them to redesign collection routes and deliver high-grade loads to a materials recovery center. Disposal fees are only approximately 20% of a total garbage bill. Unless the garbage hauler owns enough equipment to have some flexibility in operation, the cost of investing in new equipment to run a high-grade route will far outweigh disposal savings. If the hauler has to transport the high-grade load much farther to a material recovery center than to a landfill, the cost of that time and transport outweighs the disposal savings (unless the differential rate spread is enormous). Furthermore, under some franchises, there is little incentive for the garbage hauler because the hauler is required to charge

the disposal costs directly to the generator. The hauler, therefore, would receive no disposal savings for delivering the load to a processor.

The Department understands Metro's dilemma in trying to prepare an effective waste reduction program. Because of its lack of collection regulation authority, Metro has turned to the regulatory tools it does have -- rate regulation and flow control. The dilemma is compounded by the fact that there are few if any models in this country for the Waste Reduction Program required of Metro, and very little data to indicate whether rate incentives can effect the changes in the disposal system that Metro is attempting. Metro has therefore had little choice but to propose what is in effect a grand experiment.

The Department is willing to let Metro try its rate incentive and certification experiment. But because of the uncertainties surrounding the effectiveness of rate structures to produce substantial amounts of recycling both in the residential sector under the SB 405 programs, and in the commercial sector using the materials recovery centers, Metro must plan for alternative strategies to be implemented to achieve the recycling goals if rate incentives fail.

Recommended Modifications:

Metro should move up its consideration of rate options and differentials so that the direction to be taken, though perhaps not adopted, is more clearly defined and can be included in the resubmittal of the Program to EQC. See also Phase II discussion on Page 22.

8. **Possible development and distribution of recycling containers for home or office (Work Plan, Page 12).**

Public Comments: None

Analysis:

Recycling programs that distribute home recycling containers have been very successful.

Recommended Modification: None

9. **Possible waste auditing and consulting service for waste generators, including high quantity paper generators. (Work Plan, Page 21).**

Public Comments: None

Analysis:

Metro's Framework discusses the possibility of a program for high quantity paper generators for waste auditing and consulting services (Framework, Pages 8 and 9). The Work Plan does not discuss specific programs for high quantity generators, but does propose to develop a plan, by December 1986, for a waste auditing and consulting service. It is not clear from the Work Plan whether Metro intends to implement this service, or just to evaluate its need.

The waste auditing program could be useful in educating businesses about the options available for their wastes, such as the waste exchange and the cost savings of having their material hauled to a processing center rather than a landfill.

Recommended Modifications: None

10. **Possible grants, loans and diversion credits for materials recovery service. (Work Plan, Page 12).**

Public Comments: None

Analysis:

Grants and loans would be targeted to local governments, businesses, and/or recyclers to support waste reduction and recycling programs. Metro plans to work with local governments and others between January 1 and May 1, 1987 to consider this program and the program for developing recycling containers for home or office mentioned above. Final decision on these and other possible projects is scheduled by Metro Council for May 1987, with possible implementation starting the next month.

Recommended Modifications: None

11. **Possible materials markets assistance, which may include market surveys and analysis, legislative proposals, grants and loans, development of institutional purchasing policies, and materials brokerage (Framework, Page 11 and Work Plan, Pages 40-41).**

Public Comments: None

Analysis:

The only market assistance activities that Metro is committed to doing are developing a Market Research Plan and promoting recycled products to institutional purchasers.

Recommended Modifications:

Metro should commit to actively approaching institutional purchasers with the message that purchasing of recycled products can assist recycling markets, rather than wait to be asked for assistance as the Work Plan contemplates (Work Plan, Page 43).

Recover Energy

1. **Metro will consider "The technical and economic feasibility of alternative technologies for disposal of up to 48% of the waste" (Framework, Page 11). 48% of the waste is 1,300 tons per day.**

   The technologies to be evaluated include composting, refuse-derived fuel (RDF), mass burn incinerator, and cellulose conversion to ethanol. Feasibility will be determined by issuing a Request for Qualifications (RFQ) in March 1986. Metro will by July 1986 allocate the amount of waste to selected technologies, determine how much the Council is willing to spend, and develop a list of vendor finalists for each type of acceptable technology, as determined from review of the RFQ responses. The finalists may be invited to compete in a Request for Proposal (RFP) to be issued in December 1986. If the Council decides to award a contract, commercial operation of the alternative technology is scheduled to begin in December 1990.

   Public Comments:

   Greg Niedermeyer, Niedermeyer-Martin Co., supports Signal-Resco's efforts to site a burner in Columbia County. He thought Metro should allow the 52% of the waste ultimately planned for recycling to be committed to a burner on an "as available" basis. He did not think that the Metro Program supported the conclusion that 52% recycling is technically feasible. He also was concerned about the availability of revenue bonding after 1986, a concern shared by Pete Williamson of the Port of St. Helens.

   Estle Harlan, Oregon Sanitary Service Institute, testified that the industry supports implementing alternative technology concurrently with recycling.

Michael Bick, Ebasco Services, Inc. and Schnitzer Steel Products, expressed concern that Metro's Program does not demonstrate a commitment to waste reduction because it does not commit to alternative technology. He also expressed concern about the slow schedule for implementation. He thinks that the post-contract timeline is unrealistic, and that it will take at least 36 months from waste flow agreements to start-up. Metro should begin negotiations immediately with energy recovery suppliers who have acceptable sites so that financing can be completed in 1986 before new tax laws eliminate Industrial Revenue Bond financing. Finally, he states that Metro should set disposal fees in excess of $40 to reflect the true cost of landfills. This level of fee would provide the kind of incentives needed to encourage waste generators to reduce, reuse and recycle.

Douglas Francescon, Citizen, supported the concept of a large scale energy recovery facility prior to landfilling. He said we must first process waste through the hierarchy of reduce, reuse, recycle, recover, and landfill only processed waste. He urged that we take advantage of the three current proposals in the Portland area for alternative technology/energy recovery while the opportunity is there.

Rebecca Marshall, GFA, supported Metro's proposal for alternative technology and the flexibility in the plan. She prefers diversification rather than one mass burner because its volume dependency could undermine recycling. She discussed the need for criteria to rank alternative technology by technical and economic feasibility, and the need for a revenue-producing facility with developed markets.

Jeanne Roy, Citizen, and Leanne MacColl, League of Women Voters, were concerned about Metro seeking proposals for a major energy recovery facility before recycling has become established. They are concerned that the energy recovery facility would compete for the same materials as recycling, and discourage the public from recycling.

Analysis:

Metro has a process for consideration of alternative technology to process the 48% of the waste that cannot be recycled, but has not committed to using such technology.

The Department believes that 48% is a reasonable amount to assume cannot be recycled even with the aggressive recycling program planned by Metro. Therefore, it is imperative to process that waste to recover energy and to reduce the volume. Metro should either commit approximately 1,300 tons per day of waste to alternative technology, or commit to paying a price per ton for alternative technology which at a minimum reflects the true cost of landfilling plus a premium for its higher position in the state solid waste management hierarchy, and is within the price range of

alternative technology facilities built and being built by local governments throughout the country.

According to Metro's timeline, Metro plans to decide on the allocation of waste to alternative technology and the range of acceptable costs by July 1986. The Department recognizes that these decisions, to be based partially on the response to the RFQ, probably cannot be made by the proposed May resubmittal deadline. But these decisions could be made before the EQC's final review of the Waste Reduction Program on June 27.

Recommended Modifications:

Metro should either commit approximately 1,300 tons per day of waste to alternative technology, or commit to allocating as much of the 1,300 tons as can be processed by an alternative technology or combination of technologies within a price per ton cap to be determined by Metro. The price cap must at a minimum reflect the true cost of landfilling plus an adequate premium for resource recovery's higher position in the state solid waste management hierarchy, and be within the price range of alternative technology facilities built and being built by local governments throughout the country. If Metro chooses to establish a price cap for selecting alternative technology rather than to commit 48% of the waste to alternative technology, then Metro must by ordinance adopt the price cap as an amendment to the Waste Reduction Program and submit it by June 13, 1986 to the EQC for approval.

2. **Metro will consider the need and feasibility of committing up to 50 tons per day of waste to a developmental technology.**

Public Comments:

Judy Dehen, Sierra Club, and Lyle Stanley, Citizens, suggested specific changes in the Alternative Technologies Section to promote the early consideration of developmental technologies. Both requested the inclusion of "Cellulose Conversion to Ethanol" technology in the summary of tasks (Work Plan, Page 24), and urged earlier consideration (date moved from 8/87 to 3/86) of developmental technology in the timetable. In addition, Dehen expressed concerns regarding the emissions of dioxins from incineration of municipal solid waste.

Analysis:

Metro will evaluate various types of alternative technologies, including developmental technology for approximately 50 tons per day of waste, and has stated that they will bear a somewhat greater risk for implementation of small-scale developmental technology. The work plan does not schedule the evaluation of the need, feasibility and process for implementing developmental technology until August 1987. The Work Plan is not

consistent in stating whether cellulose conversion to ethanol is a technology to be evaluated in the RFQ/RFP process.

Recommended Modifications:

Metro should clarify whether cellulose conversion to ethanol is a process which is to be evaluated through the RFQ/RFP process.

Waste Reduction Performance Goals:

1. **Metro plans to do a waste substream composition study to survey the volumes, composition and places of origin of waste generated by distinct generator types. Based on the study, the Council will set reduction performance goals for each individual wastestream.**

   The 52% figure in the Final Report is not a goal but only a figure to set the outside parameter of the material which can be recycled. If the recycling goals yet to be set by Metro are substantially less than 52%, the increment of waste left will be allocated to alternative technology in 1993. See Phase III discussion, Page 23.

   Public Comments: None

   Analysis:

   Because Metro has not yet set its waste reduction goals and because it is difficult to predict the success of the planned Reduce, Reuse, Recycle Program, it is impossible for the Department to find with any certainty that a set percentage of the wastestream will be recovered through Reduction, Reuse and Recycling. If all components of the Programs are implemented aggressively, including the crucial public education and promotion needed to change the region's disposal behavior, over time the region may be able to approach a 52% recycling rate. The Department agrees with Metro that time must be allowed for the recycling program to become established and for the public's attitude toward waste reduction to change. By 1993, if it is obvious that the 52% recycling rate cannot be achieved, then the strategy for waste reduction will shift to more alternative technology so that the reduction goals can be met.

   Recommended Modifications: None

System Measurement (Framework, Page 4)

1. **In addition to the initial waste substream composition study, Metro proposes:**

   (a) **Periodic sampling of wastes to determine the amount of recyclable material being burned or landfilled instead of recycled.**

   (b) **Measurement of the quantities of wastes delivered to each facility.**

   (c) **Periodic survey of the quantities of materials recycled and the participation rates.**

   (d) **An on-going evaluation of the economic feasibility and cost-effectiveness of each program and the entire waste reduction effort.**

   Public Comments: None

   Analysis:

   The multiple means of measurement, including independent measurement of the amount and composition of materials disposed of, the quantities of materials recycled, and the participation rates in different recycling programs, should provide necessary information to evaluate the program and should show the effects of external factors such as changes over time in the quantities of materials available for recycling. If Metro commits the necessary resources to gather sufficient sample sizes, then Metro should obtain information valuable not only to measure the success of the program at meeting waste reduction goals, but also information that can help improve the recycling programs. The Work Plan (Page 46) commits to development of the ongoing systems measurement plan by May, 1986.

   Recommended Modifications: None

PHASE II

If the waste reduction goals for the individual substreams are not achieved by January 1, 1989, then Metro will ban landfill disposal of loads containing a high percentage of recyclable materials if more appropriate disposal options are available.

Public Comments: None

Analysis:

Phase II will affect change only if there are high-grade recyclable loads being dumped in the landfill. However, the more likely scenario is that if Phase I is failing, it is because local governments and garbage haulers have not responded to rate incentives and have failed to redesign collection routes to maximize wastestream differentiation and collect high-grade loads of recyclables (i.e. cardboard, office paper, yard debris). If that is the case, then there will be few loads of high-grade recyclables to divert to a processing center, and Phase II will have little effect.

Much of Metro's difficulty in devising the Waste Reduction Program is related to the fact that Metro has rate-setting and flow control authority, but not collection authority. If the indirect management tools Metro has been forced to use are not enough to achieve substantial reduction, then Metro should leave itself the option to request authority sufficient to accomplish the waste reduction goals established by Metro.

Recommended Modifications:

Metro should revise Phase II to commit to seek sufficient authority from the Oregon Legislature to ensure that the solid waste system will be managed to accomplish the waste reduction goals established by Metro.

PHASE III

If Phases I and II do not make significant progress toward maximum feasible waste reduction by January 1, 1993, or possibly earlier, then all waste not being recovered or processed for energy will be allocated to alternative technologies.

Analysis:

January 1, 1993 is a reasonable checkpoint to pick up any waste which several years of experience indicates cannot be recovered through the curbside recycling collection program and high-grade materials recovery centers. By 1993, either the Program is successful and recovering materials and energy from the entire waste stream, or will be as soon as Phase III is implemented.

Metro allows itself the option of implementing Phase III before 1993 if "the Metro Council determines that Phases I and II are unable to make significant progress toward maximum feasible waste reduction." (Framework, Page 15). This means that the Metro Council could potentially call the recycling program a failure shortly after 1989 and commit all the waste being landfilled to alternative technology. The

attitudes and system changes which will make the reduction and recycling programs successful will not happen overnight. Furthermore, as the League of Women Voters of Portland commented, having the option to commit the recyclable portion of the waste to alternative technology may well discourage source separation and a total commitment by Metro and the region population to successfully implement the reduction and recycling programs.

Recommended Modifications:

Metro should revise Phase III to delete the possibility of implementation before January 1, 1993.

Evaluation of the Metro Waste Reduction Program as a Whole

Metro is to be congratulated for considering every feasible waste reduction technique which, to the Department's knowledge, is being used in this country, and preparing a Waste Reduction Program which is innovative and multi-faceted. The program is properly based on the state's hierarchy of solid waste management methods, emphasizing reduction, reuse and recycling first, and allowing only the portion of the wastestream deemed nonrecyclable to be allocated to energy recovery.

The deficiencies in the Program are not in the conceptual framework, but in the lack of specificity and Metro Council commitment to actually implement. To a large extent, the Program is a plan to plan rather than a plan for implementation. The Department recognizes that the Program was developed under severe time constraints imposed by the legislature, and that for many of the Program components, more planning is necessary before implementation. The Department, however, does not believe the criteria of SB 662 can be met without more specificity and commitment to implement. Allowing Metro 90 days to modify its Program in effect gives Metro an additional five months from adoption of its Resolution to hone its concepts and continue its planning efforts.

For several components, there needs to be clarification of the timetable or text. For others, the implementation dates need to be accelerated so that the region will begin to benefit from waste reduction activities in the near future.

All the Program components appear to be legally feasible. Technical feasibility and degree of effectiveness are more problematic. The local collection service certification and rate incentives components, both keystones of the Program, are untested and may or may not succeed in encouraging substantial waste reduction activities. Whether or not they will succeed depends to a large extent upon how these components are designed and administered. Metro should be given additional time to further develop and explain these proposed components.

For many of the components, Metro has promised only "to consider" carrying out the component. These components cannot be found to contribute to substantial waste reduction. Even the components which the Final Report and Work Plan state will be implemented may in fact not be. The Metro Council, the elected body which holds the purse strings and makes the policy decisions for Metro, has not adopted either document. The Council has indicated its commitment to the Program only so far as the very general language in its Resolution No. 85-611-A indicates commitment.

The resolution states that budget amendments "will be considered for selected programs contained in the Solid Waste Reduction Program." Metro "will consider" a higher premium for reduction or recovery based on the state priority list, and Metro "will determine the range of acceptable costs and other specific criteria" for alternative technology projects. This kind of language does not indicate commitment from which findings can be made that a program component will be implemented. Nor does the resolution supply the specificity and timelines required by SB 662.

Finally, since shortly after SB 662 was passed, the Department has told Metro that a plan for household and small quantity hazardous wastes should be included in the Waste Reduction Program. (See Attachment 2 letters). The Department has now agreed with Metro that a plan for household and small quantity hazardous waste can be submitted separately from the Waste Reduction Program, if it is submitted to DEQ by August, 1986, and if the Department is assured, prior to the EQC's final evaluation of the Waste Reduction Program, that such a plan will be developed.

See Chart on next page for summary of evaluation of Metro Waste Reduction Program.

Recommended Modification:

SB 662, Section 8 requires a "commitment by the district to substantially reduce the volume of solid waste" and a "timetable for implementing each portion of the solid waste reduction program." The Metro Council must adopt by ordinance the Framework and Work Plan in order for the EQC to find that the Council is committed to the Program, the timetable for implementation, and providing the necessary funds. The Framework and Work Plan should be adopted as the Waste Reduction element of Metro's Solid Waste Management Plan.

SUMMARY OF EVALUATION OF THE METRO WASTE REDUCTION PROGRAM

Component	Metro Council Commitment to Implement	Program Commitment to Implement	Beginning Immediate Implementation	Legally Feasible	Technically Feasible	Economically Feasible	Effective & Appropriate	Recommended Modification
Phase I								
Reduce and Reuse								
A. Promotion and education	No	Commit	Yes	Yes	Yes	Yes	Yes	Yes
B. Plastics reduction legislation	No	Consider	Yes	Yes	Yes	Yes	Yes	No
C. Packaging reduction legislation	No	Consider	Yes	Yes	Yes	Yes	Yes	No
D. Salvage of building materials	No	?	No	Yes	Yes	Yes	Yes	Yes
E. Waste exchange	No	Consider	No	Yes	Yes	Yes	Yes	Yes
Recycle								
A. Technical assistance	No	Commit	Yes	Yes	Yes	Yes	Yes	Yes
B. Promotion and education	No	Commit	Yes	Yes	Yes	Yes	Yes	Yes
C. Recycling information center enhancement	No	Commit	Yes	Yes	Yes	Yes	Yes	Yes
D. Certification	No	Commit	No	Yes	?	Yes	?	Yes
E. Yard debris programs	No	Commit	Yes	Yes	Yes	Yes	Yes	Yes
F. Post collection materials recovery	No	Commit	No	Yes	Yes	Yes	Yes	Yes
G. Rate incentives	No	Commit	No	Yes	?	Yes	?	Yes
H. Recycling container development	No	Consider	No	Yes	Yes	?	Yes	No
I. Waste auditing consulting service	No	Consider	No	Yes	Yes	Yes	Yes	No
J. Grants, loans, diversion credits	No	Consider	No	Yes	Yes	Yes	Yes	No
K. Materials markets assistance	No	Consider	No	Yes	Yes	Yes	?	Yes
Recovery Energy								
A. Alternative technology	No	Consider	No	Yes	Yes	Yes	Yes	Yes
B. Developmental technology	No	Consider	No	Yes	?	?	?	Yes
Goals & System Measurement								
Waste reduction performance goals	No	Commit	Yes	Yes	Yes	Yes		No
System measurement	No	Commit	No	Yes	Yes	Yes	Yes	No
Phase II								
A. Bans on disposal of recyclables	No	Commit if Phase I goals not met	No	Yes	Yes	Yes	Yes	Yes
Phase III								
A. Commitment of remaining waste to alternative technology	No	Commit if Phase I and II goals are not met	No	Yes	Yes	Yes	Yes	Yes

(SM79)

Alternatives

The following potential alternatives for EQC action are identified:

1. Approve the Metro Program as submitted, with findings that the Program meets the criteria set out in SB 662, Section 8.

   Because of the problems cited in the prior analysis, the Department does not believe that the criteria of SB 662 are met.

2. Allow Metro not more than 90 days to modify the program to meet the Commission's objections.

   The Commission may adopt in whole or part the Department's list of objections and directions to Metro for modifying the Program, or may adopt its own list of objections and directions.

   The Commission may allow Metro less than 90 days for modification, but the Department recommends that the entire 90 day period allowed by SB 662 be granted. Three months will be a short but sufficient period of time for Metro to make the required modifications.

3. Delay a decision and adoption of findings and request further comment or analysis from Metro and/or the Department.

   This alternative will necessarily cut short Metro's 90-day modification period if the Commission ultimately decides to return the Program to Metro for modification. The Program must be resubmitted in time to allow Department review, a Public Hearing and comment period, and a Commission decision before July 1, 1986. The July 1, 1986 deadline for final review of the Program is statutorily set and can therefore not be changed. If the Commission fails to act or to approve the Program by July 1, 1986, all of Metro's solid waste management functions and powers automatically transfer to DEQ.

Summation:

1. The EQC cannot find that the Metro Council has made a commitment to substantial reduction of the volume of solid waste currently being landfilled because it has not adopted by ordinance the Framework or Work Plan and is therefore not bound to implement the Program.

2. The EQC finds that there are textual conflicts that need to be resolved.

3. The EQC finds that at least a portion of the program is to be immediately implemented, but most of the immediate implementation is planning rather than waste reduction activities which will immediately reduce the volume of waste being landfilled.

4. The EQC finds that the proposed program does use approaches which follow the state's solid waste management priorities (ORS 459.015(2)(a)).

Director's Recommendation:

It is recommended that the Commission adopt the above evaluation and summation as its findings and conclusions, and pursuant to SB 662, Section 8 (3), should allow Metro 90 days to modify the Waste Reduction Program to comply with SB 662.

In order for the EQC to find that Metro's Waste Reduction Program complies with the standards set out in SB 662, the Metro Council must:

(1) Make the modifications listed in the evaluation and summarized below;

(2) Show how the objections will be met by another method; or

(3) Justify why the recommended modifications are not legally, technically or economically feasible.

Modifications for Compliance with SB 662

The Metro Council must:

1. Prepare a comprehensive promotion and education program, including a detailed work plan for a multi-year promotion and education campaign and the financial commitment made to support it.

2. Clarify whether it commits to incorporation of salvage facilities at the landfill and transfer stations.

3. Commit to the establishment of a regional waste exchange.

4. Commit to promote aggressively the technical assistance program.

5. Commit adequate financial resources to operate RIC with paid staff.

6. Accelerate the certification process to initiate standards beyond SB 405 and apply rate incentives for those standards by January 1, 1987.

7. Accelerate consideration of rate options and differentials, and indicate the rates or range of rates to be applied in the certification program.

8. Apply rate incentives by January 1, 1988 to encourage (1) generation of high-grade commercial loads and (2) collection systems for yard debris.

9. Clarify whether SWPAC or Metro Council grants certification to a certification unit.

10. Explain how the certification program will be implemented so as to not penalize complying collectors and rate payers.

11. Accelerate the date of certification for yard debris to January 1988, or clarify that the Program already indicates that date.

12. Commit to ban source separated yard debris from the landfill by January 1, 1989.

13. Indicate the expected date of completion of the WTRC materials recovery facility.

14. Commit to either retrofitting CTRC for materials recovery or allowing a private materials recovery center to be established within easy access of CTRC.

15. Until CTRC is retrofitted, require high-grade loads delivered to CTRC to be diverted to existing materials recovery centers.

16. Require high-grade loads delivered to St. Johns to be diverted to Oregon Processing and Recovery Center.

17. Actively approach institutional purchasers about the need for purchasing recycled products.

18. Commit 1,300 tons per day of waste to alternative technology, or commit to establishing a price cap and allocating as much of the 1,300 tons as can be processed within that price cap.

19. Clarify whether cellulose conversion to etehanol is a process which is to be evaluated in the RFQ/RFP process.

20. Revise Phase II to commit to seek sufficient authority from the Oregon Legislature to ensure that the solid waste system will be managed to accomplish the waste reduction goals established by Metro.

21. Revise Phase III to delete the possibility of implementation before January 1, 1993.

22. Adopt by ordinance the Framework and Work Plan as an element of the Metro Solid Waste Management Plan.

Fred Hansen

Attachments:
1. Senate Bill 662
2. Letters from DEQ to Metro dated August 20, December 3 and December 12, 1985, and January 30, 1986.
3. Hearing Officer's Report

Lorie Parker:m
SM70
229-5826
January 31, 1986

VICTOR ATIYEH
GOVERNOR

ATTACHMENT 2

Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207
522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item A, June 27, 1986, EQC Meeting

Summary of Testimony and Department Responses

Summary of Procedure

Pursuant to public notice, a public hearing was convened in the Auditorium of the Portland Building, 1120 S. W. 5th, Portland, Oregon at 2:00 p.m., June 9, 1986. The purpose of the hearing was to receive testimony concerning:

(1) whether the Environmental Quality Commission should approve the revised Metro Waste Reduction Program; and

(2) the accuracy of the draft staff report.

Summary of Testimony:

*Representative Mike Burton, District 17, Oregon House of Representatives, supported the substance of the DEQ draft report, but asked that the negative tone of the report be revised.

Department Response:

The Department has revised the tone of the staff report.

*Rick Gustafson, Executive Officer, Metro, was pleased with the recommendation to approve the Program, but criticized some of the staff report comments and conclusions. He objected to the statement that Metro was not absolutely committed to using rate incentives through the certification program to encourage generation of high-grade commercial loads. He repeated the argument made before the Commission in February that acceleration of the certification program to use standards beyond SB 405 was not "technically feasible." He also stated that he "does not believe that speed of implementation is a precursor to success or a reflection of commitment," and therefore DEQ should not be critical of the fact that the waste composition study is behind schedule.

*Denotes written comments submitted. See attachments.

Gustafson stated that Metro is not "uncertain" (DEQ staff report) about the need for more material recovery centers, but that the issues of where and how many are yet to be decided. He also argued with the DEQ's February directive that Metro use its flow control authority to require delivery or transfer of high-grade loads from disposal sites to a material recovery center, stating that flow control does not need to be implemented until Phase II.

Department Response:

Metro will apply certification standards to the generation of high-grade loads "if appropriate" (Final Report, p. 12). The Department does not view this statement as a definite decision to apply certification standards to encourage generation of high-grade loads since the decision has yet to be made, and will be made based on a yet to be done waste composition study.

Metro has, in Gustafson's words, "exercised its option to disagree" with the EQC recommendation to step up the certification process to initiate standards beyond SB 405 in the first year. Had Metro begun work on certification with local governments as soon as the Program was adopted in December, the Department believes that standards beyond SB 405 could have been worked out with local governments. The Department agrees that it is now too late to do so. The statements made by Director Fred Hansen which are cited by Metro as supporting their position are not on point. In October, Hansen acknowledged that there might not be enough time before the January submittal date to get local government commitments to assist in implementation of the Program. That does not mean that he sanctioned delay to beyond July 1, 1987.

Speed of implementation is not the only test of successful implementation of the Program, but it is certainly one indicator. The sooner the needed baseline studies are done, the sooner decisions can be made leading to the implementation which will cause the reduction which is the goal of the Program.

Gustafson's statement that Metro is not "uncertain" about the need for more material recovery centers does not stand up to scrutiny. The EQC recommended that Metro commit to either retrofitting CTRC for materials recovery or allowing a private materials recovery center to be established within easy access of CTRC. Metro's response was couched in terms of deciding to build material recovery centers when it "is determined to generate adequate quantities of high-grade loads such that recovery is economically feasible." Framework, p. 11. Economic feasibility will be decided once the Waste Composition Study is completed. This language does leave uncertainty about whether CTRC will be retrofitted or new materials recovery centers built.

Gustafson stated that Metro is not "uncertain" (DEQ staff report) about the need for more material recovery centers, but that the issues of where and how many are yet to be decided. He also argued with the DEQ's February directive that Metro use its flow control authority to require delivery or transfer of high-grade loads from disposal sites to a material recovery center, stating that flow control does not need to be implemented until Phase II.

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Finally, Gustafson argues that Metro should not be required to use flow control to divert high-grade loads to a material recovery center until Phase II. That means that Metro will rely on voluntary diversion for 2-1/2 years. If the rate incentives are substantial, they may be enough to cause the diversion. As it is now, there is evidence that the existing rate incentive is not always enough to convince haulers to change their long-time practice of delivering loads to the landfill. Undoubtedly flow control would work faster and more efficiently to divert high-grade loads. It is, however, a more heavy-handed approach than voluntary diversion, which may justify Metro's choice to try voluntary compliance first.

*Teresa DeLorenzo, Metro Solid Waste Policy Advisory Committee, was pleased that DEQ was recommending approval of Metro's Program, but asked for a positive rather than reluctant approval.

Department Response:

The Department has revised the tone of the staff report.

*Marcia Gaiser, Tigard citizen, testified that building a refuse derived fuel plant would be a good alternative to landfilling all our waste. She thought that recycling opportunities are adequate, but that society needs to pressure businesses such as the fast food industry to use biodegradable packaging.

Department Response:

Metro currently has several proposals for refuse derived fuel (RDF) facilities. The Metro Program favors RDF over mass burn.

*Estle Harlan, Oregon Sanitary Service Institute, testified that Metro needs to manage its promotion and education program in cooperation and coordination with area haulers. OSSI supports Metro in its choice not to use standards beyond SB 405 standards for the first year of the certification program. She expressed grave concerns about the feasibility of applying equitable standards to haulers in Portland. Finally, she suggested that Metro should not use rate incentives and bans on yard debris disposal until markets are assured for yard debris products.

Department Response:

We agree with OSSI that it is now too late for Metro to develop and apply certification standards beyond SB 405 in the first year. Our criticism was that Metro did not choose to develop those standards six months ago.

*Chuck Stout, Portland citizen, called Metro's Program haphazard and unrealistic, doubted the Metro Council and executive director's commitment to solving the region's solid waste problems, and recommended that DEQ

reject the Program. If the EQC does approve it, he recommended that DEQ request legislative authority to monitor implementation of the Program.

Department Response:

Though Metro's Program is not perfect and it is impossible to know how it will be implemented, the Department believes that the Program meets the criteria for approval as set out in SB 662. It is true that DEQ has no authority to monitor the implementation or effectiveness of the Program.

Edith Bartel, Columbia River Region Inter-League Organizations of the League of Women Voters, stated that the League has no position on rates, but wondered whether there was money to be earmarked for developing markets for recycled products.

Department Response:

Metro will not generate extra revenue from its rate incentive program. Metro may consider a grants and loan program for market development. Work Plan, pp. 41 - 44.

Fritz Buehler, Hillsboro citizen, related his own difficulties in recycling cardboard and used bicycle tires generated at his bicycle shop.

Department Response:

Mr. Buehler's cardboard should be collected regularly after the July 1 implementation date for SB 405. The Metro Program does not address tire recycling. Tires can, however, be taken to Waste Recovery, Inc. for recycling.

*Douglas Francescon, Oregon City citizen, testified that cost projections cannot be done accurately. Therefore Metro should use as its only cost effectiveness criteria whether or not customers would stop using the waste management system. He recommended going ahead with an RFP for a large scale reduction plant immediately.

Department Response:

The EQC gave Metro the choice of deciding outright that it would build an alternative technology facility (as Mr. Francescon suggests they should do), or setting a price cap that indicates how much Metro will be willing to spend above the cost of landfilling. Metro chose the later option, thereby complying with the EQC recommended modification.

*Judith Dehen, Columbia Group of Sierra Club, criticized the Department for accepting Metro's statement that it will study but not commit to operating a salvage facility. She suggested that Metro implement incentives for delivery of high-grade loads and allow private material recovery centers to be built, letting the free market determine their economic feasibility.

She complained that Metro had ignored Sierra Club's recommendation to indicate preference for alternative technology by using this formula: burner= X; RDF= X + 1; compost= X + 2. She was also concerned that neither Metro nor DEQ had expressed an appropriate amount of concern about the air emissions from a mass burn facility. She recommended that the EQC take no action and allow Metro more time to correct their Program.

Department Response: Though Ms. Dehen is correct that it makes sense to require Metro to operate a salvage facility if it is found to be feasible and needed, the EQC in February asked only for clarification. The issue has been clarified. The Department can therefore not require more of Metro.

Though Metro did not adopt the formula suggested by the Sierra Club, they did adopt the same technology preferences as Sierra Club recommends. The Department supports energy recovery as a higher priority than landfilling, but is concerned about toxic air emissions. An energy recovery facility must comply with the state's air quality standards.

If the EQC takes no action on June 27th, as the Sierra Club suggests, all of Metro's waste management authority will automatically transfer to DEQ on July 1. To send the Program back to Metro for more revision is not an option.

Fred Hansen

Lorie Parker:m
SM355
229-5826
June 18, 1986

MIKE BURTON
MULTNOMAH COUNTY
DISTRICT 17

REPLY TO ADDRESS INDICATED:
☐ House of Representatives
Salem, Oregon 97310-1347
☐ 6937 N Fiske
Portland, Oregon 97203

HOUSE OF REPRESENTATIVES
SALEM, OREGON
97310-1347

June 6, 1986

Mr. Fred Hansen, Director
Department of Environmental Quality
522 S.W. 5th Avenue
Portland, Oregon 97207

Dear Fred:

I have reviewed both the Department's draft report of Metro's Waste Reduction Program and Metro's response. As the author of S.B. 662, I am aware of the tight timeframes required by the bill and am appreciative of the substantial effort which both organizations put forth. Compliments are due both agencies.

While I am pleased with the overall results of DEQ's review process, I am surprised by the tone expressed by the draft staff report.

The section of the report titled "Evaluation of the Waste Reduction Plan as a Whole" suggests that Metro has actively responded to DEQ concerns and has demonstrated positive movement in the bulk of those areas identified as potential problems during the Department's initial review of the program. I understand that differences remain over the date by which Metro is willing to implement its certification program and enforce rate incentives. I see those differences as legitimate differences of opinion about how to achieve the goal. I see no differences over the goal itself.

I find enough references in your staff report to Metro's cooperation to be satisfied that Metro's intent and actions satisfy the Legislature's intent in mandating a waste reduction program.

I am, therefore, bothered by the statement on page 18 of your staff report that, "Unfortunately, early indicators of Metro's commitment to implement are not encouraging. Implementation of much of the program awaits completion of the Waste Composition Study".

Although the RFP for the Waste Composition Study was not issued in accordance with the anticipated schedule, it is my understanding that it is scheduled to be issued in June, 1986. Although I recognize that this study is a critical element of the program, I do not believe that a delay of approximately 8 weeks is a critical delay. I do not see it as evidence of lack of commitment.

Based on Metro's existing statutory authority, it is clear that the success of this waste reduction program depends, in good part, upon the cooperation of individuals and local governments. This cooperation will be more easily achieved if the EQC simply approves the plan as your recommendation suggests. To handicap the program's potential for public acceptance by giving "reluctant" approval and speculating prematurely about Metro's commitment to implementation does not bode well for the type of long-term cooperation between DEQ and Metro which will be necessary to solve this region's solid waste problems.

I appreciate the substance of the DEQ draft report and suggest only that the negative tone expressed in the report is inappropriate and should be revised.

Sincerely,

Mike Burton
Representative
District 17

METRO

2000 S.W. First Avenue
Portland, OR 97201-5398
503/221-1646

June 6, 1986

DEQ, Hazardous and Solid Waste Division
Attention: Lorie Parker
P.O. Box 1760
Portland, OR 97207

Re: "Metro's Response to Draft DEQ Staff Report on Metro's Request for Review and Approval of Portland Metropolitan Area Solid Waste Reduction Program; Items #6 and #8".

While Metro is pleased with the staff recommendation regarding the Solid Waste Reduction Program, we do not feel that some of the accompanying comments and conclusions are warranted and believe it is in our mutual interest to clarify the differences.

Our comments will be directed at Items number 6 and 8 of the DEQ draft Staff Report. We have explained our problem with each item and followed it with specific citations in the Waste Reduction Program and other sources that support our contention.

Point 1; Item #6 : Metro has committed to using rate incentives through the certification program to encourage generation of high grade commercial loads if it is necessary and appropriate. This will be determined by the waste composition study results and information provided by the current processing centers and Metro's Transfer Stations.

Metro will begin its program by using rate incentives to produce collection of high grade loads including route changing. If this method does not bring appropriate results, then Metro is committed to using the certification program to accomplish the objective. Metro is further committed in Phase II to using its flow control authority to accomplish this purpose also.

This method of establishing "check points for judging the effectiveness of the program and strategies which will be implemented should the original identified strategies prove unsuccessful or less successful than anticipated" is in keeping with a DEQ request; see attached letter from Fred Hansen, paragraph 3; see also transcript of

10-23-85, Council Workshop with Fred Hansen, pg. 12, second paragraph.

For further evidence of Metro's position and intentions on this, see Final Report:

* Solid Waste Reduction Program Policies #3

* Page 3, Principles for the Allocation of Waste to Material Energy Recovery Section, Para. I,

* Page 7, see Section No. II

* Page 12, Certification for Local Collection Services and Rate Incentives Section

* Page 10, 11 Post Collection Recycling/Materials Recovery Section

See also Work Plan:

* Page 28 Certification for Local Government Services Section, Action Elements 2nd and 3rd Paragraph, Program Objective C

* Page 30 Objective #1, Standards of Performance Section, 4th paragraph

* Page 34, Rate Incentives Program Objectives #1

* Page 35, Program Strategy A, 2nd paragraph and

* Page 36, #2

Point 2: Item #6: Metro did not "delay" in its initiation of certification standards for going beyond SB405. Metro exercised its option to disagree with the DEQ's recommended modifications in February. Metro did not feel that accelerating certification standards beyond SB405 was technically feasible and argued this before the DEQ and EQC. This argument was not found un-acceptable until May by the DEQ staff.

It is important to be pointed out here that this debate is over the time horizon the two agencies are using, not commitment to going beyond SB405. Metro, as an elected body, feels the responsibility to phase in its implementation, taking time to involve, inform and gain the support of other affected interested in the region, an issue that has suffered because of the accelerated time frames

posed by the legislature in SB662. Taking this time for the purpose of gaining the advice and support of other affected interests was sanctioned by DEQ at earlier meetings.

* Hansen meeting with Council Work Session 10/23/85, page 4

* Letter (see attached) page 1, 3rd paragraph, page 3, #5

Point 3: Item #6: Metro does agree with DEQ staff that results is what will determine success for Metro. It does seem a bit premature that DEQ staff would use the system measurement schedule "shortcomings" of 45-60 days as an indication of lack of commitment to implementation and a reflection of the probable success of the program. Metro will award the RFP for system measurement in 45-60 days. While this time frame could be considered "late" according to the Work Plan, Metro also has flexibility to be up to six months "late" before needing to defend an amendment to the Ordinance (see Ordinance 86-199 Section 4). The point is made again here, that six to nine months after adoption is when programs should be geared for start up implementation, see attached DEQ letter, page 3 #5.

Metro does not believe that speed of implementation is a precursor to success or a reflection of commitment, and the legislature did not impose any time sanctions on us in the law relating to this. Changing the habits that the current solid waste system is governed by will take cooperation, time and the long term pressure of responsible government agencies. 45-60 days worth of "lost" time now does not seem worthy of the significance given it in the staff report.

Point 1: Item 8: Metro is not "uncertain" about the need for more material recovery centers, and would allow additional private facilities to be built in the area. How many more facilities, and where is yet to be determined through the system measurement program, and the effectiveness of the existing center in North Portland and the westside transfer station. It is certain that material recovery will be done at the westside transfer station. Subsequent to that, retrofitting CTRC may be done as well as developing additional private facilities. A third transfer station will also be put in for the north and east sections of the Metro region offering yet another possibility for a

material recovery facility.

Point 2: Item 8: It has not been demonstrated that "requiring" delivery or transfer of high grade loads to a material recovery center will be necessary. Metro has committed to use its flow control authority if rate incentives fail to generate sufficient material. Again, the strategy of using one approach first and applying another if the first fails will be used in this program area also.

See Final Report:

* Page 10, Post Collection Recycling/Materials Recovery Section, second paragraph, second to last sentence and last paragraph second to last sentence.

* Page 11, third paragraph and Solid Waste Reduction Policies Section VI (b)(Phase II).

* Page 15, Phase II.

See also, Work Plan:

* Page 2, Summary of Work Plan, paragraph 6.

* Page 19, Action Elements A and B also Program objectives #1.

* Page 20 and 21, Program Strategy, first paragraph, Page 21, Summary of Tasks #2.

* Page 22, Summary of Tasks #6 and #7.

* Pages 34 and 35 , Program Objectives 1A and 1B; Page 35, Program Strategy A.

* Page 36, Rate Differential at Material Recovery Facility Section, #2.

* Page 38, Summary of Tasks, A1,2,3 and 4.

* Page 39, Summary of Tasks.

* Page 46, Program Objectives #2.

In conclusion, Metro feels that there are sections of the DEQ staff report that need to be revised to reflect the true nature and intent of our Waste

Reduction program and we request that those changes be made before it is submitted to the Environmental Qaulity Commission.

Sincerely,

Rick Gustafson
Executive Officer
June 6, 1986

To: Environmental Quality Commission

From: Solid Waste Policy Advisory Committee (SWAPAC)
to Metropolitan Service District (Metro)

Re: DEQ Draft Report Approving Metro Waste Reduction Program

We are very pleased that the Department of Environmental Quality has approved Metro's Waste Reduction Program in its draft report, and urge that the final report also endorse the Metro plan. SWPAC has worked very closely with Metro staff and is very impressed by the thought, planning, and energy that have gone into the waste reduction program plan.

We are, however, puzzled by DEQ's approval "with some reluctance" as it not clear to us the source of this reluctance. This reluctant tone permeates the draft report and seems unnecessary.

Metro has outlined a methodical, well-planned approach to solid waste reduction, and has complied with the criteria as outlined in the draft report, with the exception of a slightly longer timeframe. If certain time goals have slipped in the schedule, it is because of an effort on the part of Metro to do the job right the first time.

For example, language on page nine of the draft report suggesting that the rate incentives portion of the certification program is incomplete and has unduly delayed implementation seems incorrect and inappropriately harsh. We would encourage DEQ staff to more carefully review the Metro program. Comments on page 12 suggest that only one materials recovery center now exists, and that Metro is focusing only on high grade loads for materials recovery. Both these statements are inaccurate. Lastly, language on page 18, "Unfortunately early indicators of Metro's commitment to implement are not encouraging...", seems totally unwarranted. The only results on which it is fair to judge Metro at this point is its effort to produce a viable planning document and its continuing sincere goal to implement a successful waste reduction program. To date Metro has satisfied both the letter and spirit of the law.

Please edit the final report with a view to more careful and accurate phrasing, and change the reluctant approval to a positive approval.

Teresa DeLorenzo
Chair

FROM

MARCIA A. GAISER
10595 S.W. CENTURY OAK DR.
TIGARD, OR 97224

In our Tigard paper last year, there was an article on a survey taken by Metro that noted that 90% of those interviewed felt building a fuel processing plant would be a good alternative and 80% believed composting and waste incineration were good options. 78% said they had recycled newspapers.

Our garbage haulers pick up our newspapers earlier on the same day they collect our garbage. For at least the last year the haulers have once a month collected our recyclables--cans, glass, and cardboard. They have handed out fliers several times; our monthly calendar sheet has included a special article on recycling and we still get 3 to 4% participation. The national average is 1% to 2%.

The truth of the matter is that as more recyclable product is collected, it causes over-abundance and the price goes down. Therefore, the more the hauler collects, the more it costs him.

SB 405 defines recyclable material as any material or group of materials that can be collected and sold for recycling at a net cost equal to or less than the cost of collecting and disposing of that material.

Many companies, including the haulers, are already taking care of the used cardboard. That is profitable at present. Private businesses are presently handling the yard debris from apartments and complexes. People with small yards include yard debris in their one can allotment. In a landfill, the yard debris is one of the first things to break down. Larger land owners use the transfer centers or, like myself, places like Grimms Fuel.

What we do need is some pressure on such people as the fast food businesses to refuse to use plastics and styrofoam which doesn't break down. I hear that Japan does not allow such containers unless they are biodegradeable.

While visiting Sarasota, Fl. on Feb. 2, I read the lead editorial headed, "How long can we wait". In that article Donald K. Walter, director of municipal waste technology for the Dept. of Energy was quoted."If a landfill pollutes the water table, we pollute it for the next 300 to 1000 years. If I'm polluting the air from a plant and it's unacceptable, my control measure is to shut it off and it is literally gone today." Fortune Magazine, April 1, 1985, says "Plants emit negligble polution when properly run."

I do believe that we need a new land fill, and I wish DEQ luck in finding it. However, the article in June 3, Oregonian headed "Transfer Distance to figure in landfill siting" made me shake my head. Talk about doing things backwards. Don't make it too hard on yourself.

In Sunday's paper was a list of companies seeking to build plants to burn our garbage. There is one name that wasn't on that list that I would hope those in charge would use at least as a consultant. National Ecology built a Refuse Derived Fuel plant in 1976 at a cost of 11 million--quite a difference from 230 million--with a capacity of 1200 tons a day which creates "fluff" that Baltimore Gas and Electric burns with coal. Since 1976 the plant has been shut down only four workdays and in 1984

the U S Department of Energy presented the company with a special award for Energy Innovation. One thought intrigues me. Could Oregon or Washington develop a coal industry to work with RDF ? Baltimore Gas and Electric saves about 1 million dollars a year in fuel costs by burning RDF, the equivalent of 275,000 barrels of oil a year.

What I, as a taxpayer, want is the most efficient economical plant to take care of our garbage. Let's focus on that.

Marcia Gaiser

MARCIA A. GAISER
10595 S.W. CENTURY OAK DR.
TIGARD, OR 97224

P.S. Do we have Chemical Engineers and other technical people in Metro, DEQ, and EQC?

SSI

Oregon Sanitary Service Institute

4372 Liberty Rd. S., Salem, Oregon 97302 Phone 399-7784

Research
Standards
Service

June 9, 1986

Reply to: 2202 SE Lake Road
Milwaukie, OR 97222 (654-9533)

TESTIMONY BEFORE THE DEPARTMENT OF ENVIRONMENTAL QUALITY
Re: Metro Waste Reduction Program

On behalf of the solid waste industry, I make the following comments on the Waste Reduction Program:

1. Promotion and Education

We approve of Metro taking an aggressive role in promotion and education. It has been our position all along that this was Metro's proper role in the waste reduction program.

When education and promotion was discussed by the Metro Council at their public hearing, it was the concern of some Council members that the solid waste industry was not recognized as an active participant in the planning and promotional stages. A major portion of the haulers have invested in promotional material in order to be in compliance with SB 405 when it is implemented July 1. Other wastesheds such as Clackamas County have extensive education and promotion programs in place. There needs to be coordination and cooperation between Metro and haulers or wastesheds that have successful programs currently being offered. This would speed up the effectiveness of Metro's program.

2. Certification and Rate Incentives

We agree that Metro should not use standards beyond SB 405 standards for the first year of the certification program. Metro is just now beginning to work on language for the standards, and it would be unreasonable to try to impose regulations that are not yet written. Metro has indicated that they intend to work with local government and the solid waste industry in writing the standards, and that would appear to be a reasonable approach.

However, industry has grave concerns over how uniform and equitable standards can be written for the Portland area haulers, based on the decision of the Portland City Council to have the major portion of the recycling done by a contractor over which the haulers will have no control.

For franchised areas, we agree that local government should be the responsible entity for adopting the certification units and ensuring that they are equitably applied. Local government has the authority to regulate collection, while Metro has no such authority.

3. Yard Debris

We agree with DEQ that Metro must continue and expand on its new market development work to ensure that there are markets for processed yard debris. In an effort to meet DEQ requirements, Metro has assured rate incentives and bans ahead of assurance of markets, which perpetuates an unworkable requirement. The timing of assurances must be a tandem approach - not the cart ahead of the horse approach. Industry is not adverse to diversion of yard debris, if the markets are in place.

Respectfully submitted,

Estle Harlan

ESTLE HARLAN,
Industry Consultant

Copy: OSSI BOARD
TRI-COUNTY COUNCIL

TO: DEPT. OF ENVIRONMENTAL QUALITY, HEARINGS OFFICER

RE: APPROVAL OF METRO'S SOLID WASTE PLAN

FROM: CHUCK STOUDT
1630 S.W. CLAY #13-D
PORTLAND, OREGON 97201
(503)227-0939
JUNE 9, 1986

BECAUSE THERE HAS BEEN LIMITED TIME FOR PUBLIC INPUT IN THIS MATTER AND HAVING REVIEWED THE CONTENT OF THE SOLID WASTE REDUCTION PROGRAM, I WOULD LIKE TO MAKE THE FOLLOWING OBSERVATIONS:

1) THE PURPOSE AND INTENT OF S.B.662 IS TO SUCCESSFULLY DEAL WITH THIS REGIONS SOLID WASTE DILEMMA AND TO TRANSFER THE SOLID WASTE MANAGEMENT RESPONSIBILITIES OF METRO SHOULD DEQ FIND THE PLAN TECHNICALLY, LEGALLY, OR ECONOMICALLY UNFEASIBLE.
2) METRO HAS BEEN UNABLE TO DEAL WITH THE REGIONS SOLID WASTE PROBLEMS.
3) METRO DOES NOT HAVE THE PUBLIC SUPPORT NECESSARY TO PRODUCE THE LEVEL OF RECYCLING PROPOSED EVEN WITH THE CURRENT ADVERTISING CAMPAIGN AND PUBLIC EDUCATION EFFORTS PROPOSED.
4) THE APPROACH TO CO-ORDINATING THE ELEMENTS OF THIS REGIONS SOLID WASTE DILEMMA IS HAPHAZARD AND UNREALISTIC. BECAUSE OF THE LACK OF PLANNING, THE ECONOMIC FEASIBILITY CAN NOT BE EVALUATED. INFORMATION ON THE ELEMENTS RELATIONSHIPS (ALTERNATIVE TECHNOLOGY, RATE STRUCTURE, ESTABLISHING A MARKET FOR YARD DEBRIS, LOCATIONS OF TRANSFER CENTERS, ETC.) ARE NECESSARY TO MAKE THIS REVIEW.
5) BOTH THE METRO COUNCIL AND THE EXECUTIVE DIRECTOR MUST MAKE A STRONGER COMMITTMENT TO SOLVING THIS REGIONS SOLID WASTE PROBLEMS. STRONGER MEANS ESTABLISHING A WELL PLANNED AND FULLY COMMITTED APPROACH (COMMENTS MADE BY SOME MSD COUNCILORS DURING REVIEW OF THE PLAN INDICATED THAT THE PLAN PRESENTED WAS FLEXIBLE AND CAN BE CHANGED SUBSTANTIALLY BY EITHER THE COUNCIL OR THE EXECUTIVE OFFICER AT ANY TIME AFTER DEQ APPROVAL).
6) METRO HAS FAILED TO COME UP WITH A PLAN THAT DESERVES APPROVAL, I SUGGEST DEQ REJECT THIS PLAN.
7) IF THIS PLAN IS APPROVED I SUGGEST THAT THE DEQ REQUEST THE LEGISLATURE TO INTRODUCE NEW LEGISLATION AND ESTABLISH STRICT CRITERIA FOR REVIEW OF THE STATUS OF THE PLAN SO THAT IF THAT CRITERIA IS NOT MET THE DEQ COULD ASSUME THE MANAGEMENT OF THE REGIONS SOLID WASTE.
THANK YOU FOR YOUR CONSIDERATION OF THESE OBSERVATIONS REGARDING THIS MATTER.

SINCERELY,

TESTIMONY BEFORE THE OREGON DEPATRMENT OF ENVIRONMENT QUALITY

June 9, 1986

By: Douglas Francescon
18754 S. Terry Michael Dr.
Oregon City, Oregon 97045

My testimony will deal with the general thrust of the Metro Waste Reduction Plan and focus on problems caused by policies dictated by that plan.

Metro, its staff and consultants have attempted to provide estimates on the cost of various formes of alternative technologies and future landfills. They have attempted to use these figures to determine whether implimentation of certain technologies would be economically feasible. This might be an appropriate strategy if the cost estimates were dependable over a 15 to 20 year period. However, they are not.

Costs of large scale waste reduction are directly related to energy prices, transportation costs and market availability. Over a 20 year period, such factors might be roughly approximated but never accurately estimated.

I therefore suggest that the only criteria on cost be whether or not implementation of large scale waste reduction would cause residential costomers to stop using the system or commercial costomers to absorb a large enough rate increase as to seriously effect their ability to conduct business.

A survey done by Metro shows that area residents are willing to accept a $1.00 to $5.00 per month increase in residential rates in order to finance an environmentally acceptable, long term waste disposal system. Large scale mass burn technology is only one of the technologies that could be implimented immediately for far less than a $5.00 per month increase.

Commercial rate payers will have to absorb a larger rate increase than residential costomers. However, garbage rates are generally a very small part of a business's total monthly overhead. It is very doubtful that rate increases associated with waste reduction would force any local business to change their method of doing business.

Attached is a copy fo testimony before the Metro Council on April 22 that may provide additional information on cost consicerations.

It is appropriate that both Metro and D.E.Q. be concerned enough about cost in order to provide the most cost effective waste disposal system possible. However, the amount of time that Metro has spent agonizing over what is cost effective and what is not is both inappropriate and wasteful.

All indications point to the fact that large scale waste reduction can be implimented without drastic adverse economic impact. Therefore, the most cost effective, large scale, long term plan should be implimented as soon as possible.

The strategy developed by Metro to do a symposium last summer, an R.F.Q. this summer and an R.F.P. later on is hardly conducive to waste reduction as soon as possible. Information provided by the symposium could have been aquired by more cost effective and less time consuming methods. The R.F.Q. is a waste of time because it provides no information that could not be obtained through a comprehensive R.F.P.. And the R.F.P. is what we should be involved in right now.

The length of time now being spent in developing our waste reduction program is not in the region's best interest. Government can move a great deal faster and still be prudent enough to provide a good system.

An example of how a waste of time effects the process is reflected in the responce to the R.F.Q.. The vendor who has the most hands on experience in waste reduction and has more large scale plants in operation in this country chose not to submit a responce. This vendor partisipated in the symposium and has marketed more aggresively in the Portland region than all the other vendors combined. They continue to market aggresively in Washington, California and the rest of the world. Yet they chose not to respond to Metro's R.F.Q.. I suggest that it would be in the region's best interest for E.Q.C. to find out why Signal Environmental is no longer active in this region. Along the same line, it would be appropriate to find out why Columbia County is no longer as interested in a regional facility as it once was.

TESTIMONY BEFORE THE METROPOLITAN SERVICE DISTRICT ON APRIL 22, 1986

BY: Douglas P. Francescon
18754 S. Terry Michael Dr.
Oregon City, OR 97045
631-3988

In the interest of dealing only with Ordinance 86-201, I will limit my testimony to financial aspects of alternative technology. However, I will also point out that there are political considerations that from time to time may take precedence and limit the financial options that are available.

First, I would like to point out that the tip fee for an energy recovery facility will become a fixed rate and remain the same throughout the normal twenty year duration of the contract with the vendor that is selected. Metro and the vendor may wish to include a cost of living adjustment or an adjustment for fluctuations in energy prices. But, in general, this tip fee will be guaranteed for twenty years.

The same may not be true for land fill prices. New regulations and increasing value of land near metropolitan areas have caused landfill costs to sky-rocket.

It can be argued that with alternative technology, a land fill is still necessary. The key is that the land fill can be much smaller and will last infinitely longer. Vector, odor and methane problems are eliminated and traffic problems are reduced by sixty six per cent.

The potential for increasing the life and decreasing the size of new land fills must be considered when evaluating costs of an overall waste disposal system.

The fact that energy recovery prices are constant and land fill prices fluctuate upward means that short term analysis will show land fill only systems less expensive, while long term experience will show land fill-energy recovery systems less expensive.

I assume that the $41.00 per ton tip fee that Metro has associated with energy recovery is for a system that would site in a metropolitan area, thereby eliminating significant transportation costs and the need for one of the proposed transfer stations. This would certainly provide the most cost effective system.

However, in order to avoid political or air quality problems that might result in a repeat of the Oregon City situation, the Council should consider a multi-site strategy. This involves identifying two or three sites simultaneously. The rationale being that the loss of a site, or even two sites, would not mean the loss of the project.

There will be additional costs involved with this strategy. Transportation costs will increase for sites where transfer stations would not normally be located. There may be a need for another transfer station. Planning will be more complex.

These additional costs could bring the tip fee to $46.00 or $47.00 per ton for sites where additional transport is necessary. These figures are well within the limits of the $1.00 to $5.00 per month increase that area residents have already said they are willing to accept for an environmentally superior long-term system.

Finally, I would like to point out that energy recovery costs are higher now than ever before. This is due to the very low cost of energy at the present time. Energy will not stay this inexpensive. Projections on levelized avoided costs show a steady increase from the late 1980's through the year 2000 and beyond. I ask that the Council consider the long term benefits of producing low cost steam and electicity while at the same time keeping tip fees within the limits that residents have already agreed to accept.

COLUMBIA GROUP

Comments on Metro Waste Reduction Program

#2 Metro has not stated that it will commit to operating a salvage facility even if it finds that to do so is feasible and is needed. Why does DEQ accept this? Studying a problem is often used as a way to avoid solving it. There is no standard by which to determine need and feasibility. There is no deadline for action. How can DEQ claim that this sufficiently protects the interests of Metro's constituents?

#6 DEQ states that Metro has not satisfied concerns over rate incentives for high grade loads. Put out the incentives. Let the garbage collectors determine if it is economically feasible to respond to those incentives.

#8 How did Metro choose Genstar for this project? Was there a competitive bidding process? Also, Metro does not need to determine economic feasibility. If private material recovery companies are willing to build in the area of CTRC, that proves economic feasibility. Let the free market make that determination.

#10 Metro ignored our recommendation to indicate a preference for more environmentally sound alternative technology plants by allowing a higher premium for the cleaner ones. We suggested this: burner=X, RDF=X+1, compost=X+2. This formula could be modified for the percentage cap they decided to use. The Sierra Club Columbia Group has not heard either DEQ or Metro express an appropriate amount of concern over the dangerous pollutants belched by a mass burner. This is very distressing.

SIERRA CLUB
2637 S.W. Water Street · Portland, Oregon 97201 · (503) 222-1963

Findings for Approval: 1) and 2) DEQ has expressed one of our fears. Impementation is extremely important. Metro is an organization in need of reorganization. There is a lack of accountability at Metro which makes it difficult for citizen groups to determine who is in charge and who will be responsive to public opinion. Everything needs to be concretely defined and explicitly guaranteed, or else the implementation will fall far short of the present scenarios laid out by the plan.

We recommend that the EQC take no action at this time to allow Metro one last opportunity to correct the plan.

Submitted by,

Judith A. Dehen

Judith A. Dehen
Executive Committee

SSI

Oregon Sanitary Service Institute

4372 Liberty Rd. S., Salem, Oregon 97302 Phone 399-7784

Research
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Service

Rec'd 6/27/86 EQC Mtg

June 27, 1986

Reply to: 2202 SE Lake Road
Milwaukie, OR 97222 (654-9533)

TESTIMONY BEFORE ENVIRONMENTAL QUALITY COMMISSION, June 27, 1986
Re: Metro's Waste Reduction Program.

It is the solid waste industry's position that the industry is deeply committed to recycling and waste reduction. Industry has invested time and dollars in equipment, manpower and promotional materials to carry out the recycling programs. Because industry wants to see their investments succeed, there are aspects of the Waste Reduction Program that cause serious concern.

1. Metro's plan calls for a certification program. The "teeth" to that program is a yet undefined "rate incentive" (penalty) system. Metro has justified these rate penalties by stating they are needed to "drive" participation in the waste reduction program. The solid waste industry does not need "driven" by artificial means. If there are markets that create economic feasibility, then the industry will participate in order to reduce their over all costs. The industry has repeatedly stated that Metro's role should be to develop markets. No "incentives" are needed if the markets are in place.

2. In franchised areas where recycling is made a condition of the franchise, a certification program is feasible. However, Metro staff has told the industry that the real impact from recycling will be the diversion of commercial high-grade loads and diversion of large quantities of yard debris. Therefore, even in franchised areas, it would not seem reasonable to strap the residential franchisee with rate penalties when curbside recycling programs will make such a little impact compared to the onerous burden of rate penalties. Rate incentives could be used in franchised areas now for commercial high grade loads and they could be used for diversion of drop box loads or greater of yard debris once the markets are in place.

3. In the non-franchised Portland area, there is no proposal yet offered by Metro for certification and rate penalties that will work, given Portland's decision to contract out the SB 405 recycling.

On May 6, 1986, the Metro Executive told me privately that if Portland did not franchise solid waste collection, he did not see how the certification and rate incentive portion of the waste reduction program would work. Portland did not franchise solid waste collection.

On June 24, 1986, the Tri-County Council, which is comprised of representatives from all six of the solid waste hauler associations in the Metro area, met with Metro staff in a work session to discuss the certification and rate incentive programs. Staff explained to

the Council that rate differentials were appropriate in order to compensate for the differential in costs between the collector who had the expense of aggressively recycling and the collector who did not. That staff person was asked what the justification for a rate differential would be under the following scenerio:

a. The collector who was aggressively recycling was from a franchised area where he had to do so as a condition of his franchise. Even though it was hard to get rate increases passed, there was a mechanism in place for passing on costs to customers.

b. The collector who was not aggressively recycling was from Portland. In order to avoid the rate differential, he decided to aggressively recycle. That collector was told by the city he could not do so because that responsibility had been contracted to an outside recycling contractor by the city, and that contractor was not aggressively recycling. Thus, the rate penalty would still be applied.

The staff person's response was, "There is where we have a problem." Industry agrees.

This is not a perfect world, and timing has much to do with the degree of imperfection we experience. Metro had to develop a plan prior to a decision by the City of Portland on how the city's recycling would be provided. The program Portland adopted simply does not mesh with the program Metro has developed. The programs could be compatible, however, if DEQ were told to use the power it has over wastesheds under SB 405 to instruct Portland to develop a program that is compatible with the concepts of rate incentives and certification. Under the system Portland has adopted, how can Metro subject one-half the population in the metro area to rate penalties placed on their hauler when their hauler does not have the responsibility for providing the recycling service? The person being taxed is not the person responsible for the service creating the tax. This is a gross inequity.

4. The solid waste industry is, also, concerned over the tenor of Metro's advertising campaign. During all the years Metro attempted to site a landfill, and now with DEQ's plans to do so, both entities have constantly assured the public that they were not trying to saddle their community with an unsightly "dump." Now Metro's own advertising campaign confirms the public's perception of a rotting pit. This is a typical example of what happens when a task is given to someone who is totally unfamiliar with the subject. They have not only produced a negative image, they have entirely missed the point of recycling. Industry has had hands-on experience in emphasizing citizen involvement in recycling and ways that can be accomplished. Industry has asked Metro that we be involved in the planning and promotion end of the advertising campaign, and this should be made a condition of the Education and Promotion portion of the Waste Reduction Program.

The Tri-County Council has taken the unanimous stance that it opposes the rate incentives and certification programs under the Waste Reduction Program. The Tri-County Council is comprised of representatives from Clackamas County Refuse Disposal Association, Multnomah County Refuse Disposal Association, Oregon Sanitary Service Institute, Portland Area Sanitary Service Operators, Teamsters Local 281, and Washington County Refuse Disposal Association. Solid waste collectors in these associations haul approximately 95% of the metro area garbage. These are the collectors whose businesses are on the line, who are committed to recycling, but who ask that reality be a criteria for what is viable under the Waste Reduction Program.

Respectfully submitted,

Estle Harlan

ESTLE HARLAN,
Industry Consultant

EH:e

Copy: OSSI BOARD
TRI-COUNTY COUNCIL

SSI

Oregon Sanitary Service Institute

4372 Liberty Rd. S., Salem, Oregon 97302 Phone 399-7784

Research
Standards
Service

June 27, 1986

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Respectfully submitted,

Estle Harlan

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Industry Consultant

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Copy: OSSI BOARD
TRI-COUNTY COUNCIL

CITY OF

PORTLAND, OREGON

BUREAU OF ENVIRONMENTAL SERVICES

Dick Bogle, Commissioner
John Lang, Administrator
1120 S.W. 5th Ave.
Portland, Oregon 97204-1972
(503) 796-7169

June 27, 1986

TO: Environmental Quality Commission

FROM: Delyn Kies, Solid Waste Director
Bureau of Environmental Services

RE: Testimony for the Record of Portland Metropolitan Area Solid Waste Reduction Program

The Bureau of Environmental Services has been following the development and review of the Waste Reduction Program for the Portland Metropolitan Area. We support the intent and scope of the Program with the exception of Local Government Certification and portions of the Rate Incentive Plan.

The stated goal of the Local Government Certification Program is to assist in reducing waste by increased recycling. We see no evidence that this Program will increase recycling, particularly the first year, since Metro has stated it will be measuring effort, not results.

Local governments are already required by law to provide recycling opportunities. Metro admits it expects everyone to be in compliance with the Department of Environmental Quality and that the related rate incentives will not have an effect in the first year.

We are also concerned with the direction Metro is taking in developing the Certification Program with local governments and industry. While the objective is cooperation, comments from the Bureau and Portland's garbage haulers on the redundant nature of the Program and its inequities when applied to Portland have had little effect thus far on the shape of the plan.

The Rate Incentives Plan continues and encourages several currently successful programs. Adding a disposal credit for groups such as Goodwill Industries contributes to the reuse priority of the State hierarchy. Incentives for source separated yard debris are a long-awaited and necessary addition to the recycling priority. Continuing a rate differential for high-grade waste paper loads delivered to processing centers also encourages recycling.

However, the rate incentives for certification units do not seem appropriate. Specific to Portland, they will be complicated to apply and not a direct benefit to recycling since the primary recycling responsibility is not the garbage haulers.

For the record, we suggest that the Certification Program, at least for the first year, be dropped. We also suggest that significant rate incentives be offered directly to the recycler or processor to encourage waste reduction. Metro should be directed to work together with local governments and the waste and recycling industry to develop recycling markets and programs that reduce waste so that the need for artificial rate incentives will be eliminated.

DK:lld
115:dk-eqc

Teamsters and Chauffeurs Local Union No. 281

AN AFFILIATE OF I. B. OF T. C. W. & H. OF A.

1020 N. E. THIRD AVENUE
PORTLAND, OREGON 97232

PHONE
231-2613

June 25, 1986

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
JUN 26 1986
OFFICE OF THE DIRECTOR

Mr. Fred Hansen, Director
Department of Environmental Quality
522 S.W. 5th Avenue
Box 1760
Portland, Oregon 97207

Dear Fred:

The Portland City Council program to provide Portland residents with the opportunity to recycle is a minimum and band aid response. It does not take into consideration the relationship between the opportunity to recycle and:

- ø an adequate and efficient solid waste management program for the metro area
- ø the city responsibility under the 1985 Opportunity to Recycle law to manage collections
- ø the collector's role as the conduit for collecting the money to finance the entire solid waste program.

The Portland recycling program simply adds to the present waste collection program, five contractors doing a monthly pickup of recyclables, (exclusive of newspapers and cardboard) that remain after a selective and unregulated pickup by charitable organizations. The monthly pickup by the contractors would be paid for by increasing the permit fees and dumping charges of the weekly collector. The estimated cost is $289,500.

Regular collectors would continue to work under an unregulated annual permit with no protection of routes or customers.

It is inevitable that solid waste collection in the Portland wasteshed will be franchised. The question is why and when.

The METRO solid waste management program is an enterprise financed program. The solid waste collector via its monthly charges and collections is the "tax collector". Creditability, reliability, and supervision are necessary ingredients for the enterprise system to work. This is provided by franchising collections.

Waste disposal is the major problem of the METRO solid waste management program. Solutions will require substantial expenditures that must be debt financed. Debt financing that is paid by revenues from the enterprise require an assured and predictable source of income. A franchised system will provide this.

Finally, half of the residential waste collections in the METRO area is by franchised collectors. They serve the population growth areas. Portland population is declining. Good management practices require a uniform system of collection in the METRO area. This means a franchised system in Portland.

The management, the funding of operations and a debt capacity adequate to finance waste disposal facilities all require that Portland collections be franchised.

The Oregon legislature has recognized the METRo area solid waste disposal problem and provided the authority and responsibility for its solution. The legislature has:

1. Declared the collection of solid waste to be a matter of state-wide concern;

2. Adopted a state-wide opportunity to recycle program - with deadlines;

3. Required METRO to adopt a waste reduction program that is approved by DEQ - with deadlines; and

4. Directed DEQ to select and make operable a new METRO landfill - with deadlines.

The legislature has designated and authorized cities to manage waste collections. It has authorized the granting of exclusive franchises on a non-competitive basis. And the legislature has given DEQ the right to require franchises if there is a need and a city or county fails to do so.

We believe that the logical time to franchise Portland waste collections is as part of the establishment of the Portland wasteshed Opportunity to Recycle program for these reasons:

1. The monthly collection of recyclables is an extension of the weekly collections;

2. Franchising of Portland collections will assist METRO in the administration of its waste reduction program;

3. Establishing a separate contract collection service in Portland creates a competition and instability that will delay and work against a METRO solid waste management program;

4. Franchising of the entire METRO service area is necessary for fiscal planning and the financing of alternative waste disposal facilities and

5. Portland will not voluntarily franchise. It will only do so if required by a state directive.

6. DEQ has authority to require franchising as part of the recycling program.

Resource Conservation Consultants and R.A. Wright Engineering - two of the consultants that prepared the "City of Portland Residential Recycling Collection Plan" (May 1986) in prior reports made the following statements and recommendations in connection with the franchising of Portland waste collections.

Resource Conservation Consultants in a 1982 report stated:

> "An effective, comprehensive, city-wide residential recycling program [for Portland] cannot be developed within the fragmented, uncoordinated solid waste collection environment that now exists in the City. Neither can such a program be developed independently of waste collection practices for political and economic reasons. Cooperation of the City's refuse hauling industry is essential for expanded residential recycling."

R.A. Wright Engineering, Inc. in a 1982 report "Waste Collection in Portland: Advantages and Disadvantages of Franchising, said:

> "A more compelling reason for <u>franchising garbage collections</u> is the need to integrate the management of garbage collection with Solid Waste Disposal. The latter is currently receiving significant attention from local, regional, and state government officials. All solutions involve massive expenditures for transfer, disposal, and energy recovery facilities. Costs of disposal are a significant expense for a collection company. Also, the success of these major facilities is dependent upon a predictable, and therefore controlled,

flow of solid waste. The viability of solid waste handling facilities, such as transfer stations, incinerators, and landfills is dependent upon the regulation of solid waste flow. Further recycling may never be a significant alternative without refuse collection regulation." (emphasis added).

* * *

"In summary, there are good reasons to regulate and good reasons not to. The City should look into the future regarding this issue. It is our view that refuse collection problems will continue to worsen until emergency action is required. There is an opportunity now to plan ahead for an efficient refuse collection and disposal service delivery system for the future. The City should regulate refuse collection."

There has been no change in the Portland situation since 1982 except that the solid waste disposal problem has worsened.

Portland's residential solid waste collectors approve and support franchising. On their behalf we earnestly recommend that the Portland Opportunity to Recycle program be

sent back to the City with instructions to prepare a program that franchises the weekly waste collections and the monthly collection of recyclables.

We enclosed as background the material that I submitted to the City's Technical Advisory Committee on the City Opportunity to Recycle study and my statement before the Portland City Council.

Very truly yours,

John P. Trout
Secretary-Treasurer
Teamsters Local #281

MEMORANDUM

FROM: John Trout, Secretary-Treasurer
Teamsters Local 281
1020 N.E. Third Avenue
Portland, Oregon 97232

TO: Recycling Techinical Advisory Committee to Portland
Public Works Commissioner, Dick Bogle

RE: Committee Recommendation for Portland
Opportunity to Recycle Program

DATE: MAY 13, 1986

Let me introduce this memorandum with a commendation to the Portland Bureau of Environmental Services staff and the consultant team organized and supervised by Resource Conversation Consultants, Portland, Oregon. They have done an excellent job in assembling, organizing and presenting the material.

As my contribution to the preparation of the joint (city and affected persons in the wasteshed) recycling report to DEQ that is due July 1, 1986 and to the decision by "local government leaders in conjunction with other affected persons" as to "who in their community can best make available the recycling collection and promotion required by the Act", I submit this memorandum. ORS 459.180(1), 459.170(1)(f) and EQC Policy Guidance (2)

My strong preference for a Portland Opportunity to Recycle program is Option C. The combining of Waste collection with the collection of recyclables and the franchising of both activities under area franchises that provide weekly pickup of newspapers, and a monthly pick up of other recyclables will insure maximum participation and recovery.

As a preface to my reasons for recommending Option C an overview of the solid waste management program of and problems within the Portland METRO district will be helpful.

1. While the statute creating the Opportunity to Recycle program included all types of waste originators [ORS 459.165(1)(a)], both the EQC Rules for the Implementation of the Opportunity to Recycle Act and the EQC Policy Guidance for Oregon Opportunity to Recycle Act provides that the first effort shall be a residential recycling program that meets legislative goals - available to all persons with once a month collection.

The Rules provide that the policy of DEQ is "(6) to place primary emphasis on the provision of the opportunity to recycle to residential generators of source separated recyclable materials". 340-60-015

The DEQ Policy Guidance states "The primary focus in providing the opportunity to recycle should be on improving

existing and adding new systems for residential recycling. Improving existing and adding new systems for non-residential recycling should be a secondary focus in providing the opportunity to recycle." (1)(f).

These directives limit our report and recommendation to a residential program for the Portland wasteshed.

2. The recyclable material in the residential waste stream is between 15 and 20% of the total. While the purpose of the Opportunity to Recycle legislation is to place "increased emphasis" on recycling, the collection of recyclables is not to be divorced from and treated as a separate solid waste collection and management activity. ORS 459.175(2)(a), 459.015 and EQC Rules 340-60-015.

The recommended recycling program should be compatible with and one that compliments and supports the total solid waste management program in the METRO district.

The recycling program should, where practical, utilize existing recycling services to the end that there is a minimum displacement of these services. Further in determining who will provide the recycling service due consideration is to be given to persons providing either a recycling or a collection service on June 1, 1983. ORS 459.200(b)(c); DEQ Rules 340-60-085.

3. The METRO solid waste management program is an "enterprise" funded program. The solid waste originator provides the money. The waste collector via its charges collects the money to pay for collections, transfer stations, landfills, planning and administration. In the future, the waste collector will collect the money for recycling, waste reduction, separators and burners.

The waste collector is the fiscal "linch pin" of the entire solid waste management program. He is the "tax collector". He is also the contact with the public.

It is essential that waste collectors be experienced, stable, financially response and have public credibility and confidence. These requirements and goals are best met by the franchising of collections and collectors. Option C provides a practical method for franchising waste collections in the Portland wasteshed.

4. Debt financing of facilities and equipment for the solid waste management program requires franchised waste collection to insure a cash flow to service the debt. Fragmentation of the collection service and collectors operating under an annual non-exclusive permit system will severely limit the amount of bonds that can be issued.

5. Physically and psychologically, recyclables are part of the residential waste stream. The recycling collection program will be more productive and have more support if it is part of the existing collection service. A system that treats recycling as a separate service and makes a separate charge will be counter-productive.

6. The current Portland residential waste stream is approximately one-half of the METRO residential waste stream. The population growth is in Washington County. Portland and its urban services area has a static population. All waste collections in Washington and Clackamas counties are franchised. The waste collection in the other cities and towns in Multnomah County is franchised.

The recycling program is permanent and should anticipate future changes. Portland's percentage contribution to the METRO residential waste stream will continue to decrease. If the Portland collection and recycling operation is to be compatible with the remainder of the METRO district and the major source of residential waste, it must franchise collections of waste and recyclables.

7. Portland and its urban services area is served by approximately 90 residential waste collectors. They have provided a reliable and satisfactory service at a reasonable

price. They are small businesses of the type that both the city and state encourage and support.

Two savings can be realized by franchising the Portland collection service without placing in jeopardy the existence of these small businesses. One is to rearrange customers and routes to eliminate duplicate service. The second is to provide a monthly pick up of recyclables within an area by a single collector that is selected and supervised by the waste collectors in that area. Both objectives can be part of a franchise system. Six to ten master franchises have been suggested.

8. Finally, it is to be noted that all suggested recycling programs require a detailed and continuing report and analysis of the costs of providing the waste collection service and of the recyclable collection service. The statute and DEQ rules require periodic reports of (a) the net cost of collection and disposal of non-recyclables, and (b) the net cost of collection less sale proceeds to recyclables. ORS 459.170(2)(d) and (e); DEQ Rules 340-60-055; DEQ Policy Guidance (8)(b). The information and analysis that provides these figures are the same as the information and analysis required to establish a schedule of rates for franchised collection. Shared information by the city and DEQ would reduce the cost of establishing and administering a franchise program.

OPTION C

Option C provides two new elements. An area franchise for collectors within the area. A monthly pick up within the area of recyclables (except newspapers) by a single collector selected and supervised by the waste collectors.

It maximizes the collection of newspapers by a weekly pick up as part of the weekly waste collection.

It provides a monthly pick up of other recyclables that is not separate and competitive with the waste collections and collectors. It benefits from the experience, resources, and supervision of the existing collectors.

It provides a mechanism for consolidating customers and routes of existing collectors.

It provides a single responsible and regulated collector of the money necessary to fund the solid waste management program.

It insures dependable and continuous recycling service.

It provides a uniform collection system of waste and recyclables in the METRO district.

The negative of Option C is the additional cost of organizing a franchise system and of administrating it. In making a choice this a proper consideration but should not be a controlling one. These are the other considerations.

1. The major reduction in cost of Options A and B is the continuation of the existing city annual permit program and competitive bidding for the collection of recyclables as a separate activity. We believe these savings will be short lived and that the quality and continuity of service is questionable.

2. The waste collector is the conduit for providing the money to finance the METRO solid waste management program. In addition to the costs of collection and disposal the waste collector includes in the monthly charge:

- ø The DEQ and EQC costs of planning and administration of the landfill and opportunity to recycle programs

- ø The cost of the proposed METRO waste reduction program including penalties and credits

- ø The cost of the METRO transfer station program

- ø The METRO solid waste administrative costs

- ∅ The cost of developing alternatives to land fill disposal

- ∅ The capital costs via debt financing of additional land fills, transfer stations, burners and other disposal systems

There is authority under the state statutes to include these costs in rates of a franchised operation. ORS 459.200(7)(b) and (8), 459.015(2)(b) and OL 1985 ch. 679 secs 7(1)i and 9. It is questionable whether a City has authority to include these costs in a fee charged for an annual permit. Further EQC has authority to compel the city to franchise its collection service. ORS 459.185(6)(f).

We submit that franchising in the near future is inevitable and that it can be most economically accomplished as part of the establishment of the opportunity to recycle program.

The least expensive is not always the best - particularly when the collection of waste materials is involved. Unless substantial performance bonds are required the probability of an "under bid and a walk away" by a separate recycle collector is great if the operation proves unprofitable.

To present Opportunity to Recycle programs at a public hearing or a cost comparisons basis is misleading. In that

context the choice will inevitably be the least expensive. Recycling is part of collection which in turn is part of the disposal which in turn is part of the METRO solid waste management program. To solve one part of the total solid waste management program on the basis of a price tag is simply deferring and compounding a solution of the major problem - the disposal of non recyclable solid waste.

CONCLUSION

Option C - franchising of waste collection and of recycling collection on an area basis with weekly pick up of newspapers and a monthly pick up of other recyclables will provide total coverage and maximum recovery. It will also mean that all residential waste collection in the METRO district is franchised. This in turn will assist in the development of a unified and coordinated solid waste management program in the METRO district.

My recommendation of the persons in Portland and its urban services area who can best make available the recycling collection required by the Opportunity to Recycle Act are the present collectors. They have the required capital, equipment and know how. They also have a record of providing good and cooperative service.

My recommendation for the person to be responsible for the promotion required by the Act is the City of Portland. It has the capability and understands the recycling program. The City will be objective and only interested in achieving the goals of the Opportunity to Recycle Act. It will be single minded in serving the public.

COMMENTS TO THE PORTLAND CITY COUNCIL

JUNE 4, 1986

BY

JOHN TROUT, SECRETARY-TREASURER

TEAMSTERS LOCAL 281

Subject: Portland Opportunity to Recycle Program.

For the record it is our position that Portland has failed to follow the procedure required by the Opportunity to Recycle law.

The law requires a report that covers the Portland Wasteshed -- the Wasteshed is incorporated Portland plus the unincorporated Portland municipal services area. This report and recommendations are limited to incorporated Portland.

The law requires that the report be a joint effort of "affected persons" in the Portland wasteshed and of the city. This report and recommendation is a Portland product with a technical committee acting in an advisory capacity.

Under the law the City Council's function is to review and comment on the joint effort report, not to adopt an Opportunity to Recycle program.

This is simply for record so I won't be ruled off the course because I didn't raise the question. I want to spend my time talking about the merits.

The Environmental Services recommendation is the status quo, with two additions:

First, a requirement that the collector that provides the weekly solid waste collection be required to pick up separated newspaper as part of the weekly collection.

Second, that the city on a bid basis award a contract to provide a monthly collection of recyclable materials. The monthly collection is to be financed by an increase of the permit fees charged to the waste collectors, and by an increased dumping charge to the waste collectors.

This program is recommended because it minimizes city involvement and supervision. With this we agree. Also, the program is recommended because it is the least expensive -- with this we disagree. We will discuss this point later.

The major and basic flaw with the recommendation is that it completely ignores the metro area's solid waste management program and the importance of the collection of both non-recyclable and recyclable materials to that program.

Portland is an unregulated and unfranchised island of waste collection in the metro area. All waste collections in Washington County, in Clackamas County, and in the other cities and towns in Multnomah County are franchised. These are the areas of population growth. These are the areas that in the future will provide a major share of the residential solid waste of all kinds.

Add the next ingredient. The crisis that faces the Portland metro area is the disposal of solid waste. The key to a solution of the disposal problem is the collection and the collectors. To finance transfer stations, waste reduction and separation programs, landfills, burner-energy or burner only facilities, on an enterprise basis, you have to control the flow of waste material and you must have a predictable and insured source of income.

These can only be accomplished by franchsing the collection of solid waste. Indeed, the solid waste collector is the income source -- the tax collector for the entire solid waste program.

Let me read to you from two 1982 City of Portland studies by city selected consultants.

First, R. A. Wright Engineering, Inc. -- Entitled "Waste Collection in Portland: Advantages and Disadvantages of

Franchising". It recommends that the City regulate refuse collection by franchising. The report states:

"A more compelling reason for franchising garbage collections is the need to integrate the management of garbage collection with Solid Waste Disposal. The latter is currently receiving significant attention from local, regional, and state government officials. All solutions involve massive expenditures for transfer, disposal, and energy recovery facilities. Costs of disposal are a significant expense for a collection company. Also, the success of these major facilities is dependent upon a predictable, and therefore controlled, flow of solid waste. The viability of solid waste handling facilities, such as transfer stations, incinerators, and landfills is dependent upon the regulation of solid waste flow. Further recycling may never be a significant alternative without refuse collection regulation."

Next from Resource Conservation Consultants and Northwest Stragegies -- Entitled: "Residential Recycling in Portland: Report and Recommendation." It recommends that the city adopt a "Regulatory" program --

"Development of general solid waste management plan which includes authority to manage and control waste

collection and recycling operations provided by the private sector."

Further, the report advises:

"An effective, comprehensive, city-wide residential recycling program cannot be developed within the fragmented, uncoordinated solid waste collection environment that now exists in the City. Neither can such a program be developed independently of waste collection practices for political and economic reasons. Cooperation of the City's refuse hauling industry is essential for expanded residential recycling."

Now add this -- the State Legislature by the Opportunity to Recycle Act S.B. 405, and S.B. 662 the Waste Reduction law, and the METRO Landfill law has declared all of the activities to be activities of statewide concern and control. The legislature has enacted a comprehensive local franchising law. It has declared that cities and counties have the primary responsibility for regulating and franchising waste collection. The legislature has also given EQC the right to compel franchising.

But, the recommendation to the City Council by the BUREAU OF ENVIRONMENTAL SERVICES is that it adopt:

"A cat that walks alone" attitude, and

A tunnel vision solution of the Opportunity to Recycle program.

The problem and the necessity for franchising collections in Portland is not going away. Two of the major deterrents have been removed. The first is that the law and regulations compel franchising of residential collections only. The industry accepts this condition.

The second is a question of whether franchising by a city creates anti-trust problems. The Opportunity to Recycle legislation eliminates this question.

Now is the logical time for the City to provide leadership and statesmanship. These are the reasons:

1. A regional solid waste management program has been mandated.

2. There is a present and growing solid waste disposal crisis.

3. Uniform regulation by franchising of collections is the key to an efficient and enterprise financed waste management program.

4. The legislation for franchising is in place.

5. The opportunity to recycle program is a logical extension of franchised collection.

6. A band aid response to the Opportunity to Recycle program -- delays and aggrevates the basic problem of developing a regional and comprehensive waste management program.

Before closing let me answer the argument that the status quo plus a monthly collection of non-paper recyclables is the least expensive. I am comparing a monthly collection of recyclables provided by the established waste collectors vs. a separate contract collector.

The man hours and miles traveled are the same.

The equipment is the same, except the contract collector has to make a separate investment with no opportunity for other collection uses.

The permit and supervision costs are the same.

The costs of providing the service are substantially the same. If there is a savings, it will be by the established collector because of know how, equipment, and experience.

The problem with a separate low bid contract collection is that it creates an additional collection service that must be separately supervised and that becomes a competitor to further fragment the collection industry.

The economy that is claimed is not a less expensive service. Rather it is the avoidance of the cost of administering a franchise system. The question is whether the public benefits justify the cost of administering a franchise system.

Further, the cost of a franchised system can be minimized by information sharing because, both METRO and DEQ require reports and cost analysis that are basic to franchising.

Finally, Washington and Clackamas Counties, with between 25 and 30 franchises each, require minimal staff time to regulate their franchises.

We have a substantial doubt as to the legality of including in the collector permit fee the cost of administering a service provided by a third party. Also we question whether there is legislative authority for METRO to increase dumping charges to pay to the city, so the city can pay for a city service. But again we mention this only as a matter for the record.

I want to close with a short quote from the 1982 Wright Engineering report:

> "In summary, there are good reasons to regulate and good reasons not to. The City should look into the future regarding this issue. It is our view that refuse collection problems will continue to worsen until emergency action is required. There is an opportunity now to plan ahead for an efficient refuse collection and disposal service delivery system for the future. The City should regulate refuse collection."

My suggestion is that you send the present report back with an instruction to develop a program that includes the franchising of waste collection, and that makes the monthly collection of recyclables a responsiblility of the franchised collector.

MEMO

Director

DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE 6/18

TO Dawn

PLEASE PREPARE A REPLY FOR THE DIRECTOR'S SIGNATURE BY 6/25.

Thank you.

Route Slip

Date 6/23

TO: Name	Division/Section	Initial	Dat
1. Fred Hansen			
2.			
3.			
4.			
5.			

	as requested		investigate		per conversation
	approval		justify		prepare reply
	comment		necessary action		return with more detail
	confer		initial and return		review and circulate
	for your information		note and file		signature

Rep. Burton has been sent the revised staff report, which includes his testimony and response to it. Do you still want a letter?

FROM: L Parker Phone No.

No

Central Stores 51569

☐ See Other Side

Recycled Paper

MIKE BURTON
MULTNOMAH COUNTY
DISTRICT 17

REPLY TO ADDRESS INDICATED:
☐ House of Representatives
Salem, Oregon 97310-1347
☐ 6937 N Fiske
Portland, Oregon 97203

HOUSE OF REPRESENTATIVES
SALEM, OREGON
97310-1347

June 6, 1986

Mr. Fred Hansen, Director
Department of Environmental Quality
522 S.W. 5th Avenue
Portland, Oregon 97207

Dear Fred:

I have reviewed both the Department's draft report of Metro's Waste Reduction Program and Metro's response. As the author of S.B. 662, I am aware of the tight timeframes required by the bill and am appreciative of the substantial effort which both organizations put forth. Compliments are due both agencies.

While I am pleased with the overall results of DEQ's review process, I am surprised by the tone expressed by the draft staff report.

The section of the report titled "Evaluation of the Waste Reduction Plan as a Whole" suggests that Metro has actively responded to DEQ concerns and has demonstrated positive movement in the bulk of those areas identified as potential problems during the Department's initial review of the program. I understand that differences remain over the date by which Metro is willing to implement its certification program and enforce rate incentives. I see those differences as legitimate differences of opinion about how to achieve the goal. I see no differences over the goal itself.

I find enough references in your staff report to Metro's cooperation to be satisfied that Metro's intent and actions satisfy the Legislature's intent in mandating a waste reduction program.

I am, therefore, bothered by the statement on page 18 of your staff report that, "Unfortunately, early indicators of Metro's commitment to implement are not encouraging. Implementation of much of the program awaits completion of the Waste Composition Study".

Although the RFP for the Waste Composition Study was not issued in accordance with the anticipated schedule, it is my understanding that it is scheduled to be issued in June, 1986. Although I recognize that this study is a critical element of the program, I do not believe that a delay of approximately 8 weeks is a critical delay. I do not see it as evidence of lack of commitment.

Based on Metro's existing statutory authority, it is clear that the success of this waste reduction program depends, in good part, upon the cooperation of individuals and local governments. This cooperation will be more easily achieved if the EQC simply approves the plan as your recommendation suggests. To handicap the program's potential for public acceptance by giving "reluctant" approval and speculating prematurely about Metro's commitment to implementation does not bode well for the type of long-term cooperation between DEQ and Metro which will be necessary to solve this region's solid waste problems.

I appreciate the substance of the DEQ draft report and suggest only that the negative tone expressed in the report is inappropriate and should be revised.

Sincerely,

Mike Burton
Representative
District 17

VICTOR ATIYEH
GOVERNOR

Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207
522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item B, June 27, 1986, EQC Meeting

Informational Report

Identification of 19 Candidate Landfill Sites

Background

The purpose of this report is to:

(1) Inform the Environmental Quality Commission (EQC) of the status of the Department's program to identify an environmentally suitable landfill site (or sites) to serve the Portland metropolitan area, and

(2) To provide specific information on the methodology and procedures used to develop the initial list of 142 potential sites and to reduce that number to 19 candidate sites.

The 1985 Legislature, through passage of Senate Bill 662, gave the Department and the Environmental Quality Commission the responsibility and authority to site a solid waste disposal facility to serve the Portland metropolitan area (Senate Bill 662 is published as a note at the end of Oregon Revised States (ORS) 459). The siting of a sanitary landfill is only one part of this legislation which also requires the development of an aggressive and comprehensive waste reduction program for the Portland region. The timely siting of a landfill is seen as critical since the Portland area's principal existing landfill (St. Johns) is expected to reach capacity no later than 1991; and the region's designated solid waste authority (Metropolitan Service District) has been unable to site a suitable replacement facility.

In response to Senate Bill 662 the Department is pursuing a process that will lead to the selection by the Environmental Quality Commission of an environmentally acceptable landfill site or sites by July 1, 1987. The Department realizes that any site or sites may have some environmental or technical shortcomings, but has designed its site selection process to identify those sites which are the most suitable for development as a municipal sanitary landfill. In addition, the Department has included the ability to prevent or mitigate on-site and off-site impacts from the landfill operation as one of the primary considerations in evaluating potential sites.

To ensure that a suitable site (or sites) is selected the Department has developed a comprehensive set of landfill siting criteria. Three categories of criteria are included. They are the pass-fail criteria, the site evaluation criteria, and the final decision criteria. The pass-fail criteria and a description of the process that was used to develop them were submitted to and reviewed by the Commission at their March 14 meeting.

A report describing the site evaluation and final decision criteria and the process used to develop them was reviewed by the Commission at their April 25 meeting. A summary of the siting criteria is attached (Attachment A).

The pass-fail criteria and the site evaluation criteria were designed for use in developing a list of potential landfill sites within the study area, and then reducing that list to three finalist sites. The final decision criteria will be used in evaluating the suitability of the three finalist sites.

The time frame for the site selection process calls for the development of a comprehensive list of potential sites by June, 1986, the completion and submission to the EQC of a study identifying approximately 12 to 18 preferred and appropriate sites by July, 1986; and the recommendation by the site selection consultant of 2 to 4 finalist sites by November, 1986. Each finalist site will receive a detailed feasibility analysis, including a comprehensive geotechnical investigation, preliminary design and site planning, on-and off-site mitigation planning, and cost analysis.

This work will culminate in a DEQ recommendation to the EQC for a specific site (or sites) by May of 1987, and the issuance by the EQC of an order to establish a site or sites by July 1, 1987 as required by Senate Bill 662. In considering the Department recommendation and in issuing the siting order the Commission will need to compare the two to four finalist sites using the DEQ site-selection criteria and the site acquisition, construction and operation cost estimates that will be developed as part of the detailed site feasibility studies. In addition, the Commission must find that the site or sites they select meet the minimum site suitability requirements outlined in Section 4 of Senate Bill 662.

Selection of the Project Consultant

The Department requested proposals from qualified consultants to assist with the site identification process. Of the four proposals received and reviewed, the Department selected Brown & Caldwell Consulting Engineers to assist in identifying potential sites, and in reducing that list to three finalist sites. (Brown & Caldwell worked with the Department in development of the landfill siting criteria used in this project.) The Department is negotiating with another professional engineering firm to perform the detailed feasibility studies on each of the three finalist sites.

Firms sub-contracting on the Brown & Caldwell team include Woodward-Clyde Consultants out of Walnut Creek, California, Converse Consultants of Seattle, Washington and the Portland-based firms of Benkendorf and Associates, Enviro Science, Inc., H. G. Schlicker and Associates, and B.F.S. Traffic Engineering.

The Brown and Caldwell team was selected primarily for their broad base of expertise and experience, their ability to meet tight time schedule requirements (as demonstrated during the criteria development phase of the project), and their proposal to utilize a Geographic Information System computer program to aid in identifying and evaluating potential sites within the study area.

This report describes the methods and procedures used by the Brown and Caldwell team and Department staff to develop the initial list of potential sites, and to select the 19 candidate sites from that list.

Potential Landfill Site Identification Process

The study area for the site identification process included all of the area within Washington, Multnomah, and Clackamas Counties (3,071 square miles). Sites within Columbia, Marion, or Yamhill Counties were retained for evaluation only if they were recommended to the Department by the appropriate county commissions and had received land-use approval as landfill sites.

Because of the large land area involved, identification of potential landfill sites began with a process, based on the DEQ's siting criteria, of systematically eliminating areas unsuitable for landfill location. This allowed the project team to focus on the remaining potentially suitable areas. The mapping of unfavorable areas was done primarily by using a computerized Geographic Information System (GIS), which is capable of calculating and plotting data in a number of different ways. This system provided a valuable tool for evaluating a large amount of data in a very short period of time.

The process of identifying potential sites included the following three principal steps:

(1) Pass-fail criteria were mapped to eliminate from consideration those areas which failed any single pass-fail criterion.

(2) The one (1) ratings (the rating given for the worst characteristic under a particular criterion) of several of the site evaluation criteria were mapped to identify and eliminate those areas where the most undesirable characteristics of a number of criteria overlapped. In this initial screening process, any site receiving a rating of 19 or more, indicating a rating of at least a one (1) on three separate criteria, was eliminated from further consideration. This process was used because the Department, with the concurrence of the Facility Siting Advisory Committee believed that any site scoring this low on these site selection criteria should be deleted from future consideration.

(3) Potential landfill sites were identified within those areas not eliminated during Steps 1 and 2.

The following sections discuss each of these steps in more detail.

Pass-Fail Criteria Mapping. The pass-fail criteria define restrictive site characteristics that can eliminate areas from consideration. The process of mapping these criteria began by plotting county boundaries and state and federal highways. Airports were then identified, using Oregon State Aeronautics Division information, and the regulatory setbacks of 5,000 feet for piston-type aircraft runways and 10,000 feet for turbo-jet aircraft runways were mapped. Floodways were identified by using Federal Insurance Administration and Federal Emergency Management Agency floodway maps.

The application of the pass-fail criteria for natural habitat consisted of identifying and mapping occurrences of threatened and endangered species within the study area. Preliminary lists of known threatened and endangered species in the study area were obtained from the U. S. Fish and Wildlife Service and the Oregon Natural Heritage Data Base. Site-specific information was obtained from records maintained by the Oregon Natural Heritage Data Base, and supporting descriptions of pertinent species occurrences were extracted from the computerized data base at the Heritage office.

Pass-fail mapping was accomplished for the land use criteria category through transfer of information from maps and aerial photography onto the 7.5 minute Department of the Interior U. S. Geologic Survey topographic quadrangle maps used as base maps for the site selection process. The location of parks, the Bull Run Watershed, and the Willamette Greenway were all available from published maps. Residential areas at a density of five

dwellings per acre and greater, and developed commercial areas were interpreted primarily from aerial photography. Density measurements were made using a circular template with a map area of approximately 25 acres. Where five or more dwellings were found within the template, the area was delineated as a "fail" area.

Computer tapes of topographic information for the study area were obtained from the USGS. A computer was used to calculate slopes from this information, and to plot exclusion areas with slopes of greater than 25 percent.

All areas approximately 20 acres or larger, which did not meet the pass criteria were entered into the computer to produce a map showing areas to be eliminated from future consideration.

Several pass-fail criteria were not mapped at this initial stage of the process, for example:

(1) Sole-source aquifers were not mapped, because there are no aquifers in the study area that are designated "sole source" by the U. S. Environmental Protection Agency.

(2) Active faults were not mapped because none are known to occur in the study area. Specific sites will be inspected for the presence of active faults at a later stage of the project.

(3) Historic and archaeological sites were not mapped, because those in the study area are small and would not contribute to large area exclusions. They will, however, be evaluated on a site-specific basis.

(4) Site capacity could not be mapped until specific site boundaries within a general study area were identified. Mapping of other pass-fail criteria, however, helped identify small isolated areas with insufficient acreage for landfill development. The pass-fail site capacity criterion calls for excluding areas of less than 300 acres.

Maps showing results of the application of the pass-fail criteria are presented in Attachment B.

Site Evaluation Criteria Mapping After application of the pass-fail criteria, a rather large area within the three counties remained available for consideration as potential landfill sites. The task at that point was

to screen out additional undesirable areas while maintaining the broadest range of sites for consideration.

The Brown and Caldwell team proposed a method for accomplishing this task that involved the limited application of the site evaluation criteria. This method, referred to as the initial screening process, was approved by Department staff and the Facility Siting Advisory Committee.

As discussed in detail in the April 1986 report "Portland Metropolitan Area Landfill Siting Criteria," (Attachment B to Agenda Item N, April 25, 1986 EQC Meeting) a numerical scoring system was developed to compare sites by using the site evaluation criteria. The scoring system uses two separate numerical indicators for each criterion: a site characteristic rating and a criterion weighting. The criterion weight is used to compare the importance of a given criterion in relation to other criteria. Criteria are weighted from 1 to 10, with the most important criteria given a weight of 10.

The site characteristic ratings are used to compare potential sites numerically in relation to a single criterion. Potential landfill sites and their surrounding areas have physical features that may be good or bad for constructing or operating a landfill. Specific criteria were used to evaluate how well sites are naturally suited for a landfill with respect to a specific physical feature. Each criterion includes a range of characteristics that are given numerical scores. The characteristics that are the best for a landfill have a high rating, while the features that are not as good receive a lower rating.

Ratings range from 1 to 10, with a 10 given to the characteristic most suitable for a landfill. Acceptability ratings of 1 were given to site characteristics that are borderline pass-fail. Although no single criterion rating of 1 was sufficient for site rejection, a site with several such ratings, from several independent criteria, would be extremely difficult to implement regardless of its level of acceptability for other criteria. As an example, a site over 25 miles from the principal solid waste sources may be acceptable if it has other good characteristics for a landfill. However, if it also has highly fractured bedrock to the surface and many down-gradient wells, the site should be eliminated. (These characteristics each have an acceptability rating of 1 (the worst possible rating for their respective criteria).

This screening process involved identifying, entering into the computer, and mapping the lowest scoring characteristics ("one"(1) ratings) for 17 of the site evaluation criteria. As with the pass-fail mapping, only certain of the 1 rated site evaluation criteria characteristics were well suited for use in this process i.e., were readily identifiable and mappable as

areas of about 20 acres or more. The weights of the criteria for which "1" ratings were being mapped were also entered into the computer. This permitted comparison of mapped areas with respect to the importance (weight) of their unfavorable characteristics. Areas with overlapping 1 rated characteristics were eliminated from further consideration if the cumulative weight of the overlapping criteria was equal to or greater than 19.

The site evaluation criteria that were used in the initial screening process and their assigned weights are listed below:

Criteria Category	Criterion Number	Criterion Title	Assigned Weight
Environmental - Surface Water	10	Flood Plains	6
	12	Site Drainage Discharge	4
	13	Downstream Uses	7
Environmental - Ground Water	20	Recharge/Discharge Areas	8
	21	Natural Protection	8
	23	Depth to Ground Water	4
	27	Evidence of Faulting	3
Environmental - Natural Habitat	30	Threatened or Endangered Species	8
	31	Land Habitat	4
	32	Aquatic Habitat	4
	33	Current Habitat Disturbance	4
Environmental - Land Use	40	Zoning	3
	41	Current Site Use	7
Environmental - Aesthetic	72	Buffer Area	10
Technical	89	Precipitation	3
	90	Climatic Extremes	2
Economic	92	Waste Transport Distance	5

Identification of Sites from Remaining Non-Excluded Areas: After the pass-fail criteria mapping and initial screening process were completed, potential site areas were identified by placing computer-generated, transparent map overlays showing excluded areas on 7.5- and 15-minute USGS topographic quadrangle maps, and outlining preliminary site boundaries around the non-excluded, potentially suitable areas.

In designating the preliminary site boundaries, the project team did not limit the maximum size of the sites. For example, if no obvious segregating or distinguishing features existed in an area based on

established criteria, the entire area was considered a site regardless of size. In addition, if two or more potential sites adjoined one another and had very similar characteristics, they were considered one site area. The purpose of this procedure was to carry the largest area possible through the evaluation process before narrowing the list of sites for more detailed evaluation. With this method, a very large site area may later be split into more than one site or the ideal location for siting a landfill within the area may be established later through field review of the entire area.

In addition, several other guidelines were used in defining preliminary site boundaries. These guidelines are listed below:

1. All connecting paved roads were considered to be preliminary site boundaries.

2. Roads that dead-ended inside a potential site were not considered to be site boundaries.

3. All potential sites that were less than 300 acres in size were excluded.

4. Populated areas that had not been excluded during the mapping of the pass-fail criteria, but that met the requirement for failed areas (five or more residences within a circular area having a diameter of 1,200 feet) were excluded.

5. Areas of excessive slope (greater than 25%) that were not mapped during the mapping of the pass-fail criteria were excluded. It should be noted that the computer generated slope overlay map that was used as a guide in identifying areas of excessively steep slope was not as accurate or detailed an indicator of slope as were the U.S.G.S. topographic quadrangle maps that were used as base maps for the site identification process. As a result it was necessary, in some areas, to map slope using the quadrangle maps rather than the overlay map. In order to ensure consistency in slope interpretation, the slope characteristics on each U.S.G.S. topographical quadrangle map were used to check the accuracy of the computer generated overlay map and the preliminary site boundaries. The slope characteristics on each quadrangle map were reviewed at least twice.

Using these guidelines, preliminary boundary lines were drawn around potential sites. These lines were not intended to define exactly the boundaries of a landfill that might eventually be sited at that location, but rather, were intended to provide a general guideline as to what area was to be evaluated during the next (site evaluation) stage of the process.

A total of 141 potential sites were identified in the tri-county study area. In many instances anywhere from two to six individual sites that were separated only by roads were clustered together into site areas.

During the process of reducing the 141 sites down to 12 to 18 top candidates, each of the individual sites were considered separately. However, it is possible that sites separated by light duty roads may be combined during the next stage of the process.

In addition to the 141 sites in the tri-county area, one site in Marion County was included. This site was submitted to the DEQ by Marion County in response to a request from the Director for suggestion of any sites in Marion, Yamhill, or Columbia Counties which the appropriate county commissions would recommend for consideration and which had existing land use approval as landfill sites. Addition of the Marion County site brought the total number of sites to be considered during the site evaluation stage to 142.

There has been a strong emphasis during the course of this study on public involvement in the process. The general public and private industry were asked to forward their suggestions for landfill sites within the study area. The one suggested site that was not located in an excluded (pass-fail or initial screening) zone is included in the list of potential sites.

Evaluation of Potential Landfill Site Areas

The next step in the site selection process was to compare the 142 potential landfill sites using the site evaluation criteria. Each of the 142 sites were given a rating for each of the 41 site evaluation criteria. The rating for each criterion reflected the site's relative suitability for a landfill with respect to that criterion. In assigning the ratings, the project team members relied on published reports and maps, file data, and aerial and satellite photographs. Aerial videotaping was also used where needed to confirm recorded site data and collect additional data not available from existing records.

In evaluating sites, team members were careful to assign ratings that were justified by the criterion and based on available data on the site. Team members also made every effort to be consistent in their interpretation and application of the criteria. For most criteria information was available to make clear distinguishing ratings. However, a few criteria cannot be fully evaluated until on-site investigations are made in the next phase of the project. For example, only identified cultural resources were factored into this evaluation. Sites without identified resources but in areas of high potential for finding a resource were not down-rated at this point. On-site investigation will be used in the next phase of the project to further evaluate cultural resources. All sites without currently identified cultural resources were given a rating of 10. Sites with identified resources were down-rated appropriately.

For some criteria, team members were able to make even more refined ratings to distinguish between sites than outlined in the April 1986 "Landfill Siting Criteria" report. As an example, the site life criterion, suggests a rating of 4 for sites with a projected life between 10 and 20 years. In

the rating process, this was refined to give a rating of 3 to sites with a projected life of 10 to 15 years and a rating of 4 to sites with a 15 to 20-year projected life.

After criteria ratings were completed for the site areas, the total site scores were tabulated and compared. The total score for each site area was calculated by multiplying the rating for each criterion by its respective criterion weight and then adding these products for all criteria. The criteria ratings and total scores for the 19 candidate sites are shown in Appendix C of the attached "Evaluation of Potential Landfill Sites." (Attachment C). Potential sites are organized in order of total evaluation score.

During the next stage of the site selection process the 19 candidate sites will be reviewed in more detail. Research of all available site specific material will be conducted. Information will be gathered through a program including seven public workshops and eight public hearings. Field visits will be made to each of the sites, and limited subsurface investigations will be conducted. Based on the findings from these activities, the sites will be rescored using the site evaluation criteria, and three finalist sites will be selected. The project time frame calls for this work to be completed by November of 1986. From November 1986 through April 1987, the Department will work with engineering consultants to perform detailed feasibility reports on each of the three finalist sites and forward a final recommendation to the EQC by mid-May 1987.

Director's Recommendation:

It is recommended that the Commission review the 19 candidate sites, and concur in the following course of action to be pursued by then Department:

(1) The 19 candidate sites will be investigated in more detail. This investigation will include site specific research of available data, site visits, and limited subsurface investigations on selected sites.

(2) A series of public meetings including landowner meetings, public workshops, and public hearings will be conducted. Information obtained at these meetings will be taken into consideration in evaluating the sites.

(3) The top candidate sites will be rescored using the site evaluation criteria, and three finalist sites will be selected by the Department in time to comply with the statutory mandated date of January 1, 1987.

Fred Hansen

Attachments A - Synopsis of the DEQ Landfill Siting Criteria
B - "Identification of Potential Landfill Sites," May 1986: Technical Memorandum on the Development of an Initial List of Sites - Prepared for the DEQ by Brown and Caldwell Consulting Engineers
C - "Evaluation of Potential Landfill Sites," June 1986; Technical Memorandum on the Selection of 19 Candidate Sites Prepared for the DEQ by Brown and Caldwell Consulting Engineers

Steve Greenwood:m
SM345
229-5782
June 19, 1986

STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY INTEROFFICE MEMO

TO: Environmental Quality Commission DATE: June 26, 1986

FROM: Michael Downs

SUBJECT: Solid Waste Tour after EQC meeting June 27, 1986

The staff have organized a brief tour of some Portland area solid waste management facilities in the Portland area. Metropolitan Service District (Metro) staff who oversee the operation of several sites included, have assisted in organizing the tour, and will be accompanying the Commission.

We will depart from the DEQ offices following the EQC meeting Friday, June 27, 1986 where you will be considering Metro's waste reduction program and initial 19 possible landfill sites.

I. St. Johns Landfill

Background

The St. Johns landfill first started receiving wastes in the early 1930's. Across the street is the old City of Portland incinerator, which teamed with the landfill, handled Portland's waste for many years. The landfill is owned by the City of Portland, and is operated by the Metropolitan Service District. METRO has, in turn, turned the day-to-day operation of the landfill over to a private firm (Browning-Ferris Industries). The landfill size is limited by a state statute and concerns about wetland protection. The site does not have a liner. The newest cell does have a leachate collection system. The leachate will be pumped to the City of Portland's Columbia Blvd. treatment plant.

The landfill is expected to reach capacity in 1991, with the waste reduction plan in effect.

Solid Waste Management Technique Illustrated

1. Overall landfill size in area.

2. Cell design.

3. Cover and grading of old cells.

4. Leachate collection and treatment.

5. Litter/Rodent control.

6. Site access control.

7. Active face size and operation.

8. A gas recovery system is planned.

II. Oregon Processing and Recycling Center

Background

OPRC accepts mixed loads from commercial sources and processes the waste to remove recyclable corrugated cardboard or paper. Only loads with 50% or more recyclable materials are accepted. The disposal charge for acceptable loads is less than St. John's. OPRC also purchases other recyclable materials from the public and from collectors. OPRC, operated by Genstar Corporation, began operation of the cardboard "pick" line in mid-1985.

Solid Waste Management Techniques Illustrated

1. "Dump and pick" operation.

2. Commercial high grading - advantage of available markets.

3. Does not alter "garbage" habits.

4. Quick to set up and get recyclable products out. Revisions to collection routes could allow up to 18% recyclable recovery quickly.

5. Refuse Derived Fuel (RDF) process could be added.

III. Clackamas Recycling and Transfer Station

Background

The Clackamas Recycling and Transfer station started operation in April of 1983. The transfer station accepts garbage and recyclables from both the general public and from haulers. Material dumped into the pit is pushed into larger transfer trailers which are hauled to the St. Johns Landfill. Similar transfer trailers could be used for either a landfill or energy recovery facility.

Solid Waste Management Techniques

1. Allows cost-effective use of larger, more distant landfill(s).

2. Both public and commerical access close to garbage generation.

3. Water spray to keep out dust, managed to keep odor, rodents etc. low.

4. Recycling available.

5. "Dump and pick" portion could be expanded.

6. Could add processing equipment easily.

IV. McFarlane's Bark

Background

McFarlane's is the larger of two yard debris processors serving the Portland metropolitan area. McFarlane's started processing yard debris in 1981. McFarlanes receives approximately half its materials from residential self-haulers, with other half coming from commercial landscapers. The disposal charge is presently $2.00 per cubic yard, both loose or compacted loads. The materials received are stockpiled until they are later processed in a large grinder and then composted. McFarlanes currently has a large backlog of material awaiting grinding. They are presently processing material as it is received. Sales has improved and the backlog is being reduced.

Solid Waste Management Techniques Illustrated

1. Ability to process most clean, segregated waste to useful process.

2. Some difficulties in finding proper processing equipment.

3. Importance of marketing final product (role of the state?)

MJD:r
RR1186

SUMMARY OF METRO DISPOSAL RATES
Effective January 1, 1986

ST JOHNS LANDFILL

	Commercial Rate ($/ton)	Public Rates Pickups & Trailers (2.5 cy min.)	Public Rates Cars & Sta. Wagn. (2 cy)	Public Rates Extra Yards (1 cy)
Base Rate	$7.86	$4.80	$3.84	$1.92
User Fee	$2.04	$0.55	$0.44	$0.22
Regional Transfer Charge	$2.98	$1.70	$1.36	$0.68
Rehabilitation/Enhancement Fee	$0.50	$0.15	$0.12	$0.06
State Landfill Siting Fee	$1.00	$0.30	$0.24	$0.12
TOTAL RATE	$14.38	$7.50	$6.00	$3.00

Commercial Special Waste Fees at St. Johns: $25.00 Special Waste Permit Application Fee
$3.65/ton Special Waste Surcharge (in addition to the $14.38/ton commercial rate)
$50.00 per trip minimum charge (tonnage fees paid are credited to paying the $50 minimum)

CLACKAMAS TRANSFER AND RECYCLING CENTER

	Commercial Rate ($/ton)	Public Rates Pickups & Trailers (2.5 cy min.)	Public Rates Cars & Sta. Wagn. (2 cy)	Public Rates Extra Yards (1 cy)
Base Rate	$7.86	$4.80	$3.84	$1.92
User Fee	$2.04	$0.55	$0.44	$0.22
Regional Transfer Charge	$2.98	$1.70	$1.36	$0.68
Rehabilitation/Enhancement Fee	$0.50	$0.15	$0.12	$0.06
State Landfill Siting Fee	$1.00	$0.30	$0.24	$0.12
Convenience Charge	$3.00	$1.00	$0.80	$0.40
TOTAL RATE	$17.38	$8.50	$6.80	$3.40

* Additional fees may apply for: disposal of tires, excess weight at St. Johns, uncovered loads, one ton commercial minimum, possible special waste lab fees.
* The public minimum rate may be reduced by delivering recyclables.

RDM 12/4/85

FY 1986-87
SOLID WASTE BUDGET

OPERATING — $11,116,793 (Excluding transfers)

MANAGEMENT & ADMINISTRATION — 3.19
$471,170

- General Mgt. 78% 369,565
- Budget & Contracts 2.5% 10,699
- Information Systems 14% 65,301
- Franchise Administration 3.5% 15,186
- Local Govt/Public Information 2% 10,419

ST. JOHNS LANDFILL — 10.66
$5,337,920

- General Mgt./ Operations 29% 1,528,000
- Disposal Operations 56% 2,995,720
- Recycling Center .06% 25,011
- Rate Develop. .04% 13,371
- Landfill Mgt. 6% 310,955
- Special Waste 3% 164,480
- Yard Debris 5.9% 300,383

CTRC — 5.42
$2,589,190

- General Mgt./ Operations 22% 564,651
- Disposal Operations 77% 2,001,071
- Recycling Center .6% 13,686
- Rate Development .4% 9,782

WTRC — 3.67
$741,310

- General Mgt./ Operations 59% 436,936
- Disposal Operations 32.6% 242,195
- Permits/Design 4.4% 32,551
- Construction 4% 29,628

WASTE REDUCTION — 11.74
$1,067,462

- General Mgt. 3.3% 35,508
- Recycling Info. Center 4.3% 45,967
- Promotion & Education 22% 234,248
- Rate Develop. 1.5% 15,967
- Alternative Technol 40.2% 428,864
- Technical Asst. 7.4% 78,902
- Certification 4% 42,948
- Markets Asst. 2.3% 24,539
- System Measurement 11.5%122,787
- Planning & Development 3.5% 37,732

SYSTEM PLANNING — 1.16
$909,741

- General Mgt. 1.2% 10,766
- SW System Plan 1.8% 16,849
- Financial/ Cap. Planning 1% 10,395
- Landfill Siting 96% 871,731

DEBT SERVICE — $1,207,100

NEW FACILITY
$325,000

- WTRC 325,000

SW115 SOLID WASTE PLANNING
$198,000

- Principal 150,000
- Interest 48,000

SW 117 ST. JOHNS EXPANSION
$215,000

- Principal 200,000
- Interest 15,000

SW 118 CTRC
$469,100

- Principal 173,100
- Interest 296,000

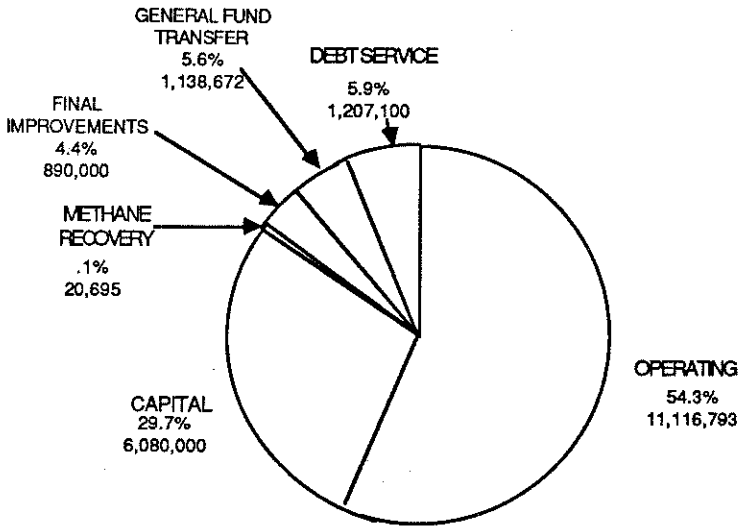
CAPITAL — $6,080,000

CTRC
180,000

- Construction 50,000
- Engineering 10,000
- Equip. Rentals 70,000
- Improvements 50,000

WTRC
5,900,000

- Land 1,000,000
- Construction 4,500,000
- Engineering 400,000



TOTAL: $20,453,260

ST.JOHNS FINAL IMPROVEMENTS — $890,000

ST. JOHNS METHANE RECOVERY — $20,695

86131

ST. JOHNS LANDFILL

Present and Future

November 1983

METROPOLITAN SERVICE DISTRICT
Providing Zoo, Solid Waste and Local Government Services

METRO

ST. JOHNS SANITARY LANDFILL

PRESENT AND FUTURE

Prepared by

SOLID WASTE DEPARTMENT

Project Manager: Dennis O'Neil

NOVEMBER 1983

ACKNOWLEDGEMENTS

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TABLE OF CONTENTS

I. INTRODUCTION

PURPOSE OF REPORT

The purpose of this report is to provide a brief and accurate description of the current status of the St. Johns Sanitary Landfill including past and future operations, estimated site life, and efforts to develop a successor.

HISTORY

The City of Portland owns the St. Johns Landfill. It was initially opened in 1932 as a disposal site for ash generated from the nearby City waste incinerator. The original landfill site covered an area of approximately 181 acres. The site is part of a 600-acre area owned by the City of Portland. The site was operated by the City as a solid waste landfill utilizing City employees or a contracted private operator from 1934 through mid-1980.

On June 1, 1980, the City of Portland transferred the responsibility for operation of the sanitary landfill to the Metropolitan Service District (Metro) of Portland, Oregon.[1] Metro is a regional agency responsible for managing all aspects of solid waste disposal in the Portland metropolitan area. Among powers granted to Metro by ORS 268.317 is the authority to own, operate and regulate landfills and other solid waste disposal facilities.

In December of 1975, the City of Portland applied to the Oregon Department of Environmental Quality (DEQ) to obtain a permit for a 70-acre lateral expansion of the site. The proposed site expansion was needed because of increased volumes of solid waste projected to enter the St. Johns site due to the expected closure of Rossman's Landfill in 1980, as well as increased population in the metropolitan area. The expansion was approved by all regulatory agencies with the exception of the Environmental Protection Agency (EPA). EPA opposed the expansion due to elimination of wetlands in the proposed site. After several years of negotiations the City and EPA reached a compromise. EPA granted approval for a 55-acre lateral expansion of the site. The City agreed to find another landfill site to be opened when the 55-acre expansion area was filled with solid waste. Future lateral or vertical expansion of the site is subject to constraints imposed by state law and various regulatory agencies.

SITE DESCRIPTION

The St. Johns Landfill is located in North Portland at 9363 N. Columbia Boulevard. The expanded landfill consists of a total of 254 acres, including 181 acres of active sanitary landfill and 55 acres of lateral expansion area. It also includes about 18 acres between N. Columbia Boulevard and Columbia Slough containing a transfer station for the public, a recycling center, offices and a gatehouse. The original landfill area was bounded by N. Slough to the northeast, wetlands adjoining Smith & Bybee Lakes to the east

and southeast, and Columbia Slough to the southwest and west. The 55-acre expansion area is immediately adjacent to the east boundary of the original site extending easterly toward the edges of Smith Lake. Figure 1 shows the landfill and its relationship to the surrounding area. The landfill area has been divided into subareas for ease in locating specific structures or activities. These subareas are identified on Figure 2. It should be noted that this map has a slightly different numbering system for subareas than previous maps.
The designation subarea 6 on previous maps has been eliminated.

Access to the site is from Columbia Boulevard northeast on the site access road. The site access road crosses Columbia Slough over the Incinerator Road Bridge and enters the landfill proper.

INSTITUTIONAL AND ORGANIZATIONAL FRAMEWORK

The St. Johns Landfill operates within a relatively complex institutional framework. This framework involves the City of Portland, Metro, DEQ, other regulatory agencies, and the contracted operator.

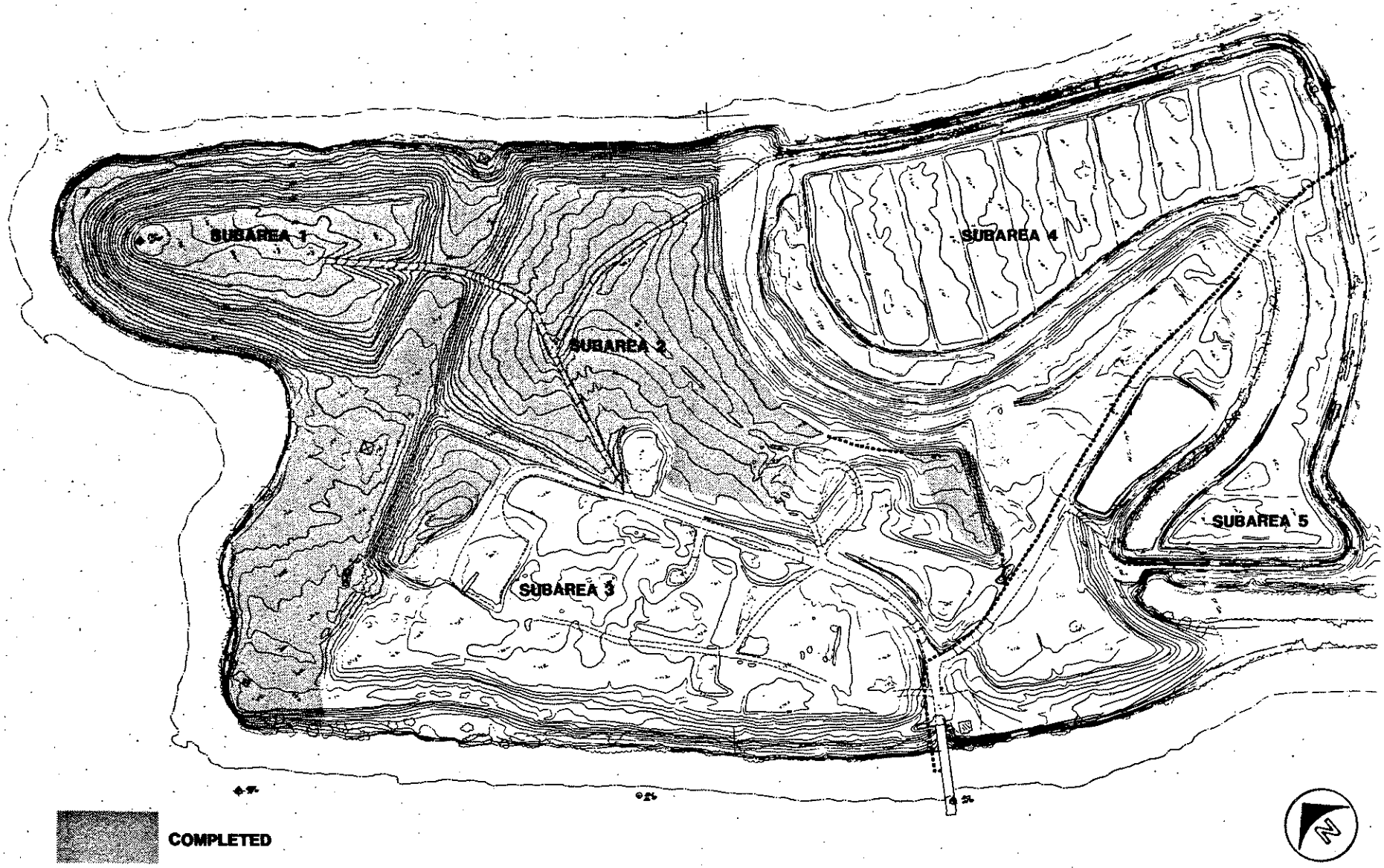
Metro is established under ORS chapter 268 and has the responsibility and authority to provide facilities for the disposal of solid waste within its region. The City of Portland transferred operational responsibility and control, rate regulation, and the authority to expand the existing 181-acre landfill to Metro on June 1, 1980. The City continues to own the landfill and from Metro receives rent.

The landfill operates under the authority of various environmental permits issued to Metro. These permits include:

- The Oregon DEQ Solid Waste Permit No. 119.
- The Oregon DEQ National Pollutant Discharge Elimination System (NPDES) Permit No. 2967-J.
- Oregon Division of State Lands Permit No. FP2222.
- U.S. Army Corps of Engineers Permit.

In recognition of the operational responsibility embodied in these permits, Metro has established an Operational Division within the Solid Waste Department. Based on a competitive bid process, Metro awarded a contract to a private firm, Easley & Brassy Corp./Genstar Conservation Systems, Inc. to operate the site, i. e., bury the solid waste within the terms and specifications of regulatory permits and the operations plan. This contract lasts until September 30, 1985.

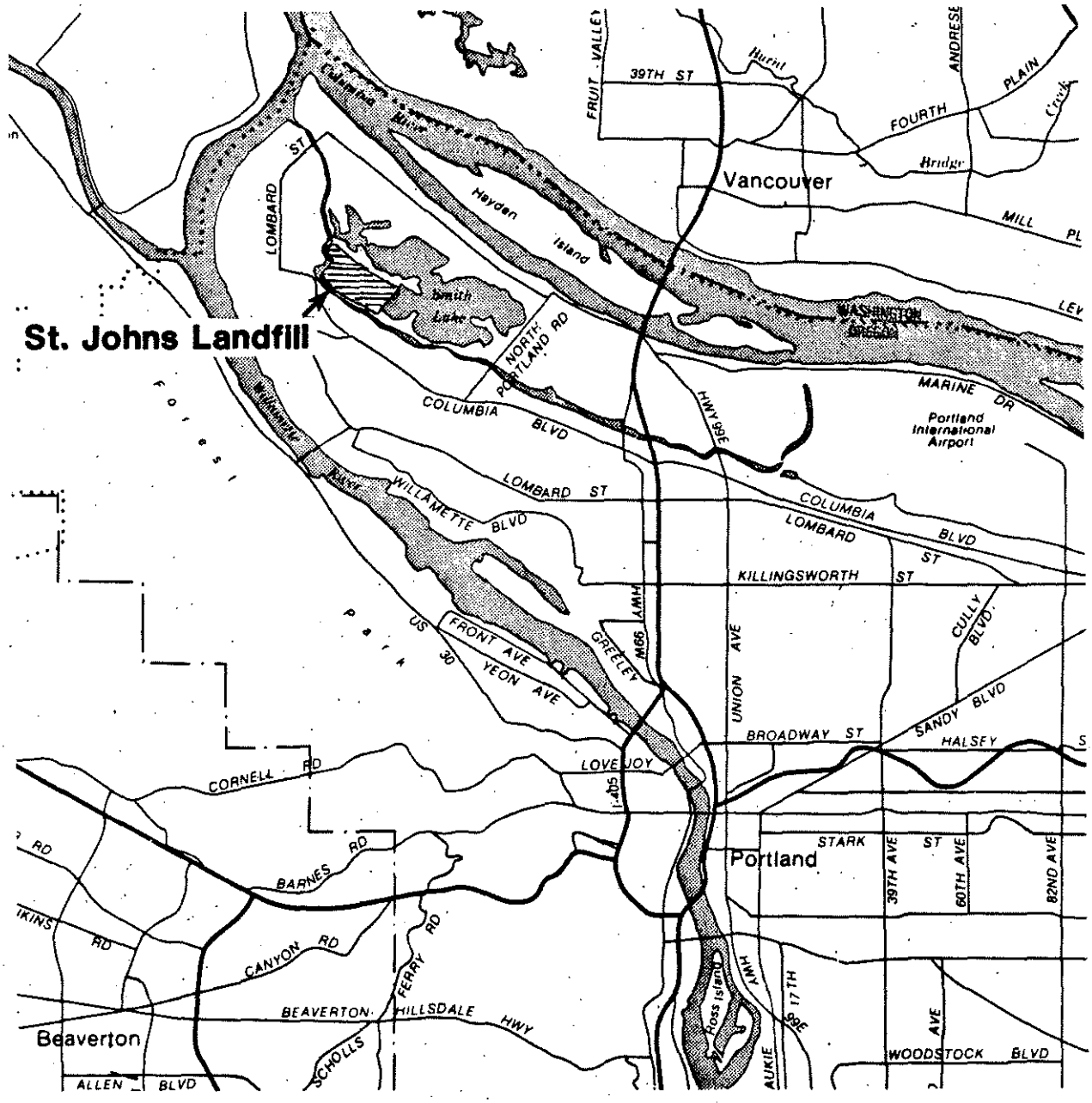
Metro is directly responsible for operating the gatehouse, including providing the operating personnel, the billing system, accounting of income and expenses for the site, and setting rates for disposal at the landfill.



METRO

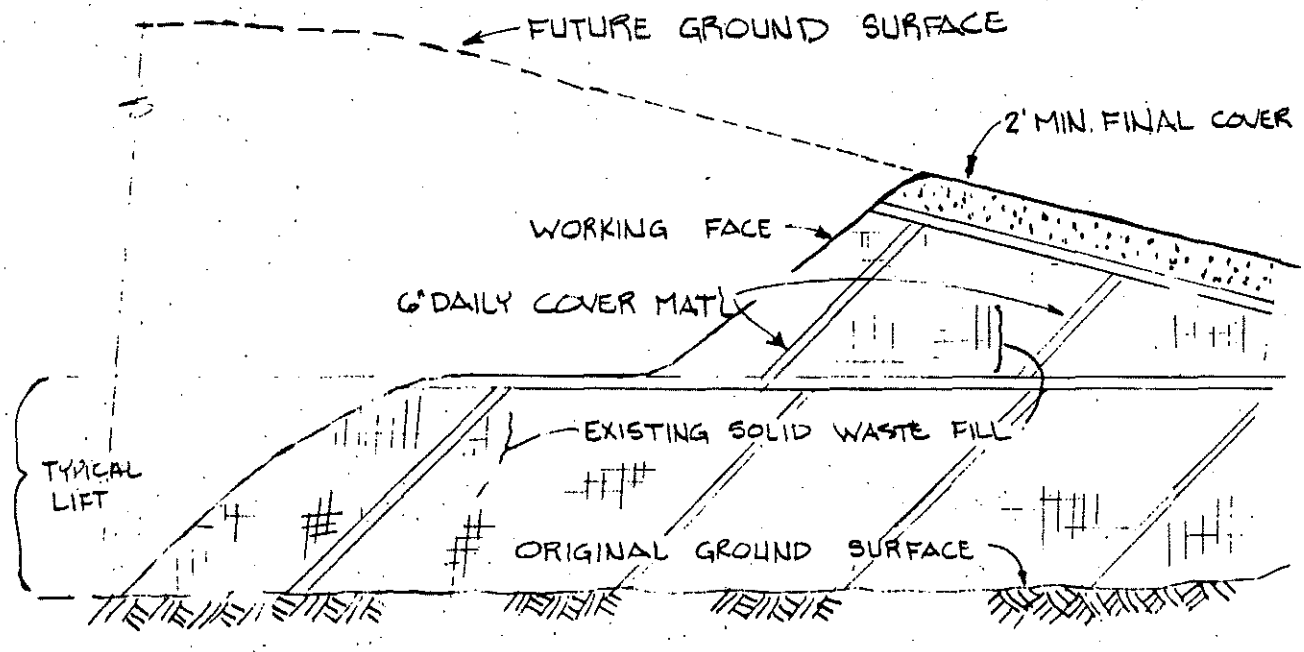
SITE MAP WITH COMPLETED AREA

FIG. 2



SITE LOCATION

FIG. 1



METRO

TYPICAL LANDFILL CROSS SECTION **FIG. 3**

GENERAL OPERATIONS

The St. Johns Landfill is a full service general use sanitary landfill and currently serves nearly all of the Portland metropolitan region. It accepts solid waste from private citizens, commercial collectors, industrial sources as well as refuse transported from the Clackamas Transfer & Recycling Center (CTRC). The CTRC is a facility designed and built by Metro in order to replace Rossman's Landfill which closed on June 10, 1983. Solid waste from private citizens as well as commercial collectors is deposited at the CTRC where it is condensed and loaded into semi-trailers for transportation to the St. Johns Landfill for final disposal. Approximately 45 percent of the total daily refuse currently being deposited at the St. Johns Landfill is material transferred from CTRC.

The Operations Plan (developed in 1979 for the City of Portland and amended in 1980 by Metro) and the various environmental and regulatory permits provide the guidelines for operational activities. In general, the site is being filled sequentially by subarea. Refuse is deposited and compacted in two-foot slanted layers to depths of approximately 10 feet. When a layer or "lift" is completed each day, a six-inch layer of compacted soil is placed over the refuse. The purpose of this soil cover is to prevent rodent and fly infestation, eliminate blowing garbage and minimize odors from the freshly placed refuse.

As a final step, a two-foot layer of compacted clay and topsoil is placed over the six-inch layer of intermediate cover. This material is termed "final cover" and is seeded to prevent erosion and cracking.

Final cover material is placed over the solid waste fill only during the fair weather months. Final cover is placed, compacted and seeded over the maximum completed solid waste fill area. Figure 3 indicates a typical cross-section through the landfill.

The St. Johns Landfill is not permitted to accept hazardous wastes. To guard against accidentally accepting hazardous wastes, Metro's gatehouse personnel accept no special wastes such as sludges, chemicals, liquids, dusts, etc. unless these are accompanied by a written permit issued by Metro and approved by DEQ.

ENVIRONMENTAL PROTECTION AND MONITORING

Operating permits from the regulatory agencies require regular environmental monitoring to observe significant changes in the natural environment surrounding the site.

Metro contracts with the City of Portland Water Pollution Control Laboratory for the analysis of water samples taken from both the groundwater and surface water sampling network surrounding the landfill. There are a total of 11 groundwater sampling wells and 10 surface water sampling points.

Samples are collected by Metro personnel following a time schedule and methods agreed to by DEQ and delivered to the laboratory for testing and analysis. The laboratory mails results directly to both Metro and DEQ.

The results are analyzed by DEQ to determine whether water quality standards are being met, and entered into the file for the sanitary landfill. Periodic inspections are also made by DEQ personnel. DEQ has not found any areas of permit noncompliance since Metro has taken over operation of the landfill.

In addition, the contract between Metro and the City of Portland calls for periodic inspections by an independent, registered, professional engineer. These inspections are intended to determine compliance with the Operations Plan, operations contract and environmental/regulatory permits. All of the inspector's recommedations have been addressed. Since Metro assumed operation of the landfill, no significant areas of non-compliance have been found.

II. EFFECT ON GROUND AND SURFACE WATER

Recently Metro retained a consulting hydrogeology firm Sweet, Edwards and Associates to review available groundwater and surface water monitoring data collected since 1971. The firm was to analyze the data to determine whether the St. Johns Landfill has any measurable impact on the quality of surrounding groundwater and surface water.

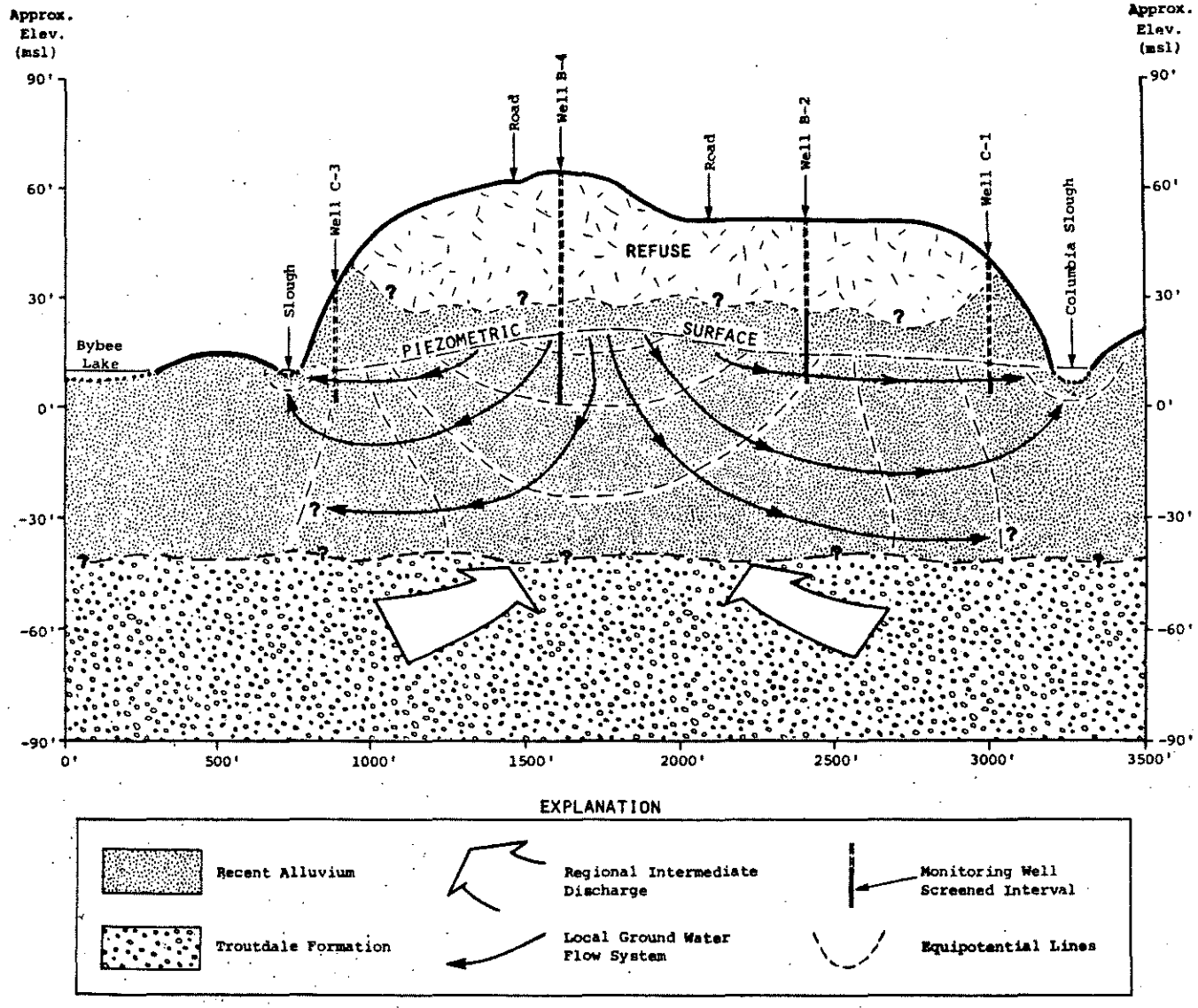
The report by Sweet, Edwards and Associates concluded that subsurface conditions and the local groundwater flow direction appear to provide some control of the extent of any groundwater contamination at the site[2]. As shown in Figure 4, the direction of deeper groundwater flow is toward the surface so there is a tendency to buoy up the shallow groundwater system. This results in confining contaminants from leachate to the shallow aquifier. Downward migration of groundwater is also limited by the lower premeability of the shallow silts and clays underlying the landfill. On the other hand, the shallow or local groundwater flow directs contaminants to the adjacent surface water in the sloughs.

Although groundwater within the solid waste boundary is contaminated there appears to be no direct impact to the beneficial uses of groundwater. Shallow groundwater within the site boundary and within the area bounded by the adjacent surface waters is not a developable resource.

A statistical analysis of the surface water quality data indicated that there has been no significant degradation of surface water near the site for most constituents tested. Nitrate levels have increased but the number of other possible pollution sources preclude identifying the landfill as the principal source of this increase.

Because the site has an NPDES permit and is subject to the limits set by Oregon Administrative Rule 340, division 41, it would seem to be in compliance with applicable water quality standards even though a certain groundwater contaminant (nitrate) exceeds planning guidelines associated with the Oregon Groundwater Protection Policy and standards based on the Resource Conseravation and Recovery Act. However, it is difficult to exactly measure NPDES permit compliance because, as noted for nitrate, the adjacent surface water receives pollutants from storm runoff, groundwater seepage from cesspools, agricultural runoff and other industrial discharges.

In addition, the report pointed out that the analysis of the data was limited by the fact that continual systematic data collection had not been carried out every year since 1971. Also, many federally mandated constituents had not been included in the monitoring data.



EXPLANATION

- Recent Alluvium
- Troutdale Formation
- Regional Intermediate Discharge
- Local Ground Water Flow System
- Monitoring Well Screened Interval
- Equipotential Lines

METRO

SUBSURFACE STRUCTURE & GROUNDWATER FLOW PATTERNS

FIG. 4

The consultant recommended that all existing monitoring wells be repaired and/or redeveloped as necessary to provide representative information about groundwater conditions. The consultant suggested that some tests be added and deleted. Finally, the consultant recommended that interior groundwater wells be included in the current monitoring program as well as the perimeter wells. These recommendations will be reviewed in consultation with DEQ.

III. PROPOSED OPERATIONS PLAN REVISIONS

SUMMARY OF CURRENT OPERATION PLAN

The operations plan for the St. Johns Landfill was developed by CH_2M HILL, the City of Portland, Metro and DEQ in 1980. The plan was the basis for the operating contract which was publicly bid in May 1980 and was awarded to Genstar Conservation Systems, Inc. in July 1980. The only major revision to the 1980 operations plan thus far was a change in the filling sequence which was approved by the City and DEQ in the fall of 1980. This revision allowed Metro's contractor to fill areas 1, 2 and 3 in one layer of refuse to final grade rather than cover all three subareas with a shallow layer and then fill to final grade with a second layer. This revision increased efficiency and avoided some increased costs.

The 1980 operations plan calls for the expansion area to be filled in five layers, each approximately 12 feet in height. Each layer would cover the entire expansion area before the next layer would be started.

There are several disadvantages to filling by the method described in the current operations plan:

1. When the 55-acre expansion area was constructed in 1980 a storm sewer system was installed. This system includes a series of drainage ditches approximately 2.4 miles long and two 6-inch stormwater pumps with their associated power lines, catchbasins and inlet structures. Most of this stormwater system would have to be relocated with each lift.

2. Each of the layers would require a top layer of a minimum of six inches of daily cover as is required for sanitary landfills.

3. No final cover would be placed until the last year of filling in this area. This creates several problems.

   a. water is allowed to infiltrate the refuse causing considerable leachate generation;

   b. final cover costs would be high in the final year of filling; and

   c. the installation of a methane gas collection system would have to take place after the expansion area is completed.

4. The rock dumping pads which are used for wet weather operation would have to be replaced in layers 1, 3 and 5.

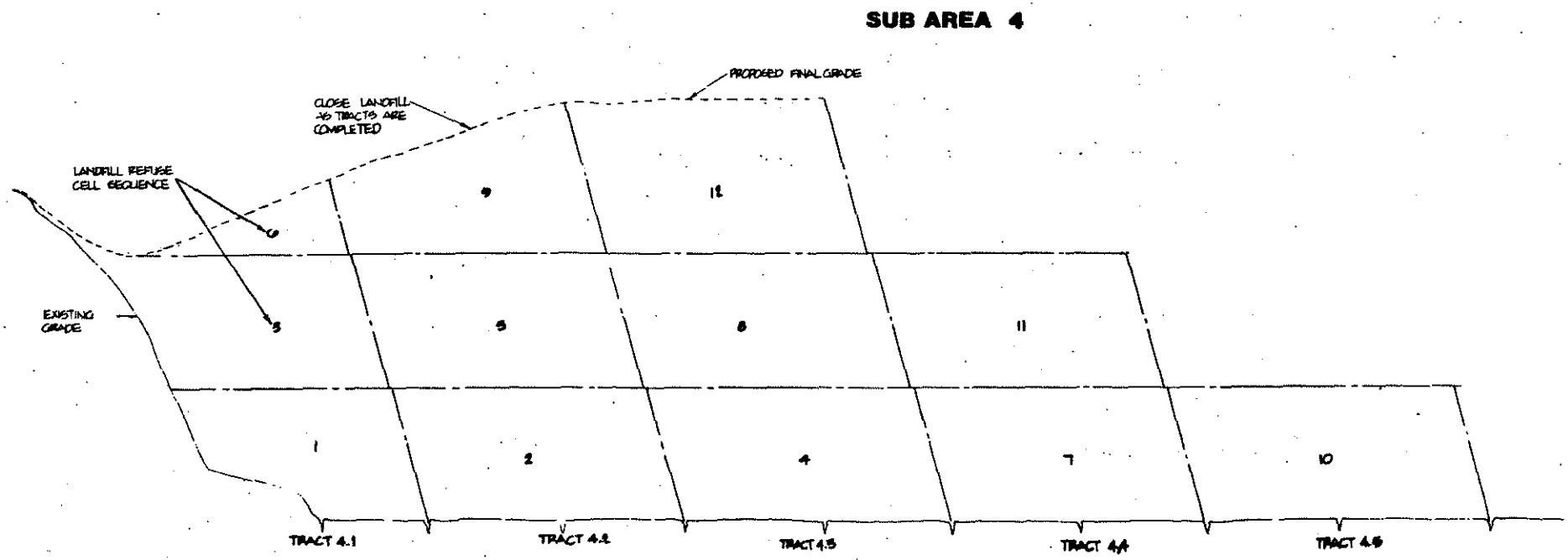
PROPOSED REVISIONS

Metro and its contractor are proposing to change the filling sequence for the expansion area. Under the proposed plan the filling would occur in strips 400-feet wide starting on the west end of the expansion area identified as subarea 4 and proceeding in a stairstep pattern of lifts that are 20-feet deep (see Figure 5). This will allow the entire area to be filled in three lifts while assuring timely closure of completed areas. This change would allow Metro to retain the use of the existing storm drainage system for the entire useful life of the expansion area, minimize the amount of space lost to daily cover, allow the uniform application of final cover over the life of the site, allow the timely installation of the methane gas collection system, and minimize the number of wet weather rock pads needed to complete the expansion area.

During the period from 1980 to 1983, Metro has performed an evaluation of the need for a surface water diversion system required in the final plans for the landfill area in conjunction with the independent engineer who semi-annually inspects the site. This evaluation determined if the system was actually necessary to effectively prevent erosion. Based on these results, Metro staff and the engineer concluded that the system is not only unnecessary but that it makes final grading difficult and may interfere with future development of the site. In the May 1983 report by the independent engineer it was recommended that the suface water diversion system be deleted from the final grading plan.

The construction of the 55-acre expansion of the St. Johns Landfill consisted primarily of two main sections. These sections included a 5000-foot dike around the outside perimeter and a leachate collection and discharge system which empties into the City of Portland sanitary sewer system at Columbia Boulevard. The dike encloses the entire east edge of the original landfill area with the exeception of a 300-foot section southwest of the label subarea 5 in Figure 2. This section adjoins Columbia Slough and a short finger of the slough. This section contains the last major remaining surface leak in the entire landfill. While other areas with leaks have been eliminated by various methods this section continues to be a problem.

The final grading plan calls for the problem in subarea 5 to be covered with refuse and capped with a final cover. This method has proved successful in most other areas, but it is the opinion of Metro staff and its contractor that the leak is too close to the water's edge and that the slope is too steep to be filled in the normal manner. Instead, it is proposed that the south end of the perimeter dike be modified to emcompass the problem area in subarea 5 and that the leachate collection and discharge system be modified accordingly. This will eliminate a source of contamination as well as minimize the collection of debris in the stagnant, dead end finger which currently exists.



METRO

PROPOSED FILL SEQUENCE

FIG. 5

IV. STATUS OF METHANE GAS RECOVERY PROJECT

INTRODUCTION

The production of methane gas in landfills is the result of the anaerobic digestion of organic refuse such as food wastes, garden waste, wood and paper products. In recent years there has been increasing interest in the recovery of landfill produced methane gas. The reason for this interest is the potential that landfill gas could be utilized as a cost-effective alternate to natural gas and fossil fuels.

This chapter provides an overview of Metro's past, current and future efforts regarding the recovery of methane gas from the St. Johns Landfill. The 1980 agreement between the City of Portland and Metro stipulates that Metro is responsible for the preparation of an economic/engineering feasibility study to determine the viability of recovering methane gas at the St. Johns site. The agreement further states that Metro is solely responsible for the development of such a project and that the net profit from the project shall be divided on a fifty-fifty basis with the City of Portland.

Metro contracted with Gas Recovery Systems to conduct the feasibility study.[3] The final feasibility report is in the form of several separate studies. The initial study included short-term production tests, market research and a limited financial analysis. The scope of the report was expanded to include long-term testing and a more finite market evaluation and economic analysis. The conclusions of the feasibility report show the project to be economically viable with adequate recoverable gas production which coincides with the completed filling of subareas 1, 2 and 3. Metro is currently involved in the financial analysis of potential marketing and business strategies for developing the project.

MARKETING OPTIONS AND DEVELOPMENT STRATEGIES

The feasibility report identified numerous potential uses for the recovered landfill gas. Three marketing options stand out as the most viable.

1. Direct sale of medium Btu (heating value) gas to industrial customers.

2. Utilization of medium Btu gas as a source of fuel for electrical generation.

3. Conversion of the raw gas to pipeline standard gas for injection into nearby utility company pipelines.

Potential revenue and project costs vary for each of the three gas utilization options.

The economic analysis is further complicated by the three development strategies available by which Metro could develop the landfill gas. The first of these is a facility designed, constructed and operated by Metro. The second strategy involves a partnership arrangement between Metro and either a developer or end user. This alternative would allow the developer/user to take advantage of energy and capital investment tax credits. The third strategy is the lease of the recovery rights to a gas developer who would finance the project, develop its own markets and pay Metro and the City a royalty based on a percentage of gross profits.

PROJECT RISKS

There are a number of inherent risks associated with any methane recovery project regardless of the development implementation strategy selected. In the case of the St. Johns Landfill, there is some additional risk due to the shallow depth of the landfill and the high water table which may inhibit methane recovery. The risks involved are categorized in Table 1. While none of the above risks should be considered insignificant, the majority can be minimized through good management and engineering practices.

The two factors that are of greatest importance to the economic feasibility of the project are:

A. The amount and lifespan of landfill gas produced.

B. The ability to efficiently collect gas.

The feasibility study presents two mathematical models which predict the quantity and lifespan of methane gas which will be produced at the landfill. These two models are based on tonnage, year of placement, refuse composition, moisture content and other factors. Both models are based on a conservative production ratio of 1.0 standard cubic foot (SCF) of methane to 1.0 pound of refuse. The two models depict different scenarios of quantity and duration of gas production. These models are shown in Figure 6.

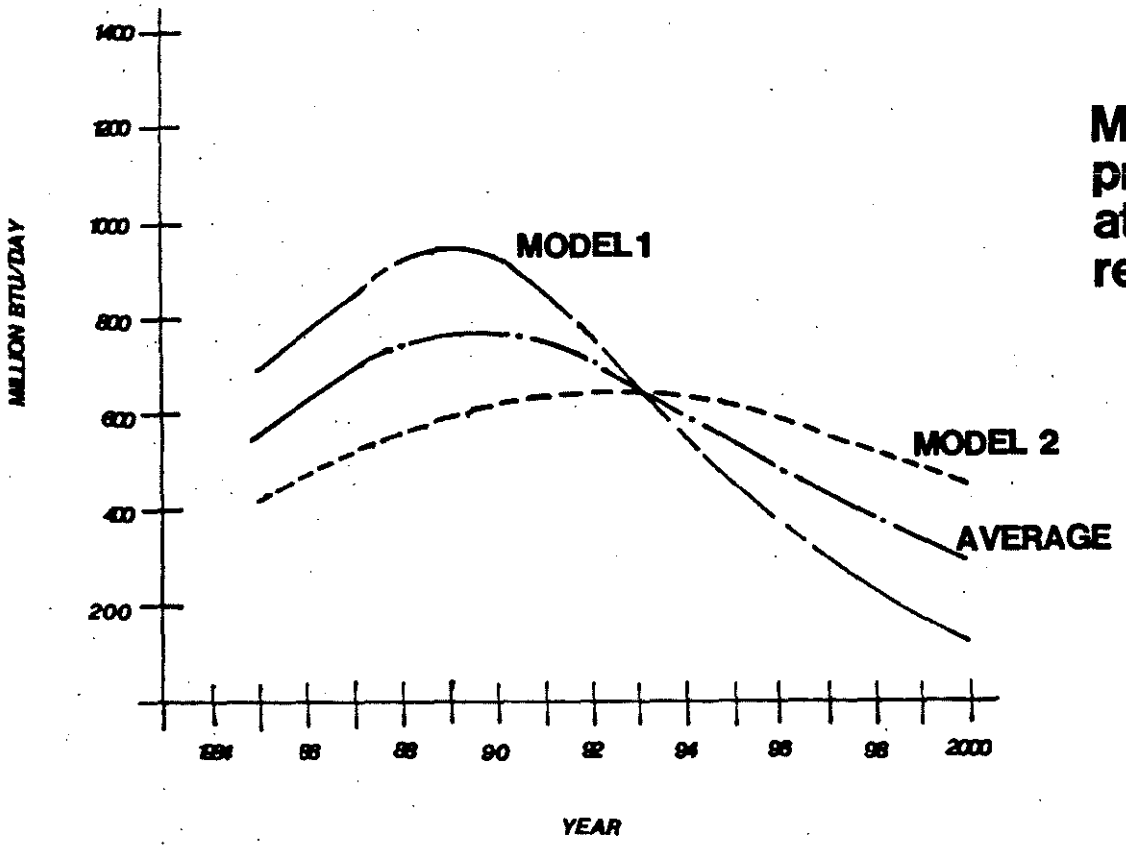
Recent data from some gas recovery projects indicate that Metro can expect production at St. Johns to follow the production curve identified in model one, rather than model two. Also, the production ratio may be as high as 1.6 SCF methane to 1.0 pound of refuse. The lower graph of Figure 6 predicts that production should peak in 1988-89 and drop one-half by 1994-1995, according to model one. The upper graph shows similar results for the more conservative production ratio.

The collection system is the other important factor influencing the economic feasibility of recovering the landfill gas. As previously mentioned, the high water table and high refuse moisture content at the St. Johns site may create difficulty in collecting the landfill gas. Some of the vertical test wells installed during the feasibility study experienced limited or total loss of production due to water infiltration.

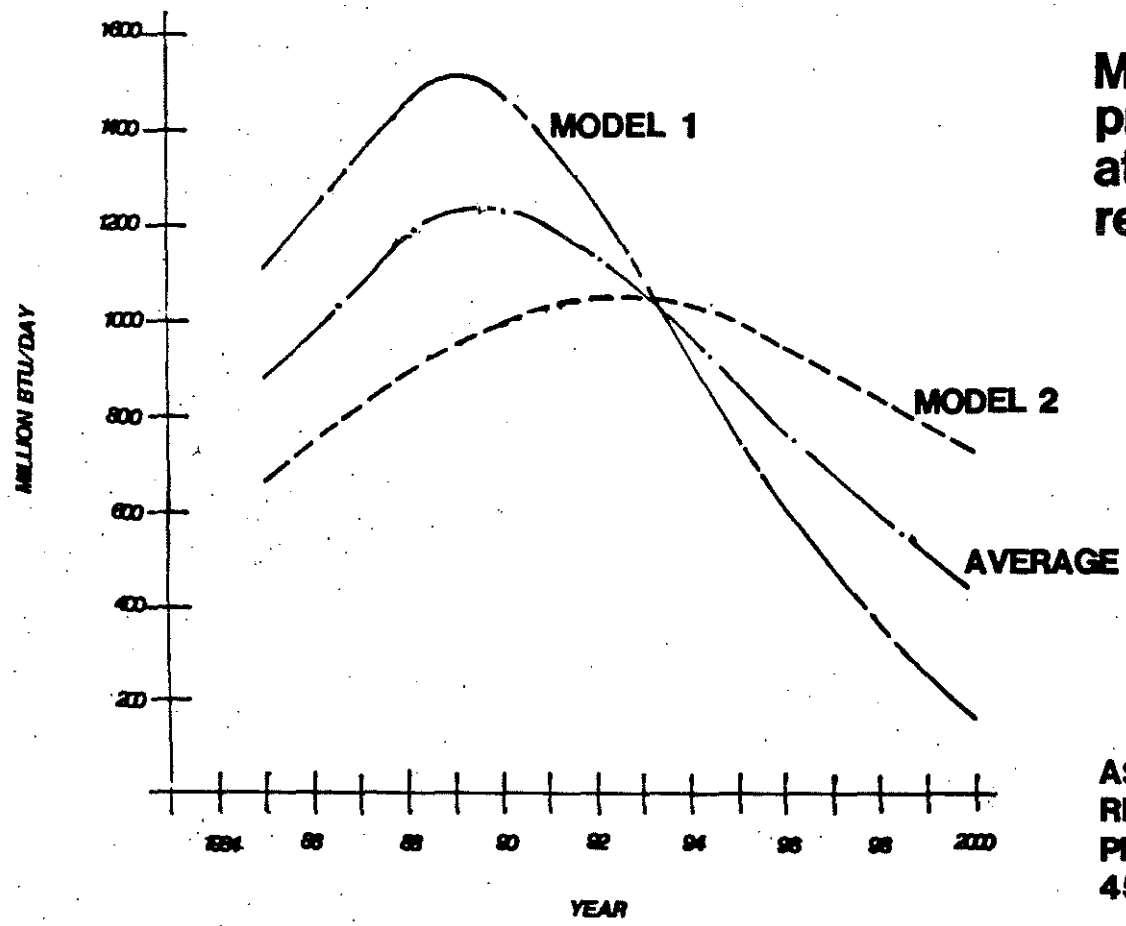
TABLE 1

RISK ASSESSMENT

Area of Concern	Risk Factor	Mitigation
Collection System	Air Contamination (Too Much Oxygen)	• Proper Maintenance of Final Cover
	Water Infiltration	• Horizontal Wells with Drainage System Incorporated
	Damage from Filling Operations	• Proper Pipe Embedment • Marking of Well and Header Location • Use of Flexible Pipe and Couplings
Process System	Inadequate Sizing of Equipment	• Careful Engineering • Use of Modular Design Allowing for Flexibility
	Insufficient Level of Gas Refinement	• Careful Engineering Adequate Testing • Marketing
Production	Temporary Interruption of Service	• Standby Natural Gas Service, • Backup Fuel Oil Capacity
	Underestimation of Gas Volume or Production Life	• Adequate Field Testing



Methane production at 1.0 SCF/lb. refuse



Methane production at 1.6 SCF/lb. refuse

ASSUMES 70% RECOVERY, 10% PROCESS LOSS & 450 Btu/SCF GAS

METRO

METHANE PRODUCTION AT VARIOUS TIMES

FIG. 6

A preliminary collection system is identified in the feasibility study. This system allows for 145 vertical gas wells and varying lengths and sizes of header pipes to carry the collected gas to a process station located at the south end of the site. (See Figure 7).

Metro is considering the use of horizontal trench wells in place of, or in addition to, conventional vertical collection wells. Trench wells have proven to be a more effective and more economical means of collecting landfill gas at several recovery projects including the Rossman's Landfill in Oregon City. Rossman's has water table conditions similar or worse than those at St. Johns. A recent test of horizontal test wells (by CH_2M HILL) has indicated them to be quite effective with no problems due to water infiltration.

Estimated cost for the collection system (145 vertical wells) is $430,000. It is anticipated a horizontal well system will consist of a similar number of wells at the same or a lesser cost.

IMPACT ON SITE AND OPERATIONS

It should be noted that the construction of a methane recovery project will have some impact on current and future site operations.

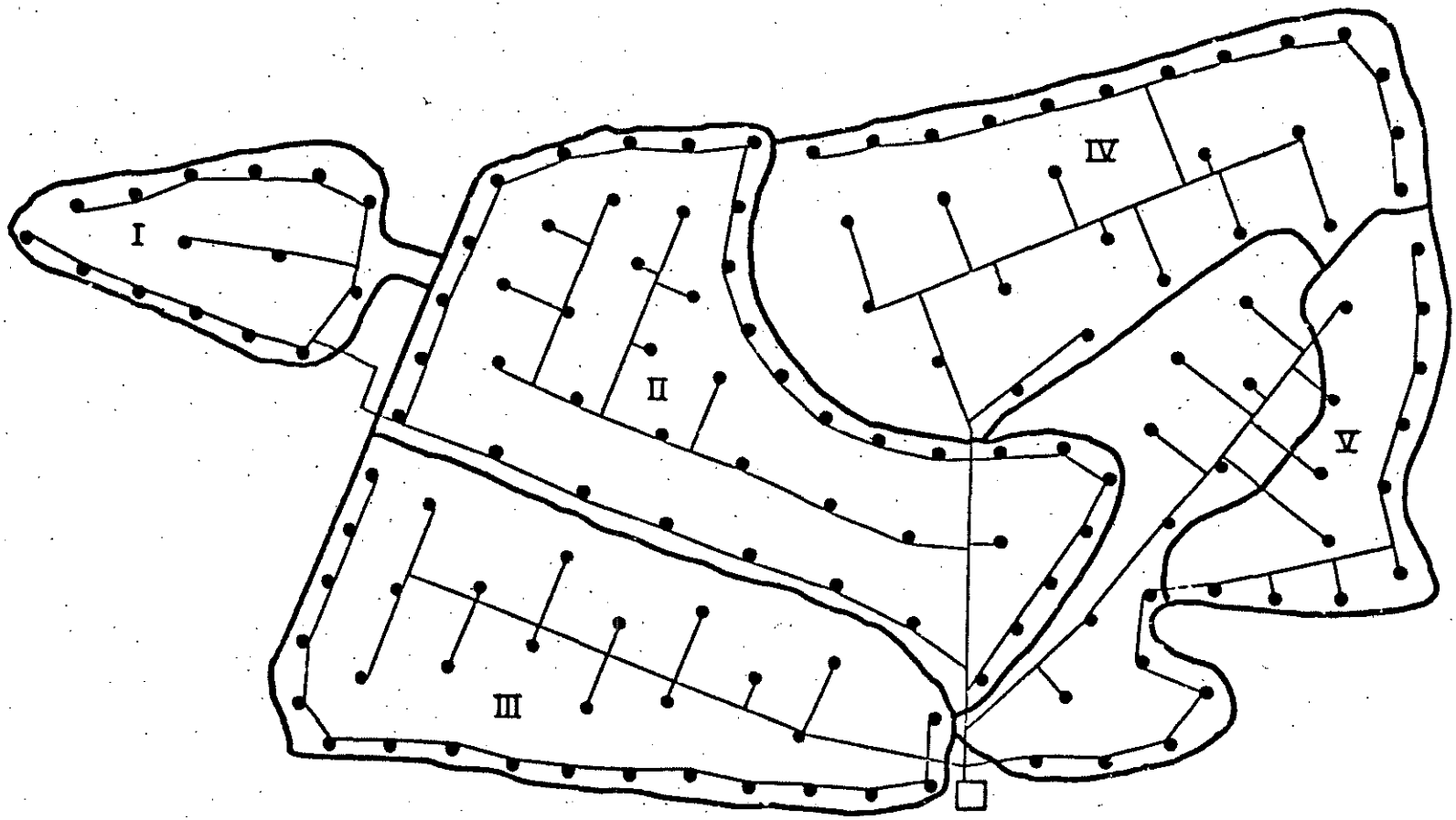
The two major elements of the project that affect the site are the collection system (wells and collection pipes) and the process station.

The proposed site for the process station is adjacent to the current access road on the north side of the "Incinerator Road Bridge." The process station will consist of piping, mechanical equipment, electrical equipment and instrumentation housed in a metal building surrounded by a chain-link fence. This portion of the project will have minimal impact on the site or filling operations.

The installation of the collection system will have the greatest impact at the site. Installation of wells and collection pipes will have to be on a phased basis to coincide with the filling operations in each subarea. Collection pipes and horizontal trench wells could be buried. If vertical wells are utilized in some areas, only the well head would be visible.

A possible cost savings could be achieved by installation of horizontal wells, and in some instances collection pipes, while active filling operations are taking place. This would eliminate the need to dig trenches, install pipes, and backfill after final cover is in place.

In summary, the methane recovery project can be designated to minimize significant impact on operations or on use of the site after final closure.



LEGEND

PROCESS STATION

GAS RECOVERY WELL

METRO

PROPOSED METHANE COLLECTION SYSTEM

FIG. 7

FINANCIAL ANALYSIS

The financial analysis of the gas recovery project can be broken down into three main steps.

1. A forecast of potential revenue that can be expected from each of the three landfill gas marketing options discussed earlier.

2. An estimate of capital and operating costs associated with each of the three marketing options.

3. A comparison of potential net revenue from the marketing options with the risk that is associated with the three development strategies discussed earlier.

The sale of the processed gas as a medium Btu fuel is the first of three marketing options. Primary prospects in the St. Johns area include:

1. Palmco, Inc.

2. Columbia Steel Castings Co., Inc.

3. Gilmore Steel Corp.

4. Ash Grove Cement Co.

Palmco and Columbia Steel Castings are the most attractive prospects of this group.

Their combined energy requirement is about equal to the aniticipated gas production at the St. Johns site. In addition, each company operates at a fairly constant level for the majority of the year. Both companies are currently paying a relatively high rate per Btu and have shown an interest in utilizing landfill gas if a stable and economic supply can be provided. Estimated gross annual revenue from these two customers could range as high as $1.25 million.

The second marketing option involves the use of landfill gas for on-site electrical generation. This does not appear economically viable because of the current low cost and abundance of hydro-electric power in the region which has greatly reduced the unit costs that northwest utilities are paying. Utilities may pay a rate which approximates their avoided costs. Avoided cost means the amount a utility pays to produce one additional unit of power or gas. Current PGE avoided costs are in the range of $0.03 to $0.04/kwh which is comparable to the estimated cost to generate electricity from recovered landfill gas.

The third marketing option involves the upgrading of the raw landfill gas to pipeline quality for sale and injection into existing gas mains. Upgrading the gas requires additional processing beyond the basic dehydration and compression required

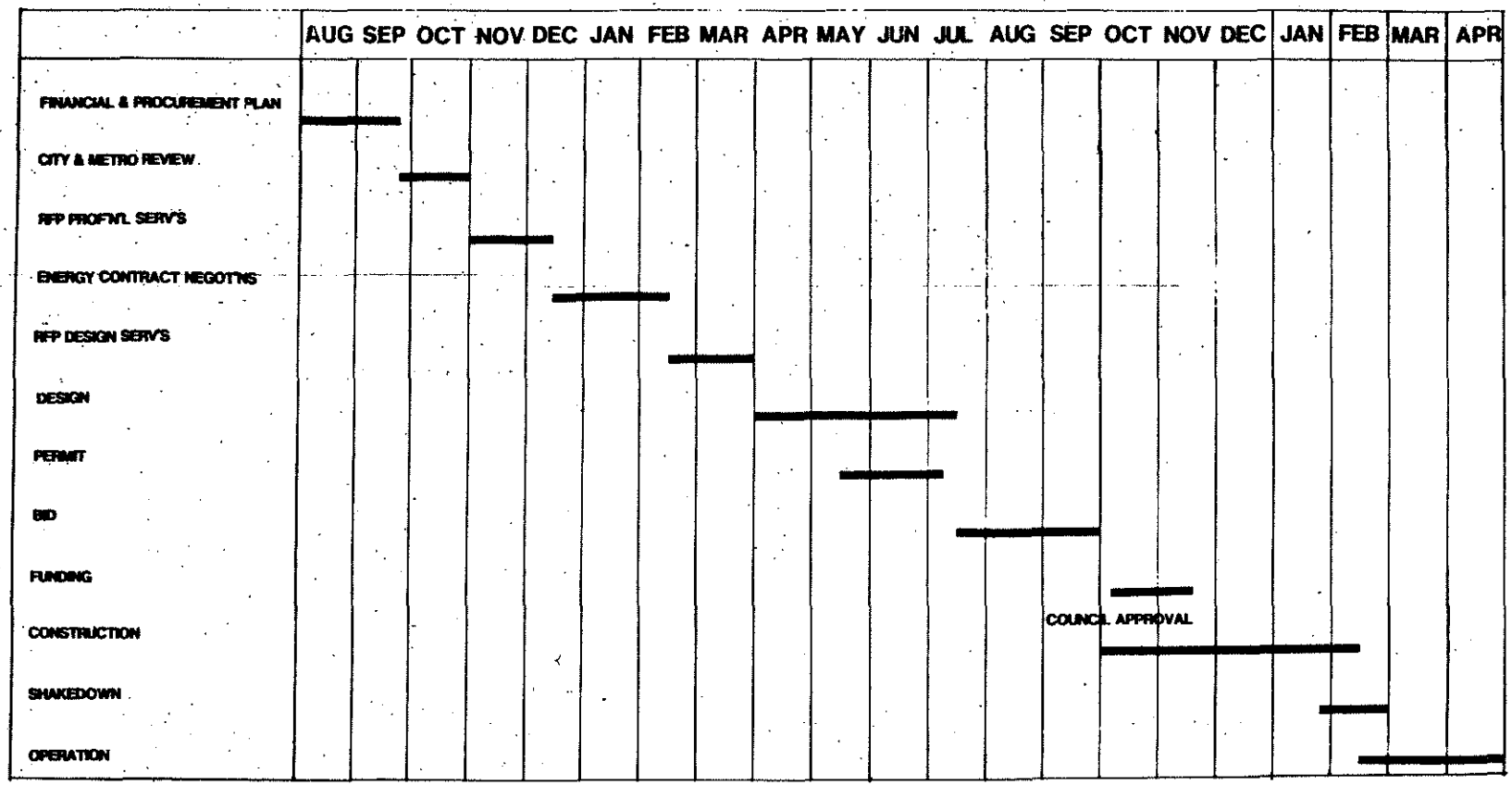
for medium Btu use. This is because carbon dioxide is generated in the landfill in approximately the same percentage as methane (45 to 55 percent). Therefore, one of the major efforts in upgrading the landfill gas is to separate the carbon dioxide from the methane. There are a number of process techniques currently available to accomplish this. Although these techniques are effective they are also costly. The economics of this approach need to be looked at closely.

It is Metro's intent use a present worth analysis to evaluate all three marketing options. This analysis will take into account forecasted energy costs, inflation, projections of gas production and estimated capital and operating costs.

Based upon the results of this analysis, Metro will develop a preferred course in terms of best use and implementation strategy.

SCHEDULING

Figure 8 identifies the schedule for implementing the gas recovery project. It establishes key tasks and target dates which must be completed in order to make large scale gas recovery coincide with the completion of subarea 3.



METHANE RECOVERY PROJECT DEVELOPMENT SCHEDULE

FIG. 8

V. SCHEDULE OF OPERATIONS, COMPLETION AND CLOSURE

REMAINING VOLUME AND ESTIMATED SITE LIFE

The St. Johns Landfill is being filled according to the contours defined in the operations plan developed by the City of Portland in April 1980 following criteria approved by the City of Portland Planning Commission in 1975. It is Metro's responsibility to construct the landfill to the approved elevations, plus or minus one foot.

Metro has determined the amount of space used for landfill operations in the past year and capacity available for future years by using aerial photography and mapping. The site was flown on June 7, 1983, by Spencer B. Gross, Consulting Engineer. The remaining volume as of that date was 6.337 million cubic yards. Volume would allow landfilling with 3.3 million tons of solid waste assuming compaction to a density of 1,200 pounds per cubic yard in place and one cubic yard daily cover per five yards of in-place compacted waste.

Because different areas of the landfill will react differently, i.e., areas that have already been partially filled compared to the new expansion area, the remaining space has been divided into three separate areas. These areas are shown in Figure 2 in Chapter I.

In determining the capacity of a landfill, three parameters need to be identified:

1. The actual volume that remains to be filled;
2. The rate at which the waste will enter the site; and
3. The methods by which the waste will be handled as it is compacted into the site.

The following assumptions were made to determine the life of this site:

- No waste will be added to completed portions of the landfill once final cover has been applied;
- Refuse will be compacted to a density of 1,200 pounds per cubic yard in-place;
- Daily cover will be applied at a ratio of one cubic yard of cover to five cubic yards of refuse;
- There will be final cover of 18 inches of dense clay and 6 inches of topsoil;
- There will be 25 percent settlement of the refuse on Area 3;
- The current method of operation at the landfill will continue until closure;
- No new general purpose landfill will be opened until the St. Johns Landfill is completed;

- Another limited use landfill will be opened when Killingsworth Fast Disposal Landfill closes;
- Hillsboro Landfill closure in December 1983 would contribute three percent of regional flow;
- Newberg Landfill closure in October 1984 would contribute seven percent of regional flow.

Four alternative waste flow projections were considered:

1. Population projection "A." The disposal rate per capita is assumed to continue decreasing as has been the recent trend. Population projections for the interim years 1983 to 1999 have been revised, using 1982 regional population estimates by the Center for Population Research and Census (CPRC) and the year 2000 forecast accepted at Metro-sponsored Growth Allocation Workships, March-April 1981. This projection results in a closure date of January 1989.

2. Population Projection "B." Per capita rate of disposal is assumed to remain constant with the same revised population forecasts as Alternative "A". This projection results in a closure date of August 1988.

3. Population Projection "C." Regional waste flows are assumed to remain constant at fiscal year 1983 level. This projection results in a closure date of December 1988.

4. Population Projection "D." An increase in per capita generation of waste to reflect the pre-recession refuse quantities. This projection also assumed achievement to the short-term goal of the Metro Waste Reduction Plan. This projection yields a closure date of September 1988.

Table 2 summarizes the site capacity calculations used for evaluation purposes.

The five-month variation in closing dates shows how sensitive are predictions to the assumptions used. Because it is essential to have landfill space available on a continuous basis and at the same time not to have facilities ready too soon, projections must be conservative. For this reason, for the purpose of projecting the life of the St. Johns Landfill, Projection "B" has been used to predict key dates for planning purposes.

Based on these assumptions, subarea 3 would reach substantial completion approximately May 1984. Final cover would then be placed on the slopes of subarea 3. The final cover would not be placed on the top of subarea 3 until later, in anticipation of additional settlement caused by the surcharge of landfilled waste.

Subarea 4 (see Figure 2) would be filled in stages with the entire area being filled to capacity in June 1987. Subarea 5, which would

be the final area, will take 11 months to fill and would last until approximately August 1988. Table 2 shows the schedule of operations past, present and future.

TABLE 2

SCHEDULE OF OPERATIONS

June 1980	Metro assumed operation of the St. Johns Landfill. Genstar began actual filling operation for Metro. Continued filling subarea 2 (see Figure 2) while preparing to complete subarea 1.
June 1980	Began work on 55-acre expansion area.
November 1980	Began filling subarea 1. Completed public transfer station. Public waste transported to filling area; commercial collectors continued to dump directly in filling area.
November 1980	Substantially completed gatehouse modifications including computer billing and weighing system.
March 1981	City of Portland began delivering sewage sludge to holding/drying areas located on subareas 4 and 5. Part of sludge used with topsoil as final cover soil amendment.
July 1981	Began filling top of subarea 1 with additional waste.
July 1981	Completed Phase I of methane gas test program.
September 1981	Completed filling subarea 1. Added 171,000 tons of solid waste to subarea 1 since Metro began operations.
April 1981	Set up a drop center for recycled material at the St. Johns Landfill.
November 1981	Substantially completed preparation of 55-acre expansion area to receive solid waste.
January 1982	Completed Phase II methane gas test program in subarea 1.
July 1982	Completed final feasibility report for gas program including market analysis.
October 1982	Added about 130,000 cubic yards of final cover to subareas 1 and 2 since Metro began operation.
April 1983	Completed filling about 80 percent of subarea 2 to final design grades with 511,000 tons of solid waste.
May 1984	Projected substantial completion of filling subarea 3 with solid waste.

June 1987	Projected substantial completion of filling subarea 4 with solid waste.
August 1988	Projected substantial completion of filling subarea 5 with solid waste.

VI. FURTHER EXPANSION OF ST. JOHNS LANDFILL

As discussed in Chapter I, a 1978 agreement between the City of Portland and the EPA allowed the St. Johns Landfill to be expanded outward 55 acres in the adjoining wetlands. This expansion is currently estimated to allow the landfill to accept solid waste until mid-1988. The information below lists the permits that would be required for further expansion and also estimates increased site life if the landfill were expanded in various ways.

REQUIRED PERMITS

Upward or outward expansion would require a new or modified Solid Waste Disposal Permit and/or NPDES Waste Discharge Permit from the Oregon DEQ. Both permits currently state that the St. Johns Landfill is an interim facility to be used only until an alternative facility is available.

Outward expansion of the landfill into the adjacent wetlands would require a new or modified removal-fill permit from the Oregon Division of State Lands. ORS 541.622 prohibits the Division of State Lands from issuing a permit to fill Smith or Bybee Lakes below the 11 foot mean sea level (MSL) contour. The base of the dike bounding the present 55-acre expansion area is at the 11 foot MSL contour. This law would have to be repealed before further outward expansion into the Lakes could occur.

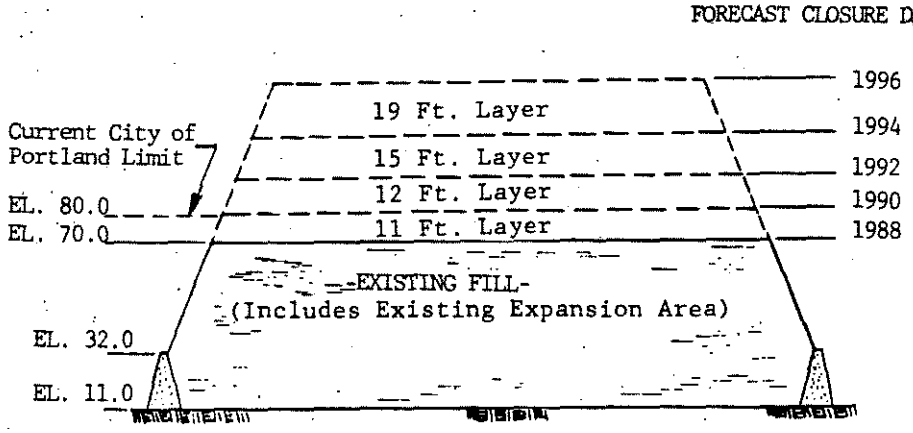
Outward expansion would require a permit from the Army Corps of Engineers to construct the necessary dikes. A Corps permit was issued for the 55-acre expansion and prohibits fill into Smith and Bybee Lakes below 11 feet MSL.

Either upward or outward expansion of the landfill would require approval by the City of Portland. In April 1975, the Portland Planning Commission recommended that the landfill be permitted to reach a height of 80 feet MSL. City Ordinance No. 140592 permits the landfill to reach 80 feet MSL. Currently the landfill is being filled to 74 feet MSL including final cover before settlement. The June 1983 City of Portland Comprehensive Plan designates the landfill as heavy manufacturing. This plan designates the surrounding Smith and Bybee Lakes as open space. Any outward expansion would have to take place in the area designated open space.

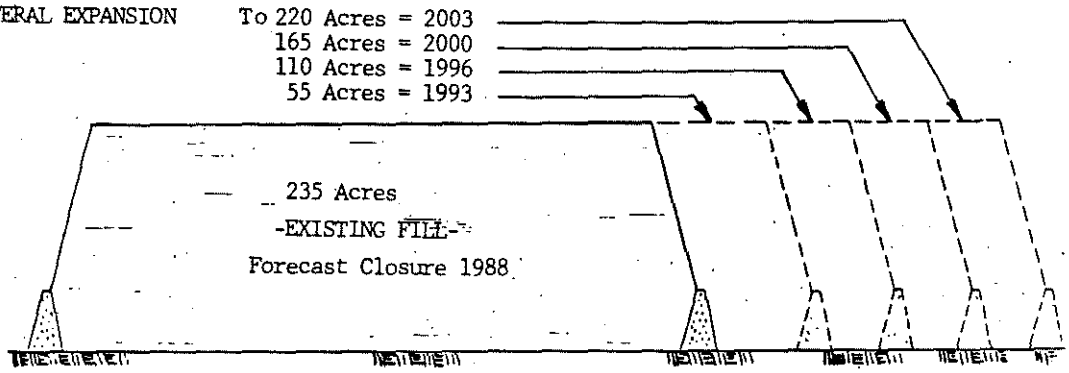
FURTHER EXPANSION AND SITE LIFE

Figure 9 shows how many years various further expansions would delay the closure of the St. Johns Landfill. The major assumptions behind these estimates are that the St. Johns Landfill will be the only general purpose landfill serving the Portland metropolitan area through in 1988 and that each 55-acre expansion contains 3.1 million tons of solid waste.

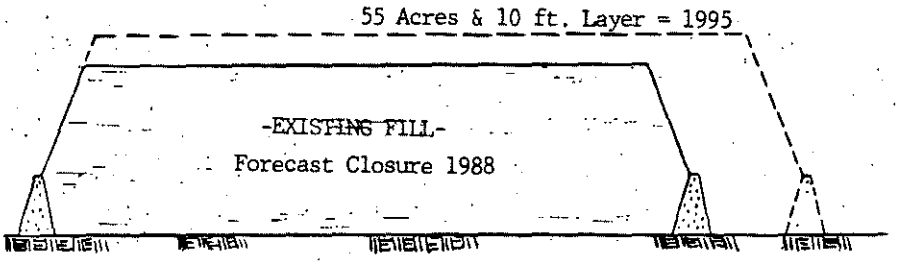
VERTICAL EXPANSION



LATERAL EXPANSION



VERTICAL AND LATERAL EXPANSION



NOTE: Vertical Scale = 10 x Horizontal Scale

ASSUMPTIONS

Forecast of waste flow based on population projections B on page 24 of this report; each additional 55 acre lateral expansion holds 3.1 million tons of solid waste based on a conceptual plan; in place density of 1200 lb. per cubic yard; 4 to 1 side-slopes on fill, 2 to 1 side-slopes on dike; no allowance for settlement in lateral or vertical expansion areas; ratio of 5 parts solid waste and 1 part cover; final cover estimated as 2 foot layer; a base elevation of 11 ft. mean sea level (MSL) and a filled elevation of 75 feet MSL used in lateral expansion areas.

METRO

FURTHER EXPANSION OF ST. JOHNS LANDFILL

Fig. 9

VII. DEVELOPMENT OF A SUCCESSOR TO THE ST. JOHNS LANDFILL

On June 19, 1980, the Oregon DEQ issued to Metro a NPDES permit covering the St. Johns Landfill. This permit was the result of a compromise reached between the City of Portland and the EPA in 1978. The NPDES permit was issued first to the City by DEQ which has the authority from the EPA to issue such permits. DEQ issued the NPDES permit to Metro when Metro assumed operation of the landfill in June 1980. Item #5, Schedule C, states:

> "The landfill is an interim facility. The permitee shall implement a long-term solid waste disposal site and/or resource recovery program. Such a program shall be designed to handle the solid waste presently going to St. Johns. The use of the landfill will be terminated and all solid waste directed to an approved alternative disposal facility in accordance with the following:
>
> | Date | Required Action |
> |---|---|
> | 01/01/81 | Identification of feasible alternative sites. |
> | 06/01/81 | Ranking or ordering of sites from environmental and economic standpoint. |
> | 01/01/82 | Selection of site(s). |
> | 01/01/83 | Purchase, lease and/or option to purchase or lease site. |
> | 01/01/84 | Obtain necessary land use and environmental permits." |

Metro's predecessor organization began an effort to develop an ERF option and a landfill option in the mid-1970s. This effort arose from a perceived need for new disposal facilities to replace those which would soon close. Since its formation in 1979, Metro actively pursued the task of developing the ERF option and the landfill option.

The ERF was to be a long-term facility and be located on a site in Oregon City, Oregon, across from Rossman's Landfill. This site had been purchased by Metro's predecessor in 1977. In 1980, Metro concluded an agreement to sell energy to Publishers Paper Company, proceeded with negotiations with Wheelabrator-Frye Inc. to build and operate the site, and sought local and state permits to develop the facility. By 1982, Metro had received a local land use permit from Oregon City and draft environmental permits from DEQ. However, in late 1982 a majority of the voters in Oregon City approved a Charter

amendment which blocked operation of the ERF. Responding to this vote, the Metro Council in November 23, 1982, stopped all further work on the facility in Oregon City.

Metro's predecessor organization began active efforts to locate another landfill in 1977. In 1979, Metro began studies of three potential sites. These studies uncovered technical problems which caused Metro to stop further work on all three sites. In 1980, Metro identified over 46 alternative sites for study including those previously considered during the 1970s.[4] These were analysed and ranked by an interagency task force and then by a citizens' Regional Landfill Siting Advisory Committee.[5] In June 1980 this committee advised Metro to limit further consideration to only one site--the Jeep Trail (later called Wildwood) site in northwest Multnomah County.[6] The committee further recommended that this site be carefully studied to determine feasibility. Metro commissioned CH_2M HILL to perform a feasibility study which looked at the Wildwood site from both the environmental and economic standpoint.

In June 1981 the Metro Council selected the Wildwood site as the future regional landfill and successor to the St. Johns Landfill.[7] This action was taken after the Council had reviewed the feasibility study results[8] and listened to extensive public comment including a favorable final recommendation by the Regional Landfill Siting Advisory Committee. The Metro Council also directed staff to apply to Multnomah County for a land use permit to operate a landfill at the Wildwood site.

In August 1981, Metro began the application review process with Multnomah County. During the summer and fall of 1981, Metro received preliminary approval of the site from DEQ and began negotiations to acquire use of the site from the primary landowner, Publishers Paper Company. Because the legal disputes about the land use permit have not yet been decided these negotiations have not yet resulted in any commitment by either Metro or Publishers.

The review by Multnomah County lasted 16 months and was quite extensive. During this review, Metro responded to issues raised by a County consultant by proposing an alternative design.[9] During the summer of 1982, Metro presented evidence at public hearings before a County hearings officer. After listening to presentations by Metro, other agencies, and opponents of the landfill, the hearings officer concluded in September 1982 that a strict interpretation of the County's own rules did not allow a landfill to be located at the Wildwood site. Metro appealed this decision to the County Commissioners.

The Multnomah County Commissioners reviewed the record, listened to testimony, and authorized a landfill at Wildwood in December 1982. Opponents of the Wildwood Landfill appealed this decision to the Oregon Land Use Board of Appeals (LUBA).

In June 1983, LUBA returned the Wildwood Landfill conditional use permit to Multnomah County. The ruling stated that the permit did not comply with several standards in the County plan and zoning ordinances. Although Metro and the County argued that the standards must be interpreted in light of the nature of the facility, LUBA ruled that the standards are expressed in absolute terms allowing no deviation or mitigation. However, LUBA suggested that the County standards are inappropriate for landfill siting and invited the County to change the standards to allow for some flexibility in the landfill siting process.

In July 1983, the Metro Council voted to appeal this ruling to the Oregon Court of Appeals. The Council also asked Multnomah County to reaffirm its decision to authorize the Wildwood Landfill by changing its relevent land use standards and reissuing the conditional use permit.

Metro has filed an appeal with the Court of Appeals and will argue the case during 1983. Multnomah County is considering modifications to its ordinance which would make it possible to authorize the landfill.

The following is an updated schedule for moving forward with the Wildwood siting process:

July 1983 - July 1985	Clarification of Multnomah County land use approval issue. Further site investigations for preliminary design.
July 1985	Begin Wildwood Landfill final design.
Spring 1986	Begin initial site construction.
August 1988	Begin Wildwood Landfill operation.

It is always possible that the development of the Wildwood Landfill could be stopped or delayed enough so it would not be ready to receive solid waste when the St. Johns Landfill reaches capacity. If this occurred one or more of the following alternatives could be chosen:

1. Expand the St. Johns Landfill as much as necessary.

2. Require all solid waste except food waste and residential garbage to go to limited use landfills. This would conserve existing space at the St. Johns Landfill and delay its closure.

3. Divert solid waste to landfills outside the District such as those located in Yamhill County, Marion County, or Clark County, Washington.

4. Request that DEQ site a landfill under its emergency siting authority.

5. Develop a landfill at another location.

A time schedule for implementating these alternatives will be submitted to the City of Portland by July 1984.

VIII. SUMMARY

Metro has operated the St. Johns Sanitary Landfill since June 1980. Since then Metro has performed its operating responsibilities to the general satisfaction of the City of Portland, the Oregon Department of Environmental Quality, and several other auditors. According to water quality monitoring data accumulated over the last 12 years the landfill appears to be in compliance with directly applicable water quality standards.

It is proposed that the current operation plan be modified somewhat when Metro begins to fill the 55-acre expansion area in 1984. The entire bottom of the expansion area would not be filled before adding additional layers of solid waste. Instead, consecutive sections of the expansion area would be filled to final grade (including final cover) in a stair-step sequence. Also, the perimeter dike at the landfill's southeast corner would be modified to enclose a portion of a dead end arm of Columbia Slough in order to cure a leachate outbreak.

It is also proposed that energy be recovered from the landfill in the form of methane gas. Landfill gas containing methane can be collected by a network of vertical wells and/or horizontal trenches in the solid waste. The mediun Btu gas could be collected and sold directly to nearby industrial customers or used as a fuel for electrical generation. Alternatively, the methane could be purified from the landfill gas and sold to Northwest Natural Gas Company for injection into its pipeline.

The gas project could be carried out in several ways. The project could be designed, constructed and operated by Metro alone. The project could be carried out by a partnership between Metro and a developer or user. The project could be carried out by a developer under a lease from Metro. Models of gas quantity and lifespan predict that gas production will rise to a peak in the late 1980s and decline thereafter. Metro staff is currently analyzing the financial aspects of methane gas development.

Based on a determination that the remaining landfill capacity is 6.4 million cubic yards, it is estimated that the landfill will hold 3.3 million tons of solid waste. Based on three alternative predictions of future solid waste flow it is estimated that the landfill will reach capacity between mid-1988 and early 1989. Further upward and outward expansion of the St. Johns Landfill is technically possible, but would require changes in existing laws and permits.

Metro is developing the Wildwood site as a successor to the St. Johns Landfill. Currently the land use authorization granted by Multnomah County is being contested. Assuming that construction of a landfill at the Wildwood site begins in 1986 the landfill would be

available to accept solid waste when the St. Johns Landfill closes in 1988. If development of the Wildwood site is stopped, or seriously delayed, there are several disposal options available.

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REFERENCES

1. Metro/City of Portland agreement approved by City Ordinance No. 149360 dated April 3, 1980.

2. Sweet, Edwards, and Associates, Metro/St. Johns Sanitary Landfill Water Quality Report, September 1983.

3. Gas Recovery Systems, Inc., Feasibility of Methane Gas Recovery at the St. Johns Landfill, July 1982.

4. CH_2M HILL and Metro, Sanitary Landfill Site Screening Study, April 1980.

5. CH_2M HILL and Metro, Five Potential Sanitary Landfill Sites, February 1981.

6. Landfill Siting, Public Involvement Report, June 1981.

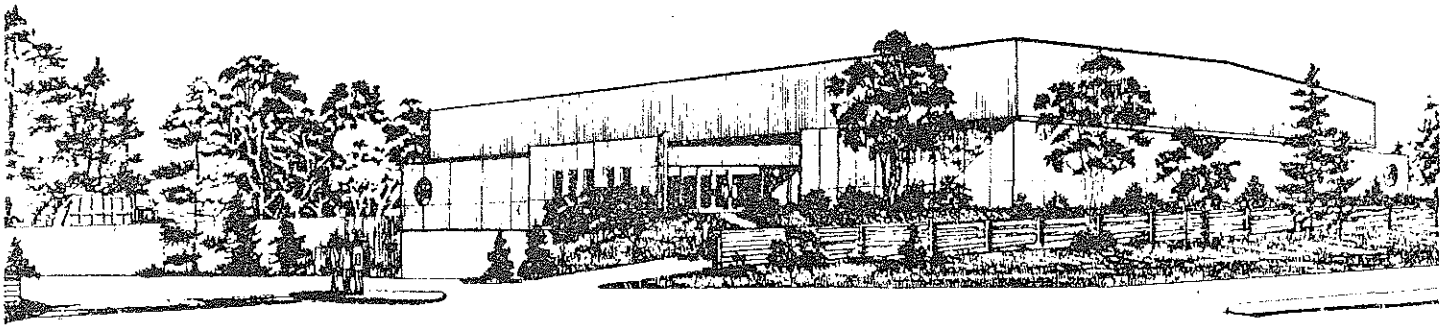
7. Resolution No. 81-252.

8. CH_2M HILL, Wildwood Sanitary Landfill Feasibility Study, Vols. I and II, May 1981.

9. CH_2M HILL, Wildwood Sanitary Landfill Feasibility Study, Vol. III, May 1982.

CLACKAMAS TRANSFER & RECYCLING CENTER

Annual Report 1985



Oregon City, Oregon

METRO

METRO

METROPOLITAN SERVICE DISTRICT
Providing Zoo, Solid Waste and Local Government Services

527 S.W. Hall St.
Portland, Oregon
97201-5287
(503) 221-1646

January 7, 1986

City of Oregon City
Oregon City, Planning Commission
320 Warner-Milne Road
Oregon City, OR 97045

Ladies and Gentlemen:

Metro is pleased to submit this 1985 annual report covering the operation of the Clackamas Transfer and Recycling Center (CTRC).

CTRC has continued to provide the citizens of the southern portion of the Metro area with clean, efficient and environmentally safe solid waste disposal. We have tried to comply with the wishes of Oregon City regarding the siting of a new transfer station in the region, as well as maintaining the flow at CTRC below the 800 ton per day restriction; but, as many of you who have become involved in these matters have found, solid waste solutions are complex and lengthy. While CTRC has exceeded the 800 ton per month limit during the peak service months, the facility handled the extra load without negative impacts to the community.

We have been pleased to work with the Oregon City staff, Clackamas County, and the Environmental Learning Center to develop plans for improvements in the Park Place Interchange area, and intend to implement some or all of the recommendations of the Park Place Improvement Task Force. Implementation of some of the items will depend on the cost when we receive bids.

Metro has made significant changes to its rates to help reduce the tonnage level at CTRC. We hope that Oregon City, Clackamas County, and other local jurisdictions will follow through with rate policy changes to allow their haulers and citizens to take advantage of the changes.

Metro is pleased with the successful operation during 1985, and we look forward to continuing our cooperative working relationship in 1986.

Sincerely,

Daniel F. Durig

Daniel F. Durig
Director
Solid Waste Department

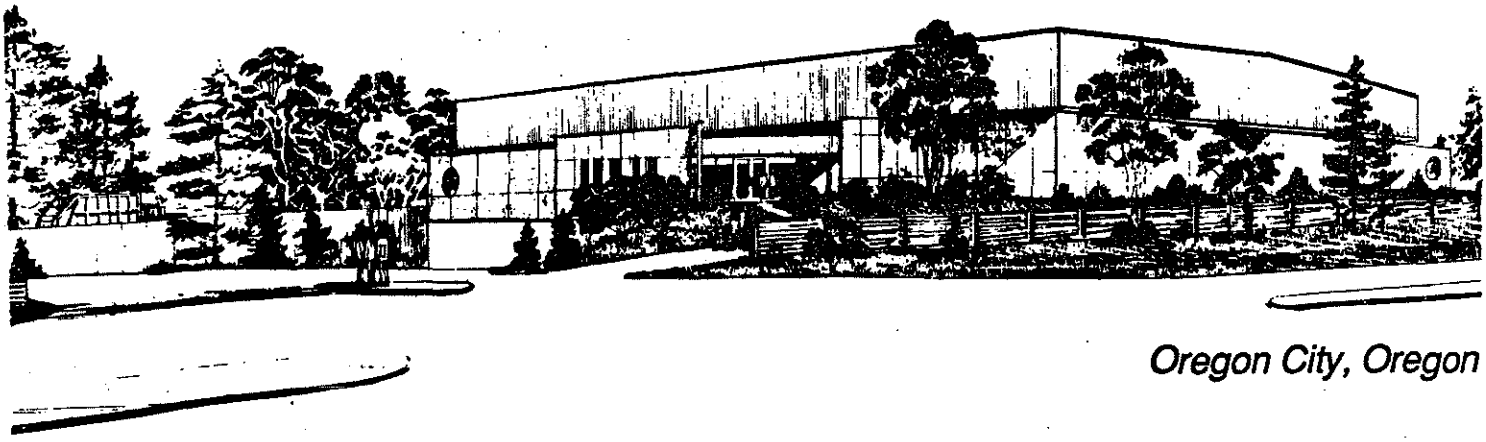
Norman Wietting

Norman Wietting
Operations Manager
Solid Waste Department

DFD/NW/mn
Encl.

CLACKAMAS TRANSFER & RECYCLING CENTER

Annual Report 1985



Oregon City, Oregon

METRO

TABLE OF CONTENTS

I. INTRODUCTION

The Clackamas Transfer & Recycling Center (CTRC) opened for business on April 11, 1983, and is the first of three solid waste transfer facilities to be constructed within the Metropolitan Service District (Metro). CTRC, located at 16101 S. E. 82nd Drive (Washington Street) in Oregon City, was built as a replacement for the Rossman's Landfill, located directly across Washington Street, to serve both public and commercial haulers in the southern portion of the Metro region.

1985 was an active year concerning the Clackamas Transfer & Recycling Center (CTRC) for the Oregon City Planning Commission and the Metropolitan Service District (Metro). Efforts to site a new transfer station in Washington County, landfill siting, and completion of an aggressive Waste Reduction Program required by the 1985 Oregon Legislature have received a significant amount of attention. The operation at CTRC has continued to meet the high standards for cleanliness, operational efficiency, environmental protection, and community acceptance which both Metro and Oregon City expect.

II. OPERATION REVIEW

During 1985 CTRC has continued to serve its customers, commercial haulers and private citizens in an efficient manner. The high level of service has almost been a hindrance in our efforts to divert waste out of CTRC to other disposal facilities.

CTRC continued to be operated under the management structure established by Metro in 1983. Under that structure, Metro operates the gatehouse facilities with its own employees, and contracts with a private solid waste management firm to operate the transfer station and haul the waste from CTRC to the St. Johns Landfill in North Portland. The contract with Genstar Waste Transfer Inc., which was publicly bid in 1982, extends until September 1986. However, that contract allows Metro to extend the end of the contract to September 1987. Metro will decide whether to extend the current contract, rebid the contract or change the management structure early in 1986.

In addition to providing the day-to-day waste handling duties, our operations contract provides for regular maintenance activities which keep CTRC in good condition. Among the activities accomplished or continued in 1985 is the complete steam cleaning of the inside walls and ceiling, repainting of the interior surfaces in July, weekly cleaning of all transfer trucks and replacement of the asphalt surface on the bottom portion of the storage pit where waste is stored during the busy portions of the workday.

During 1985 several extraordinary maintenance activities also took place. The largest of these repairs was the repair and rebuilding of the pit floor in the waste loading area. The metalic wearing surface originally installed in this area was eroded through the constant scraping by the bulldozer during the waste loading operation and the daily cleaning operation required to remove all the waste

every day as required in the CTRC design review conditions. In order to improve the durability of this surface, Metro hired a contractor to cut out a significant portion of the floor in this area and install steel rails imbedded in a concrete polymer mix which is much harder and more abrasion resistent than normal concrete. These repairs were accomplished over the weekend of December 14 - 18. Extra trucks were used to empty the pit by 10:00 p.m. on Friday, at which time the construction crews began the concrete cutting process. By 8:00 a.m. Monday the facility was able to begin transferring the waste that had been accumulated on Saturday and Sunday.

During 1985 two of the six trucks used to pull the transfer trailers to the St. Johns Landfill were replaced. The original fleet consisted of four new and two used tractors. These replacements were made to assure continued performance at the high levels required under our operations contract.

III. CTRC VOLUMES

In June 1985, the Oregon City Planning Commission conducted an additional annual review of CTRC. At that time, Metro indicated that the tonnage at CTRC had exceeded the 800 tons per day (TPD) limit imposed by the Planning Commission, and Metro requested that the tonnage limitation be removed from CTRC. Metro was notified that that type of request could not be considered at the June meeting because adequate public notice had not been given. The issue was rescheduled for the July Planning Commission meeting, but the Commission expressed its feelings that Metro must comply with the 800 TPD limit. In July the request was formally denied. The correspondence for the June and July meetings is included as Appendix A of this report.

Figure I shows that from May thru mid-October the 800 TPD limit was exceeded. This was reported to the Planning Commission during the summer. Metro had noted that we were beginning to see a seasonal drop in July and August which is indicated on Figure I. However, the unseasonably good weather during September created another period where the limit was slightly exceeded.

In estimating the real impact of the waste over 800 TPD one should note that the average commercial vehicle carries approximately 3.5 tons of waste. Except for the months of June and July this would be equivalent to less than 10 trucks per day. Table I and Figure I summarizes the 30-day average tonnage received at CTRC during 1985. Table I also shows the average for the entire year was under the 800 TPD limit.

Metro has taken several actions to reduce the waste volumes at CTRC. In October, Metro held a meeting in Oregon City to discuss the alternatives which should be implemented to reduce the flows to CTRC. The meeting was attended by Oregon City staff, members of the Planning Commission, representatives of Clackamas County, hauling company representatives from Clackamas, Washington and Multnomah counties,

and Metro staff. The group discussed several alternatives suggested by Metro, and other representatives at the meeting. A consensus was not apparent on any alternative other than Metro's proposed action to change the rate structure to create an economic incentive for haulers and others to use other solid waste disposal facilities.

On November 19, 1985, the Council of the Metropolitan Service District adopted a rate structure for 1986 creating a significant difference between fees at CTRC and other disposal facilities. These rate changes are shown in the Metro Ordinance No. 85-191 attached as Appendix B. Comparisons of charges at other facilities are shown in Table II. It should be noted that the users of CTRC are still not paying the entire cost of operating CTRC and transferring the waste to the St. Johns Landfill. The actual cost is $20.89 per ton compared to the $17.38 disposal rate which went into effect on January 1, 1986.

In order for the rate changes to have a significant impact on the tonnage at CTRC it is necessary for Clackamas County, Oregon City, and other cities in Clackamas County, to change their rate structure for drop box loads. Currently drop box customers are charged a flat fee for hauling the load plus the actual disposal cost. This creates a disincentive for a hauler to travel to disposal sites which are cheaper but may be farther than CTRC. If the disposal cost for a load is less, the customer would pay less, but it would cost the hauler more money to haul the load farther because the consumer, not the hauler, pays the disposal cost at a higher priced facility. Clackamas County has indicated their willingness to help solve this problem. In December Metro sent letters explaining the changes to the disposal rates to customers as well as all local governments who deal with solid waste collection. These letters are contained in Appendix C. Metro would encourage Oregon City and other Clackamas County cities to amend their rate structures to allow both haulers and consumers to take advantage of the new disposal rates.

TABLE I

CTRC 1985 TONNAGE SUMMARY

1985	30 DAY AVERAGE	TOTAL TONS	COMMERCIAL TONS	PUBLIC TONS	COMMERCIAL TRIPS	PUBLIC TRIPS	TRANSFER TRIPS	TOTAL TRIPS
JANUARY	645	19,995	17,583	2,412	4,174	6,432	882	11,488
FEBRUARY	638	17,873	15,803	2,070	3,513	5,519	775	9,807
MARCH	687	21,312	18,028	3,284	4,054	8,756	930	13,740
APRIL	810	24,307	20,841	3,546	4,482	9,455	1,067	15,004
MAY	831	25,763	21,993	3,791	4,777	10,110	1,130	16,017
JUNE	810	24,324	20,223	4,120	4,367	10,987	1,086	16,440
JULY	814	25,241	21,332	3,960	4,924	10,559	1,137	16,620
AUGUST	803	24,910	21,025	4,002	4,649	10,672	1,079	16,400
SEPTEMBER	818	24,541	21,044	3,534	4,561	9,425	1,064	15,050
OCTOBER	797	24,733	21,867	2,866	4,943	7,800	1,076	13,819
NOVEMBER	707	21,235	19,290	1,945	4,201	5,241	938	10,380
DECEMBER	719	22,313	19,940	2,373	4,396	6,510	1,005	11,911
TOTAL	756	276,547	238,969	37,903	53,041	101,466	12,169	166,676

TABLE II

COMPARISON OF TIPPING FEES AT DISPOSAL FACILITIES SERVICING THE METRO REGION - January 1, 1986

FACILITY	BASE RATE	SB662 FEES $1.50/ton	METRO FEES RTC	METRO FEES USER FEE	TOTAL RATE	COMPARABLE TONNAGE RATES (see note #1) 250 lbs/yd	350 lbs/yd	590 lbs/yd	850 lbs/yd
ST. Johns	$7.86 /ton	$1.50 /ton	$2.98 /ton	$2.04 /ton	$14.38 /ton	$14.38 /ton	$14.38 /ton	$14.38 /ton	
CTRC (conven. chrg w/base)	$10.86 /ton	$1.50 /ton	$2.98 /ton	$2.04 /ton	$17.38 /ton	$17.38 /ton	$17.38 /ton	$17.38 /ton	
Grabhorn (limited-use)									
loose dropbox	$1.00 /yd	-$0-	-$0-	$0.25 /yd	$1.25 /yd	$10.00 /ton	$7.14 /ton		
compacted dropbox	$2.00 /yd	-$0-	-$0-	$0.60 /yd	$2.60 /yd			$8.81 /ton	
Hillsboro (limited-use)									
loose dropbox	$1.45 /yd	-$0-	-$0-	$0.25 /yd	$1.70 /yd	$13.60 /ton	$9.71 /ton		
compacted dropbox	$1.66 /yd	-$0-	-$0-	$0.60 /yd	$2.26 /yd			$7.66 /ton	
Killingsworth (limited-use)									
loose dropbox	$1.75 /yd	-$0-	-$0-	$0.25 /yd	$2.00 /yd	$16.00 /ton	$11.43 /ton		
compacted dropbox	$2.70 /yd	-$0-	-$0-	$0.60 /yd	$3.30 /yd			$11.19 /ton	
McMinnville (note #2)									
loose	$2.57 /yd	-$0-	$0.37 /yd	$0.25 /yd	$3.19 /yd	$25.52 /ton	$18.23 /ton		
compacted	$2.82 /yd	-$0-	$0.88 /yd	$0.60 /yd	$4.30 /yd			$14.58 /ton	$10.12 /ton
Newberg Transfer Station (note #3)									
loose	$4.70 /yd	-$0-	-$0-	$0.25 /yd	$4.95 /yd	$39.60 /ton	$28.29 /ton		
compacted	$5.95 /yd	-$0-	-$0-	$0.60 /yd	$6.55 /yd			$22.20 /ton	$15.41 /ton
Woodburn (note #4)									
packer	$12.00 /ton	-$0-	$2.98 /ton	$2.04 /ton	$17.02 /ton	$17.02 /ton	$17.02 /ton	$17.02 /ton	
loose dropbox	$2.40 /yd	-$0-	$0.37 /yd	$0.25 /yd	$3.02 /yd	$17.02 /ton	$17.02 /ton		
compacted dropbox	$3.30 /yd	-$0-	$0.88 /yd	$0.60 /yd	$4.78 /yd			$16.20 /ton	
Oregon Processing (note #5) and Recovery Center (50-90% recyclable)	$12.00 /ton	-$0-	-$0-	-$0-	$12.00 /ton	$12.00 /ton	$12.00 /ton	$12.00 /ton	

** NOTES **

1 The comparability of rates is highly dependent on waste densities. Generally loose wastes have greater densities than 250 lb./cu. yd. and compacted wastes are above 590 lbs./cu. yd.

2 The McMinnville base rate includes surcharges of $.37/cu. yd. for a recycling fund and $.20/cu. yd. for local government. Compactors using this site historically have greater waste densities.

3 Yamhill County wishes to encourage the use of transfer stations such as Newberg, Forest Grove (if opened up to other haulers), and WTRC (when operational) for wastes going there. Therefore, the RTC will be charged on waste hauled directly to McMinnville but not on waste delivered through a private transfer station if certain conditions are met. The Newberg base rate includes the disposal cost at the McMinnville landfill.

4 The Woodburn disposal charge is the lessor of the yardage and tonnage rates.

5 The Oregon Processing Center rate for loads of greater than 90% recyclables is $3/ton.

11/28/85 RDM

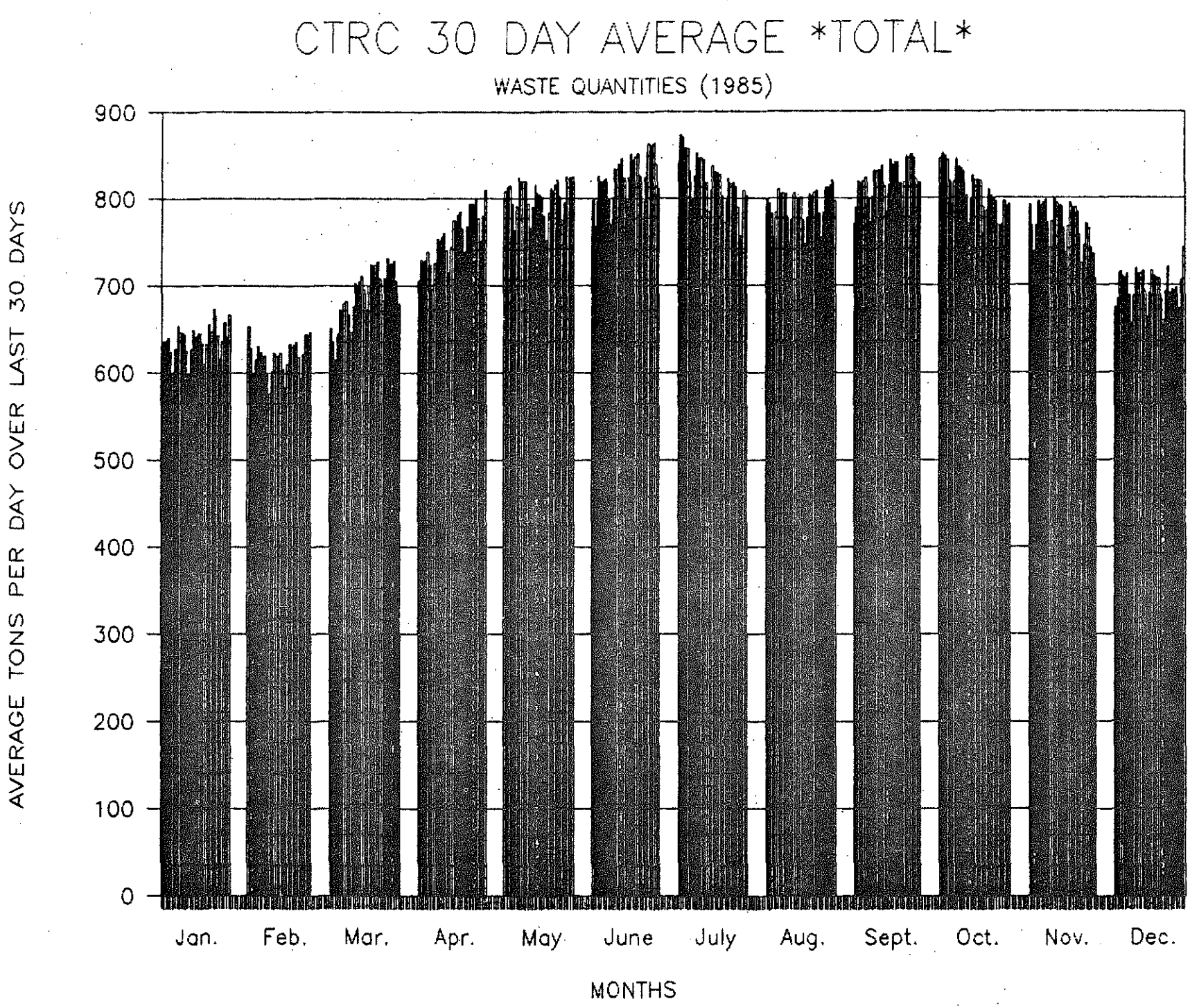

CTRC 30 DAY AVERAGE *TOTAL*
WASTE QUANTITIES (1985)
AVERAGE TONS PER DAY OVER LAST 30 DAYS
900
800
700
600
500
400
300
200
100
0
Jan.
Feb.
Mar.
Apr.
May
June
July
Aug.
Sept.
Oct.
Nov.
Dec.
MONTHS

FIGURE I

CTRC 30 DAY AVERAGE *PUBLIC*

WASTE QUANTITIES (1985)

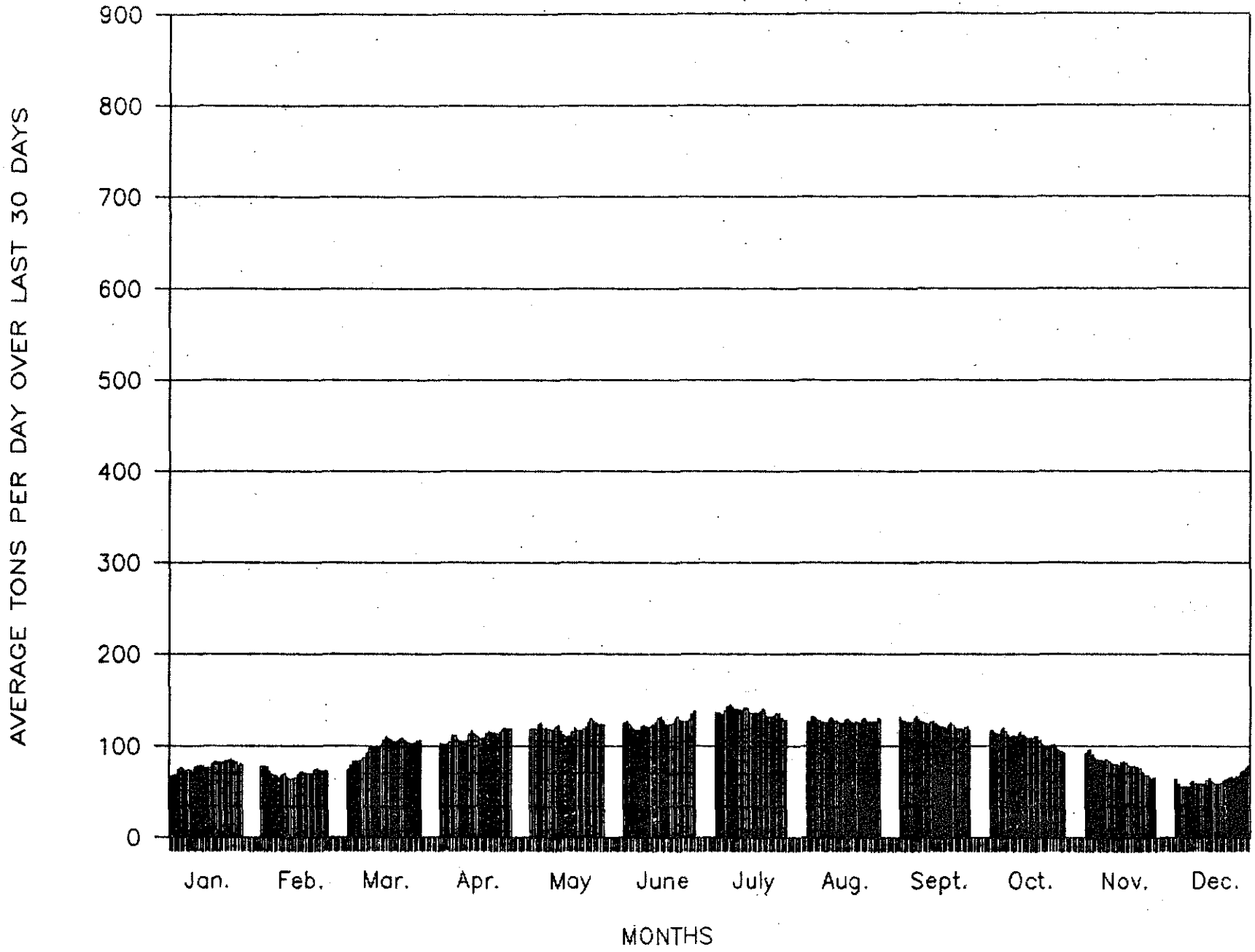


FIGURE II

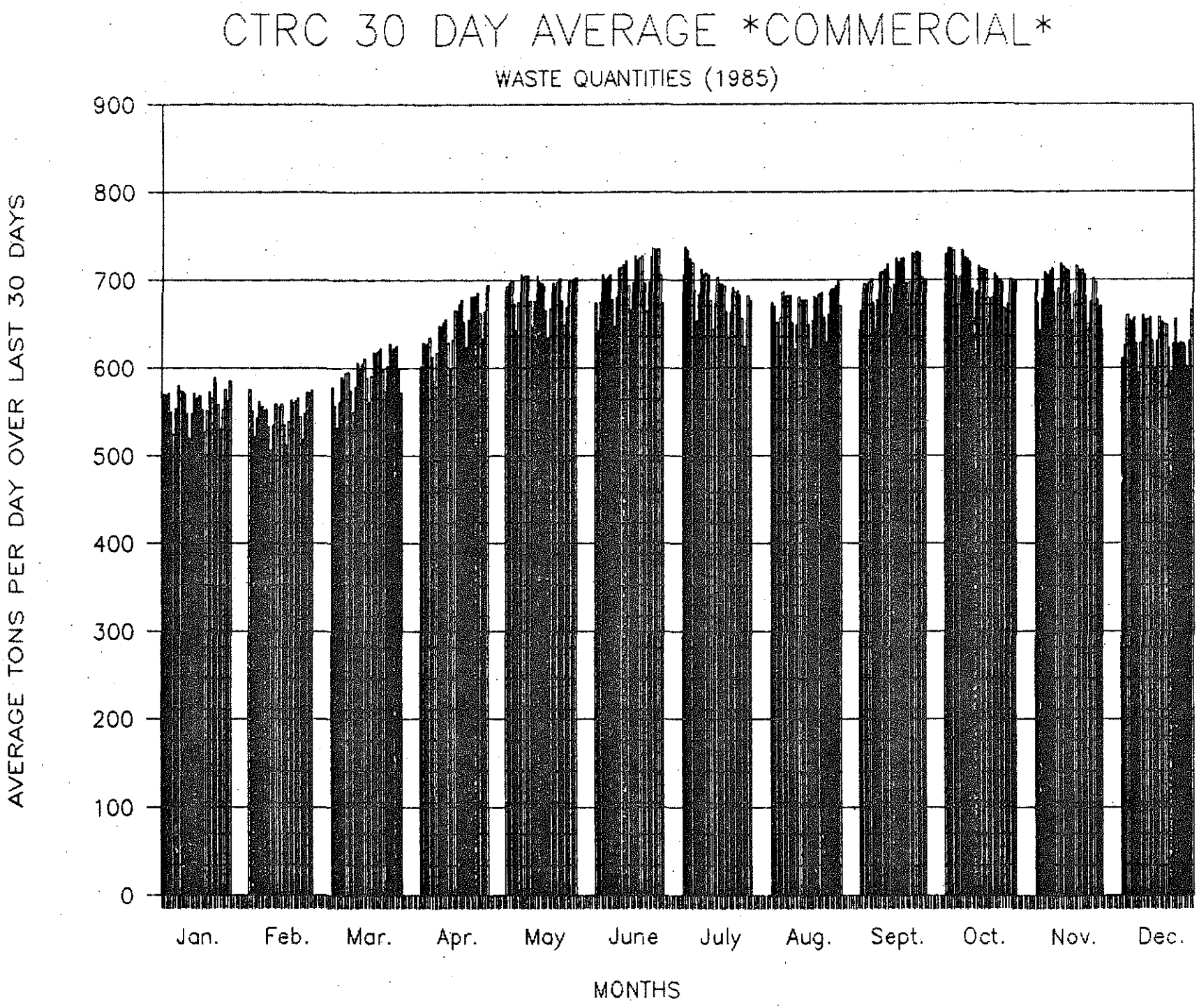

CTRC 30 DAY AVERAGE *COMMERCIAL*
WASTE QUANTITIES (1985)
AVERAGE TONS PER DAY OVER LAST 30 DAYS
900
800
700
600
500
400
300
200
100
0
Jan.
Feb.
Mar.
Apr.
May
June
July
Aug.
Sept.
Oct.
Nov.
Dec.
MONTHS

FIGURE III

IV. LITTER CONTROL

Since 1983, when CTRC replaced the Rossman's Landfill, Metro has implemented several programs which have significantly reduced the litter around the Park Place interchange and Highway I-205. These include charging double for unsecured commercial loads, requiring public customers to purchase tarps at low prices for unsecured loads, daily litter collection on and near the site, and contract requirements that all transfer truck trailers be fully enclosed.

In addition to these actions, Metro has recently contracted with the Clackamas County Juvenile Services Division to provide litter cleanup along I-205 and other streets near the Park Place interchange. Under this program the county's crews clean both sides of I-205, as well as the median from the Willamette River, to the Highway 224-Estacada exit. Portions of this zone are cleaned each Saturday and it is anticipated that the entire zone can be cleaned once each month. Metro pays the Juvenile Services Division monthly and the amount is dependent on the amount of time actually spent collecting litter.

Recently, a consultant working on a litter program for the states of Washington and California conducted a survey around CTRC and the St. Johns Landfill to determine the effect of our tarp and double charge program. They found that in excess of 90 percent of the loads were adequately covered and they have since recommended similar programs to both states. Jurisdictions of both states have requested copies of our regulations and details to implement the program.

V. ENVIRONMENTAL IMPACTS

During the permit process the Planning Commission expressed concern about the potential for environmental impacts caused by operation of CTRC. Specific areas of environmental concern were noise, odor and dust.

A. Noise

Noise is minimized because CTRC is a completely enclosed facility. Two of the three potential sources of noise are inside the building--the refuse trucks unloading and the bulldozer operating in the receiving pit. These noises are almost completely muffled inside the building and are barely audible 50 feet from the building. The third noise source is refuse and transfer trucks outside the building. The transfer trucks are equipped with muffler equipment designed to meet federal regulations. Experience has shown that these noises barely can be discerned due to existing traffic noises on Washington Street and I-205, and the log-handling activities in the nearby Publishers Paper Company yard.

B. Dust/Odor

As with noise, CTRC was designed to contain dust and odor within the building structure. Four large ventilation fans

on the roof direct air into the building. The pit is emptied and cleaned each day to minimize odor. Dust from vehicles unloading is contained by the water mist spraying system located above the pit, and by extensive daily onsite cleaning.

While many citizens in Washington County have testified against the various locations we have identified for the Washington Transfer & Recycling Center (WTRC), many have testified that CTRC is well run and does not cause noise, dust or odor problems.

VI. RECYCLING

1985 was a difficult year to maintain recycling programs. The prices for most recyclable materials have dropped significantly. In 1984 we were receiving $25 per ton for ferrous metal, which accounts for the largest portion of recyclable material at CTRC, in 1985 we received $5 per ton for most of the year. Despite the severe drop in prices we have maintained the levels of recycling done in 1984. Our contracter has made several improvements to the recycling system to increase the value of the materials sold as well as implementing ways to lower the cost to prepare the various recyclable materials. Table III shows the recycling results for 1985.

TABLE III

CTRC MONTHLY RECYCLING TONNAGE FOR 1985

(all quantities in tons unless otherwise noted)

1985	Aluminum	Extrusion	Ferrous	Metal #2	Newsprint	Corrugated	Glass	Copper	Brass	Stainless	Lead	Tires	Oil	Engine Pts.	Appliances Lawnmowers	Total *
January	3.345	0.405	80.820	8.140	6.830	8.810	9.640	0.132	0.163	0.250	0.000	8.640	260 gal.	2 bins	33 ct.	127.2
February	3.920	0.420	83.425	11.929	8.250	7.495	0.000	0.180	0.216	0.000	0.000	8.630	202	2	17	124.5
March	7.140	0.390	109.200	29.232	7.730	13.415	9.520	0.413	0.356	0.256	0.000	19.780	294	2	79	197.4
April	7.320	0.435	129.500	19.036	8.390	15.590	10.071	0.300	0.210	0.000	0.000	16.690	200	2	124	207.5
May	7.290	0.280	131.925	22.518	13.395	13.890	0.000	0.810	0.280	0.000	0.109	22.360	300	2	90	212.9
June	6.520	0.340	119.760	21.929	16.020	9.725	10.570	0.000	0.000	0.000	0.000	7.230	436	2	69	192.1
July	5.330	0.750	117.865	28.777	15.920	17.340	9.071	0.354	0.207	0.000	0.000	13.890	503	2	57	209.5
August	4.770	0.980	122.380	20.156	8.360	13.600	9.760	0.455	0.000	0.000	0.000	4.620	341	2	50	185.1
September	4.975	0.000	105.630	11.308	17.110	8.695	0.000	0.340	0.000	0.000	0.000	10.320	502	2	20	158.4
October	3.405	1.305	90.240	23.238	8.075	5.710	9.100	0.419	0.464	0.000	0.153	6.400	278	2	23	148.5
November	4.110	0.000	63.160	10.120	7.120	7.070	8.610	0.000	0.000	0.000	0.000	1.660	104	1	12	101.9
December	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL	58.125	5.305	1,153.91	206.383	117.200	121.340	76.34	3.403	1.896	0.506	0.26	120.220	3,420	21	574.00	1,864.89

* Totals do not include oil, engine parts, appliances or lawnmowers as these are not reported in tons.

VII. LANDSCAPING

In 1985 Metro has taken several actions to address the concerns expressed by the Planning Commission regarding the landscaping around CTRC, in the detention basin next to CTRC, and the vacant seven acres that Metro owns north of CTRC.

Several trees around CTRC that were installed under the original construction died in 1984. Metro investigated the causes for this and determined that in many cases the soil and drainage conditions were not appropriate for the species of trees that had been selected. On the advice of our landscaping contractor, and Mr. Jerry Hermann of the Environmental Learning Center of Clackamas Community College, we have changed several of the plant types as well as some of our landscaping techniques. The list of replacement plants is included as Appendix D.

In conjunction with Clackamas County, Oregon City, Oregon State Highway Department, and other property owners in the Park Place area, Metro has developed a plan to improve the landscaping on the vacant property to the north of CTRC and the detention basin south of CTRC. In August Clackamas County completed the planning stage of the Park Place Improvement Project. In October this plan was presented to the Planning Commission. Since then, Metro has contracted with Wilsey and Ham Consulting Engineers, and Mr. Jerry Hermann, to develop detailed installation specifications and drawings for these improvements. Copies of the drawings are contained in Appendix F. Because the project has changed from only landscaping and minor regrading to potentially include paths, walkways, and a kiosk information center, Metro is in the process of soliciting bids for the work. It is anticipated that bids will be received in February 1986 and a contract awarded in March 1986. The extent of the improvements which will ultimately be done, will be based partially on the bid prices received.

The schedule would anticipate completion of the detention basin by the summer of 1985 as well as some of the plantings on the vacant property north of CTRC. Regrading work and the balance of the planting on the vacant north end cannot be completed until the Oregon City Bypass construction progresses far enough to vacate a portion of the existing highway. This is anticipated to be completed by the fall of 1986.

VIII. LANDFILL SITING

During 1985 several actions took place which significantly changed the process for finding a new landfill to replace the St. Johns Landfill when it reaches its capacity. Early in 1985 Metro appealed the criteria adopted by Multnomah County which prohibited the Wildwood site from any future consideration as a landfill. The Land Use Board of Appeals (LUBA) denied Metro's appeal. In response, Metro asked the Oregon Legislature to review the legislation which gave the Environmental Quality Commission (EQC) the authority to site a

landfill. In June, the Legislature passed Senate Bill 662 which not only gave the EQC the authority to find and permit a disposal site, but also mandated that:

A. The Department of Environmental Quality (DEQ) must conduct a study to determine preferred and appropriate disposal sites by July 1, 1986;

B. By January 1, 1987, DEQ must recommend the preferred site or sites to EQC;

C. Not later than July 1, 1987, the EQC must issue an order directing DEQ to establish a disposal site; and

D. The DEQ will review the acknowledged comprehensive plans and land use regulations of counties in which disposal sites may be located. The local comprehensive plans and land use regulations will apply to the EQC siting process only if the DEQ finds that they are identical to or consistent with the standards specified in the new law.

IX. SOLID WASTE REDUCTION PROGRAM

In addition to the landfill siting provisions, SB 662 required Metro to submit a solid waste reduction program which will provide for:

A. A commitment by the district to substantially reduce the volume of solid waste that would otherwsie be disposed of in land disposal sites through techniques including, but not limited to, rate structures, source reduction, recycling, reuse and resource recovery;

B. A timetable for implementing each portion of the solid waste reduction program;

C. Energy efficient, cost-effective approaches for solid waste reduction that are legally, technically and economically feasible and that carry out the public policy described in ORS 459.015(2); and

D. Procedures commensurate with the type and volume of solid waste generated within the district.

Metro has submitted its Solid Waste Reduction Program to EQC for review and approval by the required deadline of January 1, 1986. EQC must now review the plan and will be conducting hearings during the next few months. The plan includes programs which will effect all local governments, the collection industry and all persons that generate or handle solid waste and recyclable materials. A copy of the summary of the plan is attached for your information.

X. PROGRESS OF WTRC SITING

The siting of the second transfer station to serve the western part of the region is coming to an end. A public hearing on one of four sites is being conducted on January 9. Public hearings have already occurred on the other three sites. A decision on which site to pursue is scheduled to be made at the for January 16 special meeting of the Metro Council. At that time, Metro will proceed to acquire the property and prepare a development application for a land use permit.

The site selection process has been a long, but thorough, review of all possible locations for the transfer station. An Advisory Group, comprised of representatives from local jurisdictions, the collection and recycling industries, and citizens of the area was formed to screen sites and make a recommendation to the Metro Council. Initially, the Advisory Group looked at 54 sites and had indentified three primary sites in March 1985 as scheduled. However, comments made at public meetings on these sites led the Advisory Group to reconsider the criteria used. After several meetings, with interested parties participating, revised criteria were adopted. The modified criteria focused on the same major factors as the original criteria, except that it recongized campus type, industrial developments and gave added weight to sites located near principal highways.

The original 54 sites and 25 new sites were evaluated using these new criteria. The Advisory Group narrowed a list of 79 sites to 10 sites in June. Public meetings were held in each area where sites were located. Following the public meetings the Advisory Group made their recommendations to the Metro Council on September 12, 1985.

Subsequent to the September public hearing Metro staff was requested to assess the land use and development issues and contact land owners about purchasing the sites. One site, owned by U. S. Plywood, was still an operating business and, therefore, was not considered at that time. The Council also requested that staff evaluate any new sites brought to the attention of the Advisory Group.

Since the September hearing three new sites were evaluated. After applying the technical criteria only one site, located in Tigard, was recommended by staff for further consideration. A public hearing was held in December, and the Metro Council voted not to consider the Tigard site as one of the final sites. The Council also voted not to consider any new sites. At this time, the property owned by U. S. Plywood has been vacated. A public hearing on this site is scheduled for January 9. If the Metro Council approves the site owned by U. S. Plywood, four possible sites remain for WTRC.

- Archdiocese/B.U.R.A. (Site 56 north and south) Beaverton
- B.U.R.A. (Site 56 south side only) Beaverton
- Champion Building/U.S. Plywood (Site N) Washington County
- Cornelius Pass Road (Site 59) Washington County

Once a site is selected, Metro will immediately begin to secure permits for the site. Funds to purchase the property are currently budgeted. The design firm of Swan Wooster is already under contract to begin the initial design phases necessary for the land use permit.

WTRC is the second of three transfer stations planned for the region. A third station to serve the east region is slated to be operating when the St. Johns Landfill closes -- estimated to be in 1990.

NW/srs
4958C/437-4
01/07/86

APPENDIX A

METRO

METROPOLITAN SERVICE DISTRICT
Providing Zoo, Solid Waste and Local Government Services

527 S.W. Hall St.
Portland, Oregon
97201-5287
(503) 221-1646

June 6, 1985

Ms. Catherine M. Galbraith
Planning Director
City of Oregon City
Oregon City, Oregon 97045

Dear Cathy,

In February 1985, the Oregon City Planning Commission conducted the second annual review of the operation of the Clackamas Transfer and Recycling Center (CTRC). The Planning Commission required Metro to submit a progress report to it prior to July 1, 1985.

1. The major concern of the Planning Commission continues to be its perception that Oregon City is the only long-term disposal facility in the region. As we have noted previously, CTRC is not the only long-term disposal facility in the region. St. Johns landfill has been in existence since 1932 and while its expected closure date is 1989, it is currently the final disposal site for approximately 2,100 tons per day of solid waste. The current system also includes one limited-use landfill in Multnomah County and two limited-use landfills in Washington County. Some waste is also going to landfills in Marion County and Yamhill County. In addition, yard debris is flowing to processing facilities in the Clackamas and Tigard areas.

   The Planning Commission has identified the building of a transfer station in Washington County as assurance that CTRC will not be the only long-term facility in the region. While we would like to be making faster progress in Washington County, it is not unreasonable to expect the siting decisions for a solid waste facility to be long and difficult. The Planning Commission took many long hours to consider the Oregon City solid waste facility in 1980. I have attached two status reports on the progress of the Washington Transfer and Recycling Center (WTRC).

   In addition to the concerns the Planning Commission had about being the only long-term disposal facility, it was also concerned about the traffic situation on Washington Street at the intersection of our entrance.

To assure that these problems did not get out of hand, the Planning Commission instituted a limit of 800 tons per day on CTRC. Several things have happened recently to cause an increase in tonnage at CTRC. The Newberg Landfill was filled and closed in September 1984; the Woodburn Landfill implemented a new rate structure in April 1985; the Killingsworth landfill increased its fees in April 1985; Clark County Washington, is now sending approximately two-thirds of its waste to St. Johns Landfill, and the general economy has improved in the area.

As can be seen on Table 1, the total waste delivered to St. Johns is above 800 TPD on a thirty-day average for April and May. In order to get an accurate picture of the increase we separated the commercial waste, the public waste, and the water that is added through the dust suppression system and washdown.

In order to reduce the tonnage at CTRC, Metro has met with several haulers that could potentially haul directly to St. Johns. These haulers expressed several problems in going to St. Johns directly. Among them are:

- The long wait to get into St. Johns in the last few months.
- The extra time required to drive to St. Johns.
- They questioned why CTRC should be subsidized by the regional users if it is not truly a regional facility.
- CTRC is not experiencing problems handling the amount of waste going through it.

The haulers have indicated a willingness to discuss these issues when appropriate.

2. Litter and debris clean up will be improved in the area of the Park Place interchange. We were unsuccessful in our efforts to develop a program with the Oregon City High School to provide litter clean up in a larger area around CTRC than our contractor was currently providing. Since February, we have contacted Clackamas County to investigate the potential of using people sentenced to community service to provide litter clean up. We have reached a tentative agreement with the county staff and hope to have the arrangements completed prior to July 1985.

3, 4, 6: Metro has met with the city and county staffs to determine an over-all grading and landscaping plan for CTRC, the detention basin and the vacant property north of CTRC. The County and Environmental Learning Center staff are currently working with Metro to develop this plan and work toward implementation of a coordinated effort in the area. We are very interested in seeing the Gateway entrance to Oregon City improved and are committed to implementing our portion.

5. We have contacted Publisher's Paper Company and they have removed the logs from the edge of the detention basin.

7. Metro and our contractor, Genstar Waste Transfer, Inc., was pleased to work with Oregon City staff and during its May 18, 1985, city clean up, Genstar donated the disposal charges on all the debris that was collected by the volunteers during the clean up. We commend the City on its successful clean-up program.

We have reviewed the operation of CTRC in light of the recent tonnage increases, the concerns of the Planning Commission, and the concerns of haulers using CTRC. We would like to request that Oregon City reconsider the 800 ton-per-day limit contained in our permit. We have identified two approaches to reduce the flow at CTRC but both lead to the same result. We can eliminate the financial incentive for haulers to stop using CTRC in order to stay below the 800 ton-per-day limit. The other option would be for Metro to use flow control to direct certain haulers away from CTRC. While it is possible to use flow control and subsidize CTRC, it does not seem reasonable to have a "regional" transfer charge on a "local" transfer station.

If you have any questions, please call me at 221-1646.

Sincerely,

Norm Wietting

Norm Wietting
Operations Manager

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Explanation of Revisions of Criteria to Site
the Washington County Transfer and Recycling Center

In response to the March 5, 1985 public meeting, the Advisory Group and Metro have worked with the community to develop acceptable criteria by which to evaluate potential sites for location of the WTRC.

The revised criteria reflect discussions from three advisory group meetings that included public participation and acceptance of the new criteria. At the Advisory Group meetings,the public reviewed the original criteria and criteria suggested by the Ad Hoc Committee of the Sunset Corridor. Other sites have been suggested in addition to the original 54 sites previously evaluated. The revised criteria is now being used to evaluate a list of 79 potential sites. The revised criteria utilize several similiar categories and definitions from the original criteria. These include size of site, geotechnical considerations, availability of utilities, and zoning. New definitions were developed for the criteria distance from center of waste, transportation access, and compatibility. The criteria of distance from center of waste is more flexible and the transportation access criteria is weighted towards reducing the visual impact of collection vehicles by favoring sites closer to principal highways. Compatibility looks at additional factors other than zoning and includes a campus environment category and a mechanism to deal with vacant land.

Major Criteria Changes

Compatibility- The Advisory Group agreed that transfer stations are most compatible with other heavy industrial uses and least compatible with residential areas. However,a campus environment zone was defined and determined to be less compatible with transfer stations than a mixed use area. Vacant land was addressed as a separate issue because of the perceived impact of a transfer station on the marketability of vacant land. Vacant parcels anticipated for campus environment development receive special consideration only if a developer or user has a master plan. Without a master plan, vacant industrial land receives the same score as a heavy industrial zone.

Transportation Access- The revised criteria emphasize the location of a transfer station close to a principal arterial thus minimizing the visual impact of collection vehicles on neighboring land uses. All three highways in Washington Country (T.V.-Highway,Highway 217, and Sunset Highway) are considered viable access routes to a transfer station.

Process Changes

The revised criteria utilize a fatal flaw approach to screen out sites that are more than seven miles from the center of waste

generation and pose physical limitations for development of a transfer station.

These changes in the criteria reflect concerns raised by the business community regarding the compatibility of typical industrial development with campus environment development. The existing Washington County Development Code makes no distinction between the various types of industrial development.

Using the revised criteria, the Advisory Group will discuss the sites at the May 29 meeting. It is our intention to take a diversity of sites to a public meeting in late June to encourage public participation in selecting a site to serve Washington County haulers and residents.

EVALUATION OF SITES

After three advisory group meetings, a revised edition of criteria were used to evaluate 79 sites. The list of sites has increased because of input from the public and the Ad Hoc Committee of the Sunset Corridor. The revised criteria sets minimum standards by which all sites are evaluated. Sites with physical limitations for development or seven miles from the center of waste generation were eliminated from the evaluation process. Twenty eight sites were eliminated by the "fatal flaw" analysis. Fifty-one sites meeting these minimum standards were evaluated in a cumulative manner using the point system for eight additional criteria. These criteria included: size of site, geotechnical considerations, availability of utilities, zoning, distance from center of waste, transportation access for transfer trucks, transportation access for collection vehicles and compatibility.

Five areas surface as being the most favorable areas for location of a transfer station. Ten sites are located within these five areas. Staff recommends that sites with fifty-five or more points be carried forward to a public meeting in June. Fifty-five was chosen as a cut off point to ensure that a variety of areas were evaluated by the public on the issue of compatibility. Also, a variety of areas ensures that a diversity of public groups will be involved in building the needed consensus to site a transfer station.

These five areas include:

Area A- Allen Blvd. and Western Ave.
Area B- Denny Road and Highway 217
Area C- Millikan Road and T.V. Highway
Area D- Jenkins Road and 158th
Area E- Cornelius Pass and Sunset Highway

All these areas would be suitable for siting a transfer station. The five areas are depicted on the attached maps.

Sites in Areas A and B are close to the center of waste generation with good access from Highway 217. Several sites are in existing industrial areas, while some sights are in close proximity to residential areas. Area C is close to the center of waste generation with good access from T. V. Highway. These sites are in close proximity to existing and future high-tech development. One site would require a zone change. Area D is close to the center of waste, but further from principal highways. These sites are surrounded by a mix of adjacent uses including food processing and unplanned vacant land. Area E is further from the center of waste but with good access from Sunset Highway. The adjacent uses includes existing and future high-tech and corporate office development.

At the June public meeting, comments and concerns regarding

the five general areas for site selection will be solicited. Information from the public meeting, along with information gathered from landowners in regards to availability and price of land, will be assessed by the Advisory Group and Metro before rating the final sites and making a recommendation to the Metro Council.

METRO

METROPOLITAN SERVICE DISTRICT
Providing Zoo, Solid Waste and Local Government Services

527 S.W. Hall St.
Portland, Oregon
97201-5287
(503) 221-1646

July 9, 1985

Ms. Cathy Galbraith
Planning Director
City of Oregon City
320 Warner-Milne Rd.
Oregon City, OR 97045

Dear Cathy:

At the Oregon City Planning Commission meeting on June 25, 1985, you asked for detailed information regarding the waste flows to our Clackamas Transfer and Recycling Center. I have listed the commercial users of the CTRC for the month of May 1985. I have also indicated, to the best of our knowledge, which county the firms haul waste from. Slight tonnage variations will occur between our customer lists and the actual waste hauled to St. Johns, due to our one-ton minimum charge. Table I is a summary of the commercial tonnage for May 1985.

TABLE I (May 1985)

Clackamas County	11,081 tons	50%
Multnomah County	6,580 tons	30%
Washington County	3,895 tons	18%
Misc. Account or Unknown County	453 tons	2%
	22,009 tons	100%

In addition to the commercial tonnage report we conducted a survey over the weekend of June 29th and 30th, and also Monday, July 1, and Tuesday, July 2nd. We asked each private vehicle their Zip Code and assigned the Zip Codes to counties. Table II summarizes the results of our survey.

TABLE II (June 29 to July 2)

Clackamas County	70%
Multnomah County	26%
Washington County	4%
	100%

In breaking down further, the Clackamas County portion of the public customers into cities, one can see that most of the traffic comes from the area immediately surrounding CTRC.

TABLE III (June 29-July 2)

Oregon City	19%	(97045)
Milwaukie	18%	(97222)
Lake Oswego	8%	(97034)
West Linn	5%	(97068)
Gladstone	2%	(97027)
Other Clackamas Co. areas	18%	(97015, etc)
	70%	

To put the CTRC in the Regional perspective, Table IV shows the waste flow by site.

TABLE IV (May 1985)

(Multnomah) St. Johns (Direct haul only)	39,000 tons	46%
(Clackamas) CTRC	27,340 tons	32%
(Multnomah) K.F.D.	10,653 tons	13%
(Washington) Hillsboro	est. 1,400 tons	2%
(Washington) Grabhorn	3,237 tons	4%
(Yamhill) McMinnville	2,722 tons	3%
(Marion) Woodburn	389 tons	1%
	84,747 tons	100%

I have included the most recent history of waste flows to give you an indication where the increases at CTRC have come from and also to try to show the future trends. The rapid increase at St. Johns and CTRC, generally started in October 1984 when the Newberg Landfill closed and the Clark County, Washington waste haulers started using St. Johns. The last significant actions affecting the waste flows occurred on April 1, 1985. The Woodburn Landfill changed their method of charging from $1.25 per cubic yard to $12.00 per ton, and the KFD site increased their rate from $1.95 per cubic yard to $2.30 per cubic yard.

We do not expect any significant changes to the current flow pattern until the Washington Transfer and Recycling Center becomes operational but many factors which influence this pattern are beyond our control.

Where the data was available, I have added June 1985 to the appropriate pages. You can see that the flow pattern does change seasonally and remains fairly steady except when a significant action takes place in the system.

If you need any further information regarding waste flows, please call me at 221-1646.

Sincerely,

Norman Wietting

Norm Wietting
Operations Manager
Solid Waste Department

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METROPOLITAN SERVICE DISTRICT
Providing Zoo, Solid Waste and Local Government Services

527 S.W. Hall St.
Portland, Oregon
97201-5287
(503) 221-1646

August 21, 1985

Ms. Catherine Galbraith
Planning Director
City of Oregon City
320 Warner Milne Road
Oregon City, OR 97045

Dear Cathy,

In July, the Oregon City Planning Commission denied Metro's request to rescind the 800 ton-per-day limitation on our Clackamas Transfer and Recycling Center. The Commission also directed Metro to report on its actions to reduce the amount of waste being received at CTRC. I would like to take this opportunity to let you know our intentions and actions regarding this matter and several other issues raised during the past several months, including the detention basin, the Gateway project, repairing the CTRC landscaping, a litter cleanup program and Metro's siting efforts in Washington County.

1. As you know, Mr. Jerry Herman, the Director of the Environmental Learning Center at Clackamas County Community College, has prepared a fairly elaborate plan to upgrade the detention basin. Per our recent discussions, we are preparing bid documents to do this work. We are preparing detailed specifications and, as we discussed, several portions of the project will be bid as options and may or may not be completed, depending on the costs and other factors. These will be determined by the Metro Council. We anticipate awarding a contract to do the renovation this fall. We should have detailed plans, for the Gateway presentation, to the Planning Commission in September.

2. The Gateway Project drawing also calls for regrading and tree planting on the north end of the property. Some of that work will be completed under the contract mentioned in Item I above. The balance must wait for ODOT to finish the Oregon City bypass construction.

3. I have attached a work scope for a purchase order we have issued to LGB Landscaping to replace the dead trees of CTRC. You will note that we have replaced several trees with different species which our landscaper recommended. This should eliminate many of the soil condition problems.

4. We have completed arrangements with Clackamas County to provide litter clean up around CTRC on at least a monthly basis. The County will use one of its youth programs to clean I-205 and some adjacent areas from the Willamette River to north of the Gladstone exit. The final contract will be presented to the Clackamas County Board of Commissioners on September 5, 1985, and the Metro Management Committee on September 12,1985.

5. As discussed at the Planning Commission meeting in July, our Washington County Transfer Station Advisory Committee made their recommendations to the Metro Council. The Committee selected three sites and ranked their relative positions in their recommendations. The top recommendation is, however, contigent on the owner of the property being willing to sell the property, rather than Metro being forced into condemnation. The concern over the condemnation on the top site stems from the fact that the facility is currently an operating business. The property was included in the available sites because of an earlier indication that the business was expecting to close.

   The Metro Council will conduct a hearing on the proposed sites on September 12, 1985 to review the Committee's recommendation. The Council is expected to authorize the Executive Officer to undertake negotiations on these three sites. We anticipate completing our assessment of the availablity of these properties and the subsequent land use process in order to gain a permit within thirty days.

6. In July, the Planning Commission directed Metro to reduce the tonnage at CTRC to below the 800 TPD limit. Our actions should be viewed as short-term and long-term solutions. In the short-term, as we explained in July, the seasonally high peak flow for the year should be behind us. As you can see in Table I, the 30-day average has dropped significantly in the last week of July and the first three weeks of August. The averages are still barely over the 800 TPD limit but should be below by the end of September.

   We see the long-term control over tonnage through CTRC as the area in which we should concentrate our efforts. We are currently recommending two actions to the Metro Council which we believe will reduce the tonnage significantly below the 800 TPD limits during the peak seasonal periods. One action is to remove the Regional Transfer Charge from all limited-use landfills in the Metro area. This should have a significant impact om the amount of drop boxes using CTRC and the tonnage at CTRC. The second action is to increase the Convenience Charge at CTRC from $2.25/ton to $3.00/ton. These actions should divert approximately 15% of the waste from CTRC to St. Johns or KFD directly. The following table shows the relative differences in rates currently and the proposed rates.

ST. JOHNS VS CTRC
Commercial Rates

	St. Johns	CTRC
Current	$13.48/ton	$15.73/ton
Proposed	$14.38/ton	$17.38/ton

CTRC VS KILLINGSWORTH FAST DISPOSAL- Commercial Rates

	CTRC	KFD
Current	$15.73/ton	$2.30 cu. yd. or at 350 lb/yd= $13.14/ton
Proposed	$17.38/ton	2.00 cu. yd. or at 350 lb/yd.= $11.43/ton

The proposed rate changes will require some action by Clackamas County. and potentially Oregon City, to make this change effective in reducing the tonnage at CTRC. The current rate structure for drop boxes consists of a hauling fee plus disposal cost. This policy forces the drop box companies to unload at the nearest site rather than the lowest total price to the company.

We plan to convene a task force in September to consist of the Chairman of the Planning Commission, the Mayor of Oregon City, the Oregon City Garbage Company, a hauling representative from Multnomah County and Washington County, and a member of the Clackamas County Board to assure that any rate action taken by Metro actually contributes to the reduction of waste at CTRC. This group will also consider other diversion techniques which will be presented by the Metro staff, such as a complete ban on dry drop box waste or yard debris at CTRC.

I will not be at your August 27, 1985 meeting due to a prior commitment for which I will be out of town. Mr. Dennis O'Neil, Ms. Randi Wexler, and Mr. Eric Dutson will represent Metro on that date. If you have any questions, please contact Dennis O'Neil at 221-1646.

Sincerely,

Norm Wietting
Operations Manager
Solid Waste Department

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APPENDIX B

BEFORE THE COUNCIL OF THE
METROPOLITAN SERVICE DISTRICT

AN ORDINANCE RELATING TO SOLID WASTE DISPOSAL CHARGES, REGIONAL TRANSFER CHARGES AND USER FEES: AMENDING METRO CODE SECTIONS 5.02.015, 5.02.020, 5.02.025, 5.02.045 AND 5.02.050; AND ESTABLISHING METRO CODE SECTION 5.02.065 FOR COLLECTION OF A SPECIAL WASTE SURCHARGE AND PERMIT APPLICATION FEE	)))))))))	ORDINANCE NO. 85-191

THE COUNCIL OF THE METROPOLITAN SERVICE DISTRICT HEREBY ORDAINS:

Section 1. Metro Code Section 5.02.015, Definitions, is amended to read as follows:

"(a) "Person" means any individual, partnership, association, corporation, trust, firm, estate, joint venture or any other private entity or any public agency.

"(b) "Solid Waste" means all putrescible and nonputrescible wastes, including without limitation, garbage, rubbish, refuse, ashes, paper and cardboard; vehicles or parts thereof; sewage sludge, septic tank and cesspool pumpings or other sludge; commercial, industrial, demolition and construction waste; home and industrial appliances; and all other waste material permitted by ordinance to be disposed of at the St. Johns Landfill.

"(c) "Special Waste" means: 1) Solid waste which is any unusual component of municipal solid waste; 2) solid waste which could potentially contain substantial quantities of waste defined as hazardous waste by the Oregon Department of Environmental Quality or the U.S. Environmental Protection Agency; or 3) solid waste which requires extraordinary management. Examples of special wastes are: chemicals, liquids, sludges and dusts from commercial and industrial operations; municipal waste water treatment plant grits, screenings and sludges; tannery wastes, empty pesticide containers, dead animals or by-products; and wastes containing asbestos.

"[(c)] (d) "St. Johns Landfill" is that landfill owned by the City of Portland, Oregon, operated by Metro and located at 9363 N. Columbia Blvd., Portland, Oregon 97203.

"[(d)] (e) "Clackamas Transfer & Recycling Center" is that solid waste transfer station owned and operated by Metro and located

at 16101 S. E. 82nd Drive, Oregon City, Oregon, 97045. (Ordinance No. 82-146, Sec. 2)"

"(f) "commercial" means those persons who dispose of waste and who:

"(1) pay for disposal of wastes on the basis of weight at St. Johns Landfill or CTRC, or

"(2) pay for disposal of wastes through a charge account at St. Johns or CTRC, or

"(3) dispose of wastes as an activity of their business.

"(g) "private" means those persons who dispose of waste and who:

"(1) do not pay for disposal of wastes on the basis of weight at St. Johns Landfill or CTRC, and

"(2) do not pay for disposal of wastes through a charge account at St. Johns Landfill or CTRC, and

"(3) do not dispose of wastes as an activity of their business."

Section 2. Metro Code Section 5.02.020, Disposal Charges at St. Johns Landfill, is amended to read as follows:

"(a) A commercial base disposal rate of [$9.80] $7.86 per ton of solid waste delivered is established for disposal at the St. Johns Landfill. A private base disposal rate of $1.92 per cubic yard is established for disposal at the St. Johns Landfill. Said rate shall be in addition to other fees, charges and surcharges established pursuant to [Sections 8, 9 and 10 of] this [ordinance] chapter.

"(b) The minimum charge for commercial vehicles shall be for one ton of solid waste. The minimum charge for private trips shall be two and one-half cubic yards for pickup trucks, vans and trailers and two cubic yards for cars. The minimum charge for private trips shall be waived for any person delivering one-half cubic yard or more of acceptable recyclable materials. Such persons shall be charged for the actual amount of waste delivered at the extra yardage rate.

"(c) The following disposal charges shall be collected by the Metropolitan Service District from all persons disposing of solid waste at the St. Johns Landfill:"

ST. JOHNS LANDFILL

Vehicle Category	Base Rate $/ton	Base Rate $/cy	Metro User Fee $/ton	Metro User Fee $/cy	Regional Transfer Charge $/ton	Regional Transfer Charge $/cy	Rehabilitation and Enhancement Fee $/ton	Rehabilitation and Enhancement Fee $/cy	State Landfill Siting Fee $/ton	State Landfill Siting Fee $/cy	Total Rate $/ton	Total Rate $/cy
COMMERCIAL												
Compacted	[$9.80] $7.86	[$2.90] $2.31	[$1.68] $2.04	[$0.43] $.60	[$2.00] $2.98	[$0.52] $.88	$.50	$.15	$1.00	$.30	[$13.48] $14.38	[$3.85] $4.24
Uncompacted	[9.80] 7.86	[1.23] .99	[1.68] 2.04	[0.25] .25	[2.00] 2.98	[0.30] .37	.50	.06	1.00	.12	[13.48] 14.38	[1.78] 1.79

	Base Rate Per Trip	Metro User Fee Per Trip	Regional Transfer Charge Per Trip	Rehabilitation and Enhancement Fee	State Landfill Siting Fee	Total Rate Per Trip
PRIVATE						
Cars[1]	[$4.62] $3.84	[$0.54] $0.44	[$1.34] $1.36	$.12	$.24	[$6.50] $6.00
Station Wagons[1]	[4.62] 3.84	[0.54] 0.44	[1.34] 1.36	.12	.24	[6.50] 6.00
Vans[2]	[5.37] 4.80	[0.54] 0.55	[1.34] 1.70	.15	.30	[7.25] 7.50
Pickups[2]	[5.37] 4.80	[0.54] 0.55	[1.34] 1.70	.15	.30	[7.25] 7.50
Trailers[2]	[5.37] 4.80	[0.54] 0.55	[1.34] 1.70	.15	.30	[7.25] 7.50
Extra Yards	[2.30] 1.92	[0.27] 0.22	0.68	.06	.12	[3.25] 3.00

	Base Rate	Metro Fee	Regional Transfer Charge	Total Rate
TIRES[3]				
Passenger (up to 10 ply)	$0.25			$0.25
Passenger Tire (on rim)	1.00			1.00
Tire Tubes	0.25			0.25
Truck Tires (20" diameter to 48" diameter on greater than 10 ply)	2.75			2.75
Small Solids	2.75			2.75
Truck Tire (on rim)	7.75			7.75
Dual	7.75			7.75
Tractor	7.75			7.75
Grader	7.75			7.75
Duplex	7.75			7.75
Large Solids	7.75			7.75

[1]Based on a minimum load of two cubic yards.
[2]Based on a minimum load of two and one-half cubic yards.
[3]Cost per tire is listed.

Section 3. Metro Code Section 5.02.025, Disposal Charges at Clackamas Transfer & Recycling Center, is amended to read as follows:

"(a) A commercial base disposal rate of [$9.80] $7.86 per ton of solid waste delivered is established for solid waste disposal at the Clackamas Transfer & Recycling Center. A private base disposal rate of $1.92 per cubic yard is established at the Clackamas Transfer & Recycling Center.

"(b) A convenience charge of [$2.25] $3.00 per commercial ton and $.40 per private cubic yard of solid waste delivered is established to be added to the base disposal rate at Clackamas Transfer & Recycling Center.

"(c) The base disposal rate and convenience charge established by this section shall be in addition to other fees, charges and surcharges established pursuant to [Sections 8, 9 and 10 of] this [ordinance] chapter.

"(d) The minimum charge for commercial vehicles shall be for one ton of solid waste. The minimum charge for private trips shall be two and one-half cubic yards for pickup trucks, vans and trailers and two cubic yards for cars. The minimum charge for private trips shall be waived for any person delivering one-half cubic yard or more of acceptable recyclable materials. Such persons shall be charged for the actual amount of waste delivered at the extra yardage rate.

"(e) The following disposal charges shall be collected by the Metropolitan Service District from all persons disposing of solid waste at the Clackamas Transfer & Recycling Center:"

Vehicle Category	Base Rate $/ton	Base Rate $/cy	Metro User Fee $/ton	Metro User Fee $/cy	Regional Transfer Charge $/ton	Regional Transfer Charge $/cy	Convenience Charge $/ton	Convenience Charge $/cy	Rehabilitation and Enhancement Fee $/ton	Rehabilitation and Enhancement Fee $/cy	State Landfill Siting Fee $/ton	State Landfill Siting Fee $/cy	Total Rate $/ton	Total Rate $/cy
COMMERCIAL														
Compacted	[$9.80] $7.86	[$2.90] $2.31	[$1.68] $2.04	[0.43] $.60	[$2.00] $2.98	[$0.52] $0.88	[$2.25] $3.00	[$0.57] $0.88	$.50	$.15	$1.00	$.30	[$15.73] $17.38	[$4.42] $5.12
Uncompacted	[9.80] 7.86	[1.23] .99	[1.68] 2.04	0.25	[2.00] 2.98	[0.30] 0.37	[2.25] 3.00	[0.33] 0.37	.50	.06	1.00	.12	[15.76] 17.38	[2.11] 2.16

	Base Rate Per Trip	Metro User Fee Per Trip	Regional Transfer Charge Per Trip	Convenience Charge Per Trip	Rehabilitation and Enhancement Fee	State Landfill Siting Fee	Total Rate Per Trip
PRIVATE							
Cars[1]	[$4.62] $3.84	[$0.54] $0.44	[$1.34] $1.36	[$0.75] $0.80	$.12	$.24	[$7.25] $6.80
Station Wagons[1]	[4.62] 3.84	[0.54] 0.44	[1.34] 1.36	[0.75] 0.80	.12	.24	[7.25] 6.80
Vans[2]	[5.37] 4.80	[0.54] 0.55	[1.34] 1.70	[0.75] 1.00	.15	.30	[8.00] 8.50
Pickups[2]	[5.37] 4.80	[0.54] 0.55	[1.34] 1.70	[0.75] 1.00	.15	.30	[8.00] 8.50
Trailers[2]	[5.37] 4.80	[0.54] 0.55	[1.34] 1.70	[0.75] 1.0	.15	.30	[8.00] 8.50
Extra Yards	[2.31] 1.92	[0.27] 0.22	0.68	[0.35] 0.40	.06	.12	[3.60] 3.40

TIRES[3]	Base Rate	Metro Fee	Regional Transfer Charge	Total Rate
Passenger (up to 10 ply)	$0.50			$0.50
Passenger Tire (on rim)	1.25			1.25
Tire Tubes	0.25			0.25
Truck Tires (20" diameter to 48" diameter on greater than 10 ply)	3.75			3.75
Small Solids	3.75			3.75
Truck Tire (on rim)	8.75			8.75
Dual	8.75			8.75
Tractor	8.75			8.75
Grader	8.75			8.75
Duplex	8.75			8.75
Large Solids	8.75			8.75

[1]Based on a minimum load of two cubic yards.
[2]Based on a minimum load of two and one-half cubic yards.
[3]Cost per tire is listed.

Section 4. Metro Code Section 5.02.045, User Fees, is amended to read as follows:

"The following user fees are established and shall be collected and paid to Metro by the operators of solid waste disposal facilities, whether within or without the boundaries of Metro, for the disposal of solid waste generated, originating [or] , collected or disposed within Metro boundaries in accordance with Metro Code Section 5.01.150:

"(a) For noncompacted commercial solid waste, [25¢] $.25 per cubic yard delivered, or [$1.68] $2.04 per ton delivered.

"(b) For compacted commercial solid waste, [43¢] $.60 per cubic yard delivered; or [$1.68] $2.04 per ton delivered.

"(c) For all material delivered in private cars, station wagons, vans, single and two-wheel trailers, trucks with rated capacities of less than one (1) ton, [27¢] $.22 per cubic yard with a minimum charge of [54¢] $.44 per load when disposal rates are based on a two cubic yard minimum or $.55 per load when rates are based on a two and one-half cubic yard minimum.

"(d) User fees for solid waste delivered in units of less than a whole cubic yard shall be determined and collected on a basis proportional to the fractional yardage delivered.

"(e) Inert material, including but not limited to earth, sand, stone, crushed stone, crushed concrete, broken asphaltic concrete and wood chips used at a landfill for cover, diking, road base or other internal use and for which disposal charges have been waived pursuant to Section 5.02.030 of this chapter shall be exempt from the above user fees. (Ordinance No. 82-146, Sec. 8)"

Section 5. Metro Code Section 5.02.050, Regional Transfer Charge, is amended to read as follows:

"(a) There is hereby established a regional transfer charge which shall be a charge to the operators of solid waste disposal facilities for services rendered by Metro in administering and operating solid waste transfer facilities owned, operated or franchised by Metro. Such charge shall be collected and paid in the form of an add-on to user fees established by Section 5.02.045 of this chapter.

"(b) The following regional transfer charges shall be collected and paid to Metro by the operators of solid waste disposal facilities, whether within or without the boundaries of Metro, for

the disposal of solid waste generated, originating [or] , collected or disposed within Metro boundaries:

"(1) For noncompacted commercial solid waste, [$0.30] $.37 per cubic yard delivered; [$2.00] $2.98 per ton delivered.

"(2) For compacted commercial solid waste, [$0.52] $.88 per cubic yard delivered; [$2.00] $2.98 per ton delivered.

"(3) For all material delivered in private cars, station wagons, vans, single and two wheel trailers, trucks with rated capacities of less than one (1) ton, [$0.68] $.68 per cubic yard with a minimum charge of [$1.34] $1.36 per load when disposal rates are based on a two cubic yard minimum or $1.70 per load when rates are based on a two and one-half cubic yard minimum."

"(c) Regional transfer charges shall not be collected on wastes disposed at limited use landfills by commercial disposers. The purpose of this exemption is to encourage the disposal of non-food wastes at limited use sites and thus prolong the capacity of general purpose landfills."

"(d) The Solid Waste Director is hereby authorized to exempt those wastes which are disposed at transfer stations not operated by Metro from the collection of Regional Transfer Charges if the following conditions are met:

i The RTC exemption benefits the entire waste management system and is needed to provide economic incentives for diverting wastes away from a Metro facility; and

ii The RTC exemption is for a reasonable time not to exceed the completion of construction of the Washington Transfer & Recycling Center; and

iii The RTC exemption will apply only to the quantity of waste which does not adversely affect the finances of the entire waste management system; and

iv The transfer station agrees to accept the entire quantity of waste from the region that it can legally and operationally accept; and

v The transfer station continues to collect other Metro fees as required; and

vi The RTC exemption is granted to a transfer station through a written agreement.

Section 6. Metro Code Section 5.02.065 is established to read as follows:

"5.02.065 Special Waste Surcharge and Special Waste Permit Application Fees:

"(a) There are hereby established a Special Waste Surcharge and a Special Waste Permit Application Fee which shall be collected on all special wastes disposed at the St. Johns Landfill and on all Special Waste Permit Applications. Said Surcharge and fee shall be in addition to any other charge or fee established by this chapter. The purpose of the surcharge and permit application fee is to require disposers of special waste to pay the cost of those services which are provided at the St. Johns Landfill and by the Metro Solid Waste Department to manage special wastes. The said surcharge and fee shall be applied to all special wastes as defined in Metro Code Section 5.02.015.

"(b) The amount of the Special Waste Surcharge collected at the St. Johns Landfill shall be $3.65 per ton of special waste delivered.

"(c) The minimum charge collected through all fees for each special waste disposal trip shall be $50.00.

"(d) The amount of the Special Waste Permit Application Fee shall be $25.00. This fee shall be collected at the time Special Waste Permit Applications are received for processing."

"(e) Lab or testing costs which are incurred by Metro for evaluation of a particular waste may be charged to the disposer of that waste."

"(f) The fees listed in this section shall not be collected from any person who obtains a special waste permit to dispose of waste containing asbestos or other special waste which is removed from a dwelling or apartment building of three or fewer units owned or rented by that person and not disposed of by a commercial hauler or asbestos remover. The purpose of this exemption is to encourage such persons to separate Special Waste from the residential waste stream so that it is disposed of properly."

Section 7. Metro Code, Section 5.02.041, is established to read as follows:

"5.02.041 Rehabilitation and Enhancement Fees:

The following rehabilitation and enhancement fees are established and shall be collected on all wastes disposed at the St. Johns Sanitary Landfill and the Clackamas Transfer & Recycling Center. Money collected from these fees shall be provided for rehabilitation and enhancement of the area in and around the St. Johns Sanitary Landfill.

a) For noncompacted commercial solid waste $.50 per ton delivered, or $.06 per cubic yard delivered.

b) For compacted commercial solid waste, $.50 per ton delivered, or $.15 per cubic yard delivered.

c) For private solid waste, $.06 per cubic yard delivered."

Metro Code, Section 5.02.046, is established to read as follows:

"5.02.046 State Landfill Siting Fees:

The following state landfill siting fees are established and shall be collected on all wastes disposed at the St. Johns Sanitary Landfill and the Clackamas Transfer & Recycling Center. Money collected from these fees shall be paid to the Department of Environmental Quality as directed by Oregon Laws 1985, chapter 679.

a) For noncompacted commercial solid waste $1.00 per ton delivered, or $.12 per cubic yard delivered.

b) For compacted commercial solid waste, $1.00 per ton delivered, or $.30 per cubic yard delivered.

c) For private solid waste, $.12 per cubic yard delivered."

Section 8. The Council finds that, in order to recoup sufficient revenue to operate disposal facilities and programs for 1986 it is necessary that the rates established herein be effective by January of 1986. Therefore an emergency is hereby declared to exist pursuant to ORS 268.515(7), and the rates, fees and charges

established by this ordinance shall be effective on and after January 1, 1986.

ADOPTED by the Council of the Metropolitan Service District this 26th day of November, 1985.

Ernie Bonner, Presiding Officer

Attest:

Clerk of the Council

RM/srs
4118C/405-5
12/03/85

APPENDIX C

IMPORTANT
1986 RATE
DISPOSAL
INFORMATION

METRO

METROPOLITAN SERVICE DISTRICT
Providing Zoo, Solid Waste and Local Government Services

November 29, 1985

527 S.W. Hall St.
Portland, Oregon
97201-5287
(503) 221-1646

Dear Customer:

New Metro disposal and user fee rates will take effect on January 1, 1986 at the St. Johns landfill and the Clackamas Transfer and Recycling Center (CTRC). This is the first rate increase which has been required since 1983 (except at CTRC).

The total commercial disposal rate at St. Johns will increase from $13.48/ton to $14.38/ton (this is only a 6.7% increase after 3 years). In addition, new fees have been added for those who dispose of special waste at St. Johns. The total commercial rate at the Clackamas Transfer and Recycling Center (CTRC) will increase from $15.73/ton to $17.38/ton (a 10.5% increase after 2 years). Depending on the disposal facility and rate pass through method used, these increases should effect residential collection rates by no more than $.05 to $.15 per month.

These tipping fee increases are a result of changes in the cost of service, recent legislation and actions being taken to encourage the diversion of waste away from St. Johns and CTRC. The legislation (SB662) requires that $1.00 per ton of waste be paid for a state landfill siting program and that $.50 per ton be collected for a St. Johns rehabilitation and enhancement fund. The reasons for the rate changes are explained in the detailed 1986 rate study or the rate study overview which can be obtained from Metro.

Metro has the responsibility for assuring that an effective waste management system is available to serve the region. To provide this assurance, Metro has taken the following actions to extend the life of the St. Johns landfill and to promote the efficient utilization of CTRC:

- It is proposed that beginning on January 1, 1986 St. Johns and CTRC will no longer accept wastes which are generated outside of the Metro planning area (Multnomah, Clackamas and Washington Counties). Additional information about this planned restriction will be provided to you soon.

- The Regional Transfer Charge has been removed from commercial wastes disposed at limited-use landfills (Killingsworth, Hillsboro & Grabhorn). Neither the RTC nor Metro user fees are charged at the Oregon Processing and Recovery Center. This provides an economic incentive for some disposers to take eligible wastes to these sites rather than to St. Johns.

- The convenience charge collected at CTRC has been increased to provide an incentive for haulers to use St. Johns or Killingsworth Fast Disposal so that CTRC waste volumes are held within the allowable limit.

- The $1.00 per ton which must be paid for the state landfill siting program on all wastes generated in the region is being paid by Metro this year so that rates at non-Metro facilities will not need to increase. This should keep St. Johns landfill from filling up so quickly.

- And finally, Metro has worked with Yamhill County and others to develop strategies for making it economically more attractive to use disposal sites peripheral to the district. Specifically, Metro has proposed provisions for waiving the Regional Transfer Charge on waste which leaves the region through transfer stations (i.e. Newberg and potentially Forest Grove) if certain conditions are met. Removing the RTC at these facilities and temporarily waiving the fees instituted by SB662 ($1.00/ton) creates another incentive for diversion.

Metro encourages haulers to take advantage of these actions and to utilize the disposal site(s) which makes the most economic sense for their particular operation. A comparison of commercial tip fees at different facilities under the new rates (see the attached table) should indicate that those who haul non food waste and those who operate in areas between two alternative disposal sites may benefit by utilizing a different site than they have been using. The Oregon Processing Center should be considered by those who dispose of wastes containing a high proportion of cardboard or paper.

For example, the tip fees paid for compacted dropbox wastes at limited-use sites are 23% to 47% lower than the St. Johns rates and 36% to 56% lower than the CTRC rates ($20 to $60 in tip fees could be saved on each trip). Savings on noncompacted wastes are a function of the actual waste densities. Generally, loads with densities of greater than 280 pounds per

COMPARISON OF TIPPING FEES AT DISPOSAL FACILITIES
SERVICING THE METRO REGION - January 1, 1986

FACILITY	BASE RATE	SB662 FEES $1.50/ton	METRO FEES RTC	METRO FEES USER FEE	TOTAL RATE	COMPARABLE TONNAGE RATES (see note #1) 250 lbs/yd	350 lbs/yd	590 lbs/yd	850 lbs/yd
ST. Johns	$7.86 /ton	$1.50 /ton	$2.98 /ton	$2.04 /ton	$14.38 /ton	$14.38 /ton	$14.38 /ton	$14.38 /ton	
CTRC (conven. chrg w/base)	$10.86 /ton	$1.50 /ton	$2.98 /ton	$2.04 /ton	$17.38 /ton	$17.38 /ton	$17.38 /ton	$17.38 /ton	
Grabhorn (limited-use)									
loose dropbox	$1.00 /yd	-$0-	-$0-	$0.25 /yd	$1.25 /yd	$10.00 /ton	$7.14 /ton		
compacted dropbox	$2.00 /yd	-$0-	-$0-	$0.60 /yd	$2.60 /yd			$8.81 /ton	
Hillsboro (limited-use)									
loose dropbox	$1.45 /yd	-$0-	-$0-	$0.25 /yd	$1.70 /yd	$13.60 /ton	$9.71 /ton		
compacted dropbox	$1.66 /yd	-$0-	-$0-	$0.60 /yd	$2.26 /yd			$7.66 /ton	
Killingsworth (limited-use)									
loose dropbox	$1.75 /yd	-$0-	-$0-	$0.25 /yd	$2.00 /yd	$16.00 /ton	$11.43 /ton		
compacted dropbox	$2.70 /yd	-$0-	-$0-	$0.60 /yd	$3.30 /yd			$11.19 /ton	
McMinnville (note #2)									
loose	$2.57 /yd	-$0-	$0.37 /yd	$0.25 /yd	$3.19 /yd	$25.52 /ton	$18.23 /ton		
compacted	$2.82 /yd	-$0-	$0.88 /yd	$0.60 /yd	$4.30 /yd			$14.58 /ton	$10.12 /ton
Newberg Transfer Station (note #3)									
loose	$4.70 /yd	-$0-	-$0-	$0.25 /yd	$4.95 /yd	$39.60 /ton	$28.29 /ton		
compacted	$5.95 /yd	-$0-	-$0-	$0.60 /yd	$6.55 /yd			$22.20 /ton	$15.41 /ton
Woodburn (note #4)									
packer	$12.00 /ton	-$0-	$2.98 /ton	$2.04 /ton	$17.02 /ton	$17.02 /ton	$17.02 /ton	$17.02 /ton	
loose dropbox	$2.40 /yd	-$0-	$0.37 /yd	$0.25 /yd	$3.02 /yd	$17.02 /ton	$17.02 /ton		
compacted dropbox	$3.30 /yd	-$0-	$0.88 /yd	$0.60 /yd	$4.78 /yd			$16.20 /ton	
Oregon Processing (note #5) and Recovery Center (50-90% recyclable)	$12.00 /ton	-$0-	-$0-	-$0-	$12.00 /ton	$12.00 /ton	$12.00 /ton	$12.00 /ton	

** NOTES **

1 The comparability of rates is highly dependent on waste densities. Generally loose wastes have greater densities than 250 lb./cu. yd. and compacted wastes are above 590 lbs./cu. yd.

2 The McMinnville base rate includes surcharges of $.37/cu. yd. for a recycling fund and $.20/cu. yd. for local government. Compactors using this site historically have greater waste densities.

3 Yamhill County wishes to encourage the use of transfer stations such as Newberg, Forest Grove (if opened up to other haulers), and WTRC (when operational) for wastes going there. Therefore, the RTC will be charged on waste hauled directly to McMinnville but not on waste delivered through a private transfer station if certain conditions are met. The Newberg base rate includes the disposal cost at the McMinnville landfill.

4 The Woodburn disposal charge is the lessor of the yardage and tonnage rates.

5 The Oregon Processing Center rate for loads of greater than 90% recyclables is $3/ton.

11/20/85 RDM

cubic yard could be disposed of for a lower tip fee at the Killingsworth Fast Disposal (For example, $10 per trip could be saved on the tip fee for a 20 cu. yd. load of waste having a density of 350 lbs/yd^3 if Killingsworth were used rather than St. Johns, there would be a $20 savings over the CTRC rate). Of course operators will also want to consider travel time and other costs involved to determine which site(s) is best for them.

If you have any questions on the new rates or would like further information, please contact Rich McConaghy at 221-1646. We appreciate your patronage and hope that you have a healthy and prosperous new year.

Sincerely,

Dan Durig

Dan Durig,
Director Solid Waste

METRO

METROPOLITAN SERVICE DISTRICT
Providing Zoo, Solid Waste and Local Government Services

527 S.W. Hall St.
Portland, Oregon
97201-5287
(503) 221-1646

December 11, 1985

4847C/437 - Merge List
12/12/85

Dear :

New Metro disposal and user fee rates will take effect on January 1, 1986, at the St. Johns landfill and the Clackamas Transfer & Recycling Center (CTRC). Metro has made every effort to hold disposal rates down and this is the first rate increase which has been required since 1983 (except at CTRC). You should be aware that rate increases are likely to occur in the future as system demands for greater waste reduction and recycling efforts, disposal facilities and transfer stations increase. Local involvement in recycling and waste reduction will become increasingly important as a means of keeping disposal costs at reasonable levels. Your involvement in providing effective waste reduction and recycling opportunities and programs is encouraged.

The total commercial disposal rate at St. Johns will increase from $13.48/ton to $14.38/ton (this is a 6.7 percent increase after three years). In addition, new fees have been added for those who dispose of special waste at St. Johns. The total commercial rate at CTRC will increase from $15.73/ton to $17.38/ton (a 10.5 percent increase after two years). Depending on the disposal facility and rate pass-through method used, these increases should effect residential collection rates by no more than $.05 to $.15 per month. Depending on your individual situation, efficiencies or changes on the collection side may add to or reduce this increase.

Public disposal rates at the St. Johns Landfill will increase from $7.25 per pickup load to $7.50 per load. The CTRC public rate increases from $8.00 per pickup load to $8.50 per load. Reduced rates are available for cars or station wagons and when recyclables are delivered along with wastes.

These tipping fee increases are a result of changes in the cost of service, recent legislation and actions being taken to encourage the diversion of waste away from St. Johns and CTRC. The legislation (SB 662) requires that $1.00 per ton of waste be paid for a state landfill siting program and that $.50 per ton be collected for a St. Johns Rehabilitation and Enhancement Fund. The reasons for the rate changes are explained in the detailed 1986 rate study or the rate study overview which I have included.

Metro has the responsibility for assuring that an effective waste management system is available to serve the region. To provide this assurance, Metro has taken the following actions to extend the life of the St. Johns Landfill and to promote the efficient utilization of CTRC:

- It is proposed that beginning on January 1, 1986, St. Johns and CTRC will no longer accept wastes which are generated outside of the Metro planning area (Multnomah, Clackamas and Washington counties). Additional information about this planned restriction is provided in the enclosed draft ordinance and staff report (the second reading of this ordinance will be on December 19).

- The Regional Transfer Charge has been removed from commercial wastes disposed at limited-use landfills (Killingsworth, Hillsboro & Grabhorn). Neither the RTC nor Metro user fees are charged at the Oregon Processing and Recovery Center. This provides an economic incentive for some disposers to take eligible wastes to these sites rather than to St. Johns.

- The convenience charge collected at CTRC has been increased to provide an incentive for haulers to use St. Johns or Killingsworth Fast Disposal so that CTRC waste volumes are held within the allowable limit.

- The $1.00 per ton which must be paid for the state landfill siting program on all wastes generated in the region is being paid by Metro this year so that rates at non-Metro facilities will not need to increase. This should keep the St. Johns Landfill from filling up so quickly.

- And finally, Metro has worked with Yamhill County and others to develop strategies for making it economically more attractive to use disposal sites peripheral

to the District. Specifically, Metro has proposed provisions for waiving the Regional Transfer Charge on waste which leaves the region through transfer stations (i.e., Newberg and potentially Forest Grove) if certain conditions are met. Removing the RTC at these facilities and temporarily waiving the fees instituted by SB 662 ($1.00/ton) creates another incentive for diversion.

Metro encourages haulers to take advantage of these actions and to utilize the disposal site(s) which makes the most economic sense for their particular operation. A comparison of commercial tip fees at different facilities under the new rates (see the attached table) should indicate that those who haul non-food waste and those who operate in areas between two alternative disposal sites may benefit by utilizing a different site than they have been using. The Oregon Processing Center should be considered by those who dispose of wastes containing a high proportion of cardboard or paper.

For example, the tip fees paid for compacted dropbox wastes at limited-use sites are 23 percent to 47 percent lower than the St. Johns rates and 36 percent to 56 percent lower than the CTRC rates ($20 to $60 in tip fees could be saved on each trip). Savings on noncompacted wastes are a function of the actual waste densities. Generally, loads with densities of greater than 280 pounds per cubic yard could be disposed of for a lower tip fee at the Killingsworth Fast Disposal (for example, $10 per trip could be saved on the tip fee for a 20 cu. yd. load of waste having a density of 350 lbs/cu. yd. if Killingsworth were used rather than St. Johns, there would be a $20 savings over the CTRC rate). Of course, operators will also want to consider travel time and other costs involved to determine which site(s) is best for them.

If you have any questions on the new rates or would like further information, please contact Rich McConaghy at 221-1646. I appreciate the increased interest that we have experienced in the previous several months on the part of local government in this important public service.

Sincerely,

Daniel F. Durig, Director Solid Waste

DFD/RM/gl
4836C/437-2

Enclosures

APPENDIX D

July 29, 1985

L.G.B. Landscaping
Commercial & Residential Landscaping
1045 High Street
Gladstone, Oregon 97027

Metropolitan Service District
527 S.W. Hall
Portland, Oregon 97201

To Whom This May Concern:

I feel that the plant selection is fine for most of the areas that they are selected. In one case, I find it difficult to understand why a Dogwood Tree is placed in the lawn. This normally is not done, due to the fact that Dogwoods can not take as much water that is necessary to keep the lawn green.

There are a couple of reasons why I feel there is a problem on this site despite all the fertilizer we put on. One reason is the soil is not the best. The fill that was brought in was great for compacting, but not the most nutrients within. It nearly is all sand. This explains why the lawn needs so much water. I would not say that that is the only problem. When we made circles around each tree, we found that they were still in the burlap or plastic ball. The trees had not been loosed from the ball. In the cases we find this done, some trees are able to make it through the bag and survive, others get root bound and die. When we plant trees or shrubs, we remove the bag. Also, our plants are guaranteed for one year.

The following is a list of the vegetation and their prices that need replacing at CTRC. I am also recommending some changes in the types of vegetation that would be more suitable to give you the appearance and durability required to fit your operation.

AREA	RECOMMENDATION
Washington Blvd.	Three Sugar Maples to replace two Locust and one Dogwood.
Building - Washington Blvd.	Replace Russian Olive with one Vine Maple. Replace one dead Vine Maple.
Fence line bordering empty lot	Replace Spruce with 16 Fir Trees, 6'-7' tall.
Washrack	Replace 16 Arborvitae. Replace two Sweet Gum.
Northwest corner near railroad tracks and retention pond	Plant two Sweetgum where Pine Trees did not survive.
Truck circle turn around	Replace dead Olive Tree with one Thornless Honey Locust.
Front by stairway	Replace Ponderosa Pine with 9'-10' Noble Fir.

Three Sugar Maples at $50.00 each	$ 150.00
Two Vine Maples at $20.00 each	40.00
Sixteen Douglas Firs at $25.00 each	400.00
Four Sweet Gum at $55.00 each	220.00
One Thornless Honey Locust at $50.00	50.00
Sixteen Arborvitae at $14.00 each	224.00
One Noble Fir at $30.00	30.00
TOTAL MATERIALS	$1,114.00
Two days labor	550.00
Material pick-up and delivery charge	100.00
Tractor for planting	100.00
TOTAL	$1,864.00

Please let me know if you are interested in this proposal. We should start procedures in planting before the growing season has past.

Yours truly,

Lance Baker

APPENDIX E

CTRC WASTE QUANTITIES GIVEN IN 30 DAY AVERAGE

Date (1985)	Public Trips	Public Tons	Commer tons	Total Tons	Average Last 30 Days
January 1	0	0	0	0	632
2	273	102	1,071	1,173	637
3	200	75	820	895	637
4	221	83	838	921	640
5	527	198	157	355	624
6	308	116	22	138	601
7	203	76	943	1,019	628
8	167	63	800	863	654
9	154	58	739	797	647
10	157	59	729	788	647
11	154	58	775	833	645
12	415	156	60	216	626
13	273	102	0	102	601
14	164	62	875	937	628
15	135	51	705	756	649
16	125	47	730	777	642
17	143	54	766	820	645
18	145	54	711	765	646
19	385	144	73	217	633
20	211	79	9	88	610
21	173	65	860	925	633
22	150	56	667	723	655
23	150	56	701	757	647
24	132	50	722	772	673
25	159	60	763	823	665
26	417	156	79	235	643
27	272	102	0	102	616
28	189	71	826	897	636
29	165	62	697	759	657
30	112	42	742	784	641
31	153	57	703	760	667

CTRC WASTE QUANTITIES GIVEN IN 30 DAY AVERAGE

Date (1985)		Public Trips	Public Tons	Commer tons	Total Tons	Average Last 30 Days
FEBRUARY	1	71	27	752	779	653
	2	144	54	85	139	628
	3	199	75	0	75	600
	4	146	55	781	836	616
	5	54	20	554	574	631
	6	117	44	776	820	624
	7	77	29	707	736	620
	8	89	33	765	798	620
	9	311	117	99	216	601
	10	272	102	0	102	576
	11	122	46	929	975	602
	12	131	49	714	763	624
	13	140	53	741	794	619
	14	147	55	752	807	621
	15	168	63	795	858	623
	16	459	172	73	245	604
	17	382	143	15	158	584
	18	335	126	889	1,015	610
	19	154	58	725	783	634
	20	130	49	760	809	630
	21	125	47	741	788	632
	22	161	60	803	863	635
	23	488	183	76	259	618
	24	294	110	2	112	595
	25	228	86	968	1,054	622
	26	174	65	719	784	645
	27	206	77	783	860	643
	28	195	73	799	872	647

CTRC WASTE QUANTITIES GIVEN IN 30 DAY AVERAGE

Date (1985)	Public Trips	Public Tons	Commer tons	Total Tons	Average Last 30 Days
MARCH 1	202	76	833	909	651
2	561	210	71	281	635
3	388	146	12	158	615
4	230	86	987	1,073	646
5	158	59	813	872	672
6	181	68	732	800	671
7	189	71	759	830	680
8	200	75	812	887	682
9	556	209	81	290	667
10	495	186	20	206	647
11	323	121	967	1,088	676
12	233	87	811	898	703
13	245	92	768	860	699
14	194	73	873	946	705
15	229	86	881	967	711
16	634	238	99	337	695
17	493	185	0	185	673
18	276	104	955	1,059	700
19	255	96	778	874	724
20	176	66	865	931	721
21	155	58	812	870	724
22	153	57	848	905	727
23	329	123	97	220	708
24	235	88	12	100	683
25	221	83	934	1,017	708
26	173	65	735	800	731
27	153	57	744	801	723
28	206	77	792	869	725
29	205	77	862	939	728
30	411	154	64	218	706
31	297	111	11	122	680

CTRC WASTE QUANTITIES GIVEN IN 30 DAY AVERAGE

Date (1985)	Public Trips	Public Tons	Commer tons	Total Tons	Average Last 30 Days
APRIL 1	241	90	964	1,054	706
2	253	95	792	887	730
3	216	81	890	971	727
4	232	87	884	971	730
5	333	125	928	1,053	738
6	776	291	91	365	723
7	187	70	4	70	696
8	337	126	1,059	1,185	726
9	299	112	933	1,045	754
10	274	103	915	1,018	751
11	248	93	967	1,060	757
12	263	99	872	971	760
13	748	281	81	358	741
14	564	212	0	195	715
15	334	125	1,092	1,217	744
16	261	98	991	1,089	775
17	238	89	950	1,039	774
18	189	71	1,023	1,094	781
19	197	74	957	1,031	785
20	569	213	88	300	766
21	322	121	5	118	739
22	213	80	1,014	1,094	768
23	177	66	800	866	794
24	169	63	839	902	790
25	184	69	842	911	794
26	190	71	865	936	798
27	498	187	88	245	778
28	385	144	9	153	751
29	285	107	964	1,071	780
30	273	102	934	1,036	810

CTRC WASTE QUANTITIES GIVEN IN 30 DAY AVERAGE

Date (1985)	Public Trips	Public Tons	Commer tons	Total Tons	Average Last 30 Days
MAY 1	272	102	902	1,004	809
2	248	93	933	1,026	813
3	201	75	956	1,031	815
4	621	233	96	329	794
5	458	172	12	168	764
6	286	107	1,065	1,172	791
7	269	101	955	1,056	824
8	232	87	966	1,053	820
9	251	94	960	1,054	820
10	242	91	922	1,013	820
11	553	207	110	317	795
12	342	128	0	128	767
13	272	102	954	1,056	790
14	222	83	873	956	816
15	208	78	885	963	807
16	259	97	930	1,027	805
17	277	104	828	932	801
18	639	240	222	462	780
19	528	198	17	209	753
20	315	118	1,069	1,187	783
21	271	102	890	992	812
22	269	101	878	979	808
23	275	103	982	1,085	815
24	310	116	969	1,085	821
25	672	252	86	338	802
26	370	139	8	147	776
27	279	105	698	803	794
28	328	123	938	1,061	825
29	185	69	947	1,016	823
30	215	81	978	1,059	824
31	241	90	964	1,054	825

CTRC WASTE QUANTITIES GIVEN IN 30 DAY AVERAGE

Date (1985)		Public Trips	Public Tons	Commer tons	Total Tons	Average Last 30 Days
JUNE	1	390	146	68	208	798
	2	381	143	1	144	768
	3	320	120	1,078	1,198	797
	4	243	91	932	1,023	826
	5	160	60	932	992	820
	6	180	68	1,013	1,081	821
	7	184	69	1,043	1,112	823
	8	564	212	124	336	799
	9	463	174	7	181	771
	10	347	130	1,100	1,230	801
	11	324	122	991	1,113	834
	12	293	110	969	1,079	835
	13	340	128	973	1,101	840
	14	385	144	1,005	1,149	846
	15	704	264	100	364	824
	16	369	138	10	148	798
	17	302	113	1,127	1,240	824
	18	267	100	947	1,047	852
	19	257	96	906	1,002	846
	20	289	108	957	1,065	848
	21	325	122	954	1,076	851
	22	622	233	96	329	826
	23	514	193	10	201	797
	24	387	145	1,052	1,197	825
	25	285	107	882	989	853
	26	290	109	985	1,094	863
	27	290	109	896	1,005	861
	28	343	129	966	1,095	864
	29	702	263	86	338	840
	30	467	175	13	188	811

CTRC WASTE QUANTITIES GIVEN IN 30 DAY AVERAGE

Date (1985)	Public Trips	Public Tons	Commer tons	Total Tons	Average Last 30 Days
JULY	371	139	1,034	1,173	843
2	280	105	945	1,050	873
3	342	128	989	1,117	870
4	96	36	617	653	858
5	460	173	802	975	858
6	567	213	102	315	832
7	381	143	0	143	800
8	340	128	986	1,114	826
9	276	104	873	977	852
10	300	113	937	1,050	846
11	277	104	1,031	1,135	847
12	266	100	910	1,010	845
13	586	220	109	302	818
14	359	135	21	151	785
15	340	128	973	1,101	809
16	317	119	901	1,020	838
17	281	105	905	1,010	831
18	266	100	921	1,021	830
19	282	106	839	945	828
20	468	176	134	310	803
21	391	147	14	161	772
22	298	112	991	1,103	798
23	303	114	850	964	823
24	305	114	877	991	816
25	306	115	919	1,034	818
26	320	120	869	989	814
27	499	187	91	274	790
28	370	139	10	134	758
29	327	123	1,009	1,132	785
30	298	112	819	931	809
31	287	108	854	962	802

CTRC WASTE QUANTITIES GIVEN IN 30 DAY AVERAGE

Date (1985)	Public Trips	Public Tons	Commer tons	Total Tons	Average Last 30 Days
AUGUST 1	238	89	894	983	800
2	262	98	834	932	794
3	583	219	92	302	782
4	391	147	23	155	755
5	364	137	1,038	1,175	784
6	286	107	862	969	811
7	263	99	850	949	806
8	238	89	893	982	806
9	264	99	928	1,027	805
10	583	219	131	350	779
11	415	156	9	146	750
12	311	117	948	1,065	775
13	320	120	940	1,060	806
14	269	101	863	964	801
15	248	93	907	1,000	801
16	292	110	912	1,022	801
17	485	182	81	256	775
18	355	133	2	119	748
19	328	123	1,092	1,215	778
20	278	104	857	961	805
21	268	101	948	1,049	803
22	300	113	953	1,066	806
23	293	110	953	1,063	809
24	553	207	65	264	783
25	479	180	5	148	755
26	310	116	1,048	1,164	785
27	245	92	883	975	813
28	296	111	1,009	1,120	812
29	278	104	900	1,004	815
30	290	109	1,026	1,135	821
31	587	220	79	292	798

CTRC WASTE QUANTITIES GIVEN IN 30 DAY AVERAGE

Date (1985)	Public Trips	Public Tons	Commer tons	Total Tons	Average Last 30 Days
SEPTEMBER 1	340	128	3	121	771
2	297	111	747	858	789
3	336	126	925	1,051	819
4	296	111	1,020	1,131	817
5	268	101	947	1,048	820
6	234	88	965	1,053	824
7	636	239	77	301	801
8	449	168	7	162	772
9	311	117	1,136	1,253	802
10	192	72	971	1,043	832
11	233	87	968	1,055	832
12	216	81	993	1,074	832
13	211	79	1,043	1,122	837
14	469	176	115	291	814
15	338	127	6	133	784
16	265	99	1,090	1,189	815
17	201	75	918	993	844
18	190	71	941	1,012	838
19	229	86	986	1,072	841
20	239	90	961	1,051	841
21	584	219	117	336	817
22	434	163	5	168	787
23	386	145	1,058	1,203	819
24	246	92	971	1,063	849
25	195	73	1,006	1,079	846
26	224	84	995	1,079	850
27	257	96	935	1,031	847
28	485	182	93	275	822
29	376	141	4	145	789
30	288	108	1,041	1,149	818

CTRC WASTE QUANTITIES GIVEN IN 30 DAY AVERAGE

Date (1985)		Public Trips	Public Tons	Commer tons	Total Tons	Average Last 30 Days
OCTOBER	1	243	91	865	956	846
	2	225	84	958	1,042	852
	3	186	70	883	953	849
	4	237	89	932	1,021	845
	5	634	238	83	321	821
	6	449	168	6	174	792
	7	250	94	1,029	1,123	819
	8	151	57	898	955	845
	9	177	66	909	975	836
	10	270	101	906	1,007	835
	11	205	77	874	951	831
	12	432	162	77	239	804
	13	343	129	7	136	771
	14	232	87	1,054	1,141	799
	15	182	68	894	962	827
	16	152	57	969	1,026	821
	17	197	74	897	971	821
	18	191	72	908	980	819
	19	345	129	67	196	790
	20	390	104	0	104	759
	21	206	77	1,077	1,154	786
	22	135	51	836	887	810
	23	135	51	939	990	803
	24	141	53	856	909	798
	25	203	76	948	1,024	796
	26	448	168	107	275	769
	27	345	113	2	115	739
	28	182	68	1,159	1,227	770
	29	170	64	862	926	796
	30	169	63	917	980	791
	31	175	66	948	1,014	793

CTRC WASTE QUANTITIES GIVEN IN 30 DAY AVERAGE

Date (1985)		Public Trips	Public Tons	Commer tons	Total Tons	Average Last 30 Days
NOVEMBER	1	148	56	956	1,012	792
	2	461	173	112	285	769
	3	360	121	0	121	739
	4	148	56	1,126	1,182	768
	5	164	62	947	1,009	796
	6	124	47	946	993	791
	7	114	43	991	1,034	794
	8	155	58	1,025	1,083	798
	9	400	150	100	250	772
	10	183	69	1	70	743
	11	211	79	1,056	1,135	773
	12	181	68	875	943	800
	13	140	53	924	977	794
	14	156	59	813	872	791
	15	131	49	950	999	790
	16	428	161	65	226	766
	17	309	109	17	126	737
	18	190	71	1,037	1,108	768
	19	116	44	884	928	795
	20	110	41	931	972	789
	21	99	37	868	905	790
	22	67	25	784	809	784
	23	128	48	85	133	758
	24	130	49	20	69	726
	25	88	33	859	892	746
	26	96	36	809	845	771
	27	131	49	1,007	1,056	765
	28	5	2	264	266	743
	29	174	65	711	776	736
	30	94	35	127	162	708

CTRC WASTE QUANTITIES GIVEN IN 30 DAY AVERAGE

Date (1985)		Public Trips	Public Tons	Commer tons	Total Tons	Average Last 30 Days
DECEMBER	1	32	10	0	10	674
	2	33	12	543	555	683
	3	110	41	1,041	1,082	715
	4	162	61	949	1,010	710
	5	179	67	865	932	707
	6	140	53	1,109	1,162	713
	7	435	163	138	301	688
	8	338	111	0	111	656
	9	217	81	1,132	1,213	688
	10	173	65	930	995	719
	11	160	60	888	948	713
	12	149	56	903	959	713
	13	212	80	986	1,066	716
	14	393	147	28	175	693
	15	288	108	2	110	663
	16	187	70	1,002	1,072	692
	17	141	53	837	890	717
	18	141	53	851	904	710
	19	164	62	815	877	709
	20	136	51	904	955	708
	21	358	134	79	213	685
	22	211	61	0	61	660
	23	223	84	1,036	1,120	693
	24	206	77	840	917	721
	25	0	0	0	0	691
	26	236	89	878	967	695
	27	151	57	984	1,041	695
	28	435	163	174	337	697
	29	338	94	4	98	675
	30	305	114	1,000	1,114	706
	31	257	96	1,022	1,118	743

APPENDIX F