Agenda

COUNCIL MEETING

METROPOLITAN SERVICE DISTRICT 527 S.W. HALL ST., PORTLAND, OREGON 97201 503 221-1646
Providing Zoo, Transportation, Solid Waste and other Regional Services

Date: March 14, 1985

Day: Thursday

Time: 6:30 p.m.

Place: Washington Park Zoo, Meeting Center, Gate "G"

Approx. Time *		Presented By
6:30	CALL TO ORDER ROLL CALL	
	1. Introductions	
	2. Councilor Communications	
	3. Executive Officer Communications	
6:35	3.1 Consideration of Resolution No. 85-553, for the Purpose of Confirming the Appointment of Vickie L. Rocker to the Position of Public Affairs Director	Gustafson
	4. Written Communications to Council on Non-Agenda Items	
	5. Citizen Communications to Council on Non-Agenda Items	
6:50	6. APPROVAL OF MINUTES of the meeting of February 14, 1985	
	7. ORDINANCES	
6:55	7.1 Consideration of Ordinance No. 85-186, for the Purpose of Amending the FY 1984-85 Budget and Appropriations Schedule (Continued First Reading)	Sims

* All times listed on this agenda are approximate; items may not be considered in the exact order indicated.

8. RESOLUTIONS

7:10	8.1 Consideration of Resolution No. 85-539, for the Purpose of Transmitting the FY 1984-85 Budget Amendments to the TSCC	Sims
7:15	8.2 Consideration of Resolution No. 85-545, for the Purpose of Adopting a Council Position on Proposed Legislation Modifying State Landfill Siting Authority	Fell

9. OTHER BUSINESS

7:30	9.1 Consideration of a Contract with Swan Wooster Engineering Inc. to Design the Washington County Transfer Recycling & Center	Winn

7:45 10. COMMITTEE REPORTS

7:50 ADJOURN

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Executive Officer Report

RICK GUSTAFSON, Executive Officer
METROPOLITAN SERVICE DISTRICT 527 SW Hall St., Portland, OR 97201-5287 503 221-1646

March 14, 1985

1985 Legislature

The dues bill, HB 2037, passed the House March 12 with a vote of 40-18 (Phillips and Burton were absent). This bill, along with the zoo uncoupling bill, HB 2036, have been assigned to Senator Otto's Government Operations and Elections Committee.

The excise tax authority bill, HB 2275, remains in the House Intergovernmental Affairs Committee with no action scheduled.

Metropolitan legislative agenda. Multnomah, Clackamas and Washington counties have approved resolutions supporting a metropolitan position on legislative financial issues. A regionally coordinated testimony was presented to the Joint Trade and Economic Development Committee on the lottery; a regional corrections proposal, which has the support of the Corrections Division, is in legislative council draft and will be introduced in the Senate by Glenn Otto; a 2¢ gas tax bill, amended to phase penny increases, was passed by the House Transportation Committee and is now in the Revenue Committee; and all local governments will be treated consistently in deliberations on the sales tax.

Regional Convention, Trade, and Spectator Facilities

The first meeting of the Task Force, chaired by Bob Ridgley, will be held on March 18. Specific study committees are being formed

Intergovernmental Resource Committee

The Committee completed its deliberations and recommended a 51¢ dues level to the Council.

UGB Cases

A full report on all pending cases will be prepared for the Council at the March 28 meeting. In the future, status reports will be provided on a regular basis. In the meantime, Case No. 83-1 (DeShirlia/McCarthy) will be on the March 28 agenda, and Case No. 84-2 (PGE) will be scheduled shortly for hearing.

Telecommunications	The Telecommunications Forum is completing its report which will be presented to Council later this month.
Air Quality	Forecasts of 1987 hydrocarbon emissions were prepared for DEQ as part of a re-assessment of the growth cushion. Emissions from transportation sources will be reduced by 25 to 30 percent over the next four years.
Federal Transportation Funds	The TIP subcommittee has finalized its FY '85 (e)(4) highway construction program recommendation. TPAC, JPACT and Council action are programmed for next month.
S.W. Corridor Study	The Policy Committee met on February 28 and approved the list of issues to be addressed and options to be studied. More information was requested on the citizen involvement program.
Regional Landfill Site	The Multnomah County Task Force is currently reviewing the landfill siting process.
Washington Transfer & Recycling Center	Staff conducted a public meeting on March 5, presenting information on the siting process and soliciting input from the public on the two sites selected by the Advisory Group for further studies (located in the area of 158th & Jenkins/Merlo Roads). Council action is scheduled March 14 on a design contract with Swan Wooster.
Clackamas Transfer & Recycling Center	The CTRC Annual Report was presented to the Oregon City Planning Commission on Feb. 26th. The Commission is generally pleased with the operation of the facility although some landscape and litter problems were discussed. They recognized Metro's progress in siting the transfer station in Washington County, but also stressed that the time set by the Commission in opening this second facility has not been met.
St. Johns Landfill	Councilor Gary Hansen and I were members of a panel on landfills at the North Portland Citizens Committee conference on "Neighborhood Goal Setting" on March 9. Gary and I discussed Metro's role in siting and closure of landfills and current plans for St. Johns. Former Metro Councilor Mike Burton moderated the session on economic development of the neighborhood.

Methane Gas	On March 28 options for development of this project will be presented to the Council.
Waste Reduction	An agreement was signed between Clackamas County and Metro providing for six composting workshops (3 in Clackamas, 3 in Portland) and for distribution of recycling curriculum guides to Clackamas County through in-service training workshops. As part of the development of the Implementation Plan for SB 405, educational and marketing materials are being distributed over the next four months statewide to the wasteshed areas and affected interests.
Alaska Tundra Exhibit	The official opening of this exhibit extends through March 17; events for the public are scheduled over the weekend - March 16 & 17.
Africa Bush Exhibit	Design of this project has commenced and is anticipated to be completed in December 1985.
Elephant Museum	A fund-raising campaign was kicked off at a dinner hosted by the Earle Chiles Foundation. Mr. and Mrs. Glen Holden presented the Zoo a donation of $100,000 for the Museum in memory of his mother Lilah Callen Holden. An additional $300,000 is needed to complete the 7,000 foot structure.
More on Elephants	Packy's 23rd birthday is Sunday, April 14, and a celebration is scheduled to begin at Noon with a special cake served at 2:00 p.m. Those Saturday Market elephant ears are coming to the Zoo. Look for the vending cart selling them.
Office Move	With the approval of the lease, an RFP was issued for a space planner. Proposals have been received and a committee which includes Councilor Kafoury and myself will conduct interviews before making a final selection. In the meantime, each department has been requested to identify special needs to be considered by the space planner.
Oregon COG Directors	Discussion at the Oregon COG Directors meeting on February 15 included a review of NARC's Federal briefing, a legislative update on the cigarette tax and lottery, and compensation and benefit plans.

Legal Issues

1000 Friends v. LCDC, Metro. This case is the appeal of LCDC's acknowledgement of Metro's Urban Growth Boundary. It is rumored, once again, that the Circuit Court decision may be rendered in the next few weeks. If the decision is adverse, then LCDC must reopen the acknowledgment process for the boundary.

Krypton v. Metro. Krypton, a subcontractor on the Alaska Tundra project, is suing for payment on the contractor's bond or for payment from Metro if the bond is defective. Metro has filed a motion to dismiss. Because other parties are also suing and being sued, the case is moving slowly through the motion phase.

Alaska Tundra. Metro's suit to recover the costs of this project from the bond is proceeding slowly, as well, because it has been consolidated for pretrial purposes with the Krypton case.

Metro v. Multnomah County. This is Metro's suit to remove the Wildwood exclusion from Multnomah County's landfill ordinance. Metro's brief is due next week, and the case should be decided in May.

Public Affairs

I am very pleased with the selection of Vickie L. Rocker as our new Director. Upon confirmation, she is prepared to start on April 1.

New Employees

February 1985

Zoo

Michael Illig, Senior Keeper of Paddocks

Solid Waste

Wayne Rifer, promoted to Analyst II from Program Coordinator

Patrick Miner, promoted to Program Coordinator from Program Assistant (Recycling Information Center)

Marilyn Derksen, Gatehouse/Landfill Attendant

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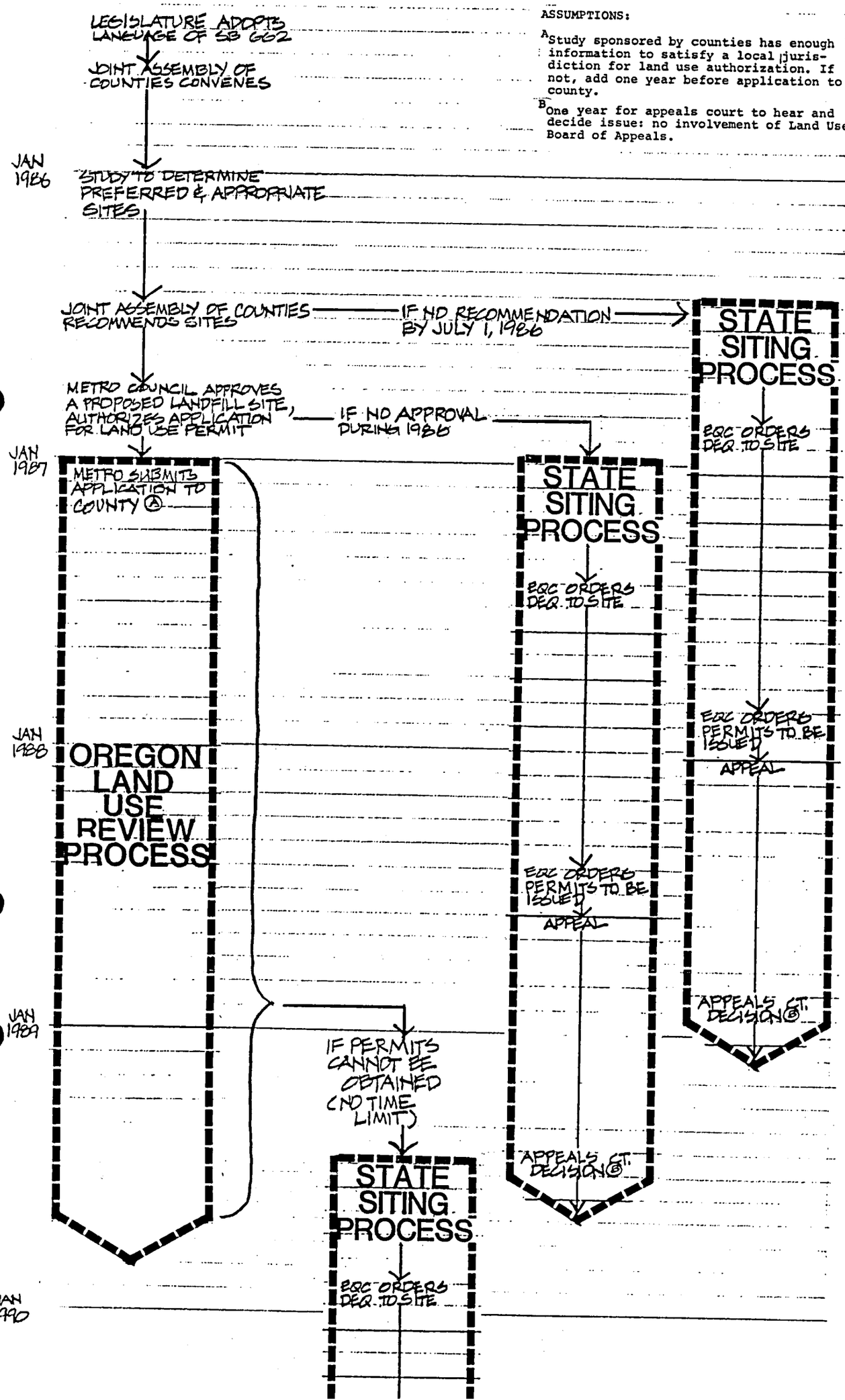
3108C/D3-2

SCENARIO 5

- COUNTIES SELECT SITE; METRO APPROVES
- POSSIBLE STATE SITING PROCESS



ASSUMPTIONS:

[A] Study sponsored by counties has enough information to satisfy a local jurisdiction for land use authorization. If not, add one year before application to county.

[B] One year for appeals court to hear and decide issue: no involvement of Land Use Board of Appeals.

Senate Bill 662

Sponsored by COMMITTEE ON GOVERNMENT OPERATIONS AND ELECTIONS (at the request of Representative Mike Burton)

SUMMARY

The following summary is not prepared by the sponsors of the measure and is not a part of the body thereof subject to consideration by the Legislative Assembly. It is an editor's brief statement of the essential features of the measure **as introduced.**

Requires joint assembly of county commissioners of counties within metropolitan service district for purpose of selecting landfill disposal sites. Requires recommendation of sites to metropolitan service district no later than July 1, 1986. Requires metropolitan service district to review recommended sites. Requires metropolitan service district, if it approves site, to seek permits necessary to operate landfill on site. Authorizes Environmental Quality Commission to select site and issue necessary permits if joint assembly does not recommend site; if metropolitan service district does not approve site; or if necessary permits cannot be obtained. Specifies criteria by which Environmental Quality Commission must choose site and issue permits for operation of landfill on that site. Requires surcharge of 50 cents per ton from person depositing solid waste in landfill created under this Act after July 1, 1986. Provides that fees collected as surcharge be used to promote economic development of specified area within Multnomah County.

A BILL FOR AN ACT

Relating to solid waste disposal; and appropriating money.

Be It Enacted by the People of the State of Oregon:

SECTION 1. Sections 2 to 4 of this Act are added to and made a part of ORS chapter 459.

SECTION 2. (1) Within 60 days after the effective date of this 1985 Act, the governing bodies of all the counties located wholly or partially within a metropolitan service district shall meet in a joint assembly for the purpose of determining appropriate locations for a landfill disposal site within the boundaries of their counties.

(2) Not later than 30 days after the effective date of this 1985 Act, the governing body of the most populous county within the metropolitan service district shall call the joint assembly of the county governing bodies. The governing body of the most populous county shall cause notice of the joint assembly to be sent by certified mail to each member of the governing body of each county. The notice shall specify the time and place of the joint assembly.

(3) At the joint assembly, a majority of the members of each governing body constitutes a quorum for the transaction of business.

(4) The members of the county governing bodies at the joint assembly shall adopt rules for the conduct of the joint assembly and any further proceedings that may be necessary for carrying out the requirements of this section. The members of the county governing bodies shall order a study to be conducted to determine the preferred and appropriate sites for a landfill within their counties. The study shall be completed not later than July 1, 1986.

(5) Upon completion of the study, but not later than July 1, 1986, the members of the governing bodies of the affected counties shall jointly recommend preferred sites for a landfill to the council of the metropolitan service district. The governing bodies may also jointly recommend a preferred site for a resource recovery facility.

(6) Notwithstanding any acknowledged comprehensive plan of a city or county, when making its determination on the location of a landfill disposal site, the joint assembly of county commissioners need

NOTE: Matter in **bold face** in an amended section is new; matter [*italic and bracketed*] is existing law to be omitted.

consider only the state-wide planning goals relating to solid waste management adopted under ORS 197.005 to 197.430 and the provisions of the solid waste management plan adopted by the metropolitan service district for the area.

(7) A county shall be barred from contesting or seeking review of a decision by the Environmental Quality Commission relating to selection of a landfill disposal site under section 4 of this 1985 Act if the commission is required to select the landfill disposal site because a site is not selected and recommended by the joint assembly of county commissioners under this section.

(8) Unless the cost is apportioned differently according to an agreement among the counties, the cost of the study required under this section shall be paid by each county in such proportion as the population of the county bears to the total population of all the affected counties.

SECTION 3. (1) If, upon review but not later than _____, 1986, the council of the metropolitan service district approves a proposed landfill disposal site recommended by the county governing bodies under section 2 of this 1985 Act, the metropolitan service district shall apply to the local government unit with jurisdiction over the proposed site for any license, permit or other form of approval necessary under a comprehensive plan or land use regulations to establish or operate a landfill on that site.

(2) ORS 215.428 and 227.178 apply to an application made under this section. However, the metropolitan service district shall not ask for any extension of time that allows final action on its application to be taken later than one year after the date on which the application was first made.

SECTION 4. (1) The Environmental Quality Commission shall review the sites recommended by the county governing bodies under section 2 of this 1985 Act and any other alternative disposal sites or resource recovery systems of facilities recommended by the metropolitan service district or Department of Environmental Quality and select a site if:

(a) A site is not selected and recommended by the joint assembly of county commissioners under section 2 of this 1985 Act;

(b) The metropolitan service district did not approve the sites selected and recommended by the joint assembly of county commissioners; or

(c) The necessary permits, licenses or other forms of approval for a selected site cannot be obtained by the metropolitan service district.

(2) In making its determination on the location of a landfill disposal site, the Environmental Quality Commission shall consider only:

(a) The provisions of the solid waste management plan adopted by the metropolitan service district for the area;

(b) The state-wide planning goals adopted under ORS 197.005 to 197.430; and

(c) Rules adopted by the Department of Environmental Quality relating to solid waste disposal.

(3) Notwithstanding any city or county charter or ordinance, the Environmental Quality Commission is authorized to issue all permits required for a landfill disposal site within the boundaries of an affected local government unit if the commission finds that:

(a) The action is consistent with the state-wide planning goals relating to solid waste management adopted under ORS 197.005 to 197.430 and the solid waste management plan adopted by the metropolitan service district; and

(b) The metropolitan service district is unable to establish a landfill disposal site.

(4) The Environmental Quality Commission shall issue all permits necessary for the establishment and operation of a landfill disposal site within one year after the date on which it makes the findings of fact described in subsection (1) of this section.

(5) Judicial review of any order of the Environmental Quality Commission under this section may be obtained by any aggrieved person by petition to the Court of Appeals in the manner provided for review of orders in contested cases.

SECTION 5. (1) Any person using a landfill disposal site established under this Act after July 1, 1986, shall pay, in addition to other fees paid for the use of the site, a fee of 50 cents per ton of solid waste deposited in the site.

(2) Fees collected under this section are continuously appropriated to the Economic Development Commission for the purpose of promoting the economic development of that area in Multnomah County situated west of Interstate Highway 5 between the Willamette and Columbia Rivers.

BEFORE THE COUNCIL OF THE
METROPOLITAN SERVICE DISTRICT

FOR THE PURPOSE OF ADOPTING A COUNCIL POSITION ON PROPOSED LEGISLATION MODIFYING STATE LANDFILL SITING AUTHORITY	)))))	RESOLUTION NO. 85-545 Introduced by Councilor Ernie Bonner and Executive Officer Rick Gustafson

WHEREAS, The process of siting a sanitary landfill is characterized by lengthy time requirements, ambiguous authority and criteria; and

WHEREAS, The need for a new sanitary landfill site in the Portland metropolitan area is manifest; and

WHEREAS, Legislation modifying existing state landfill siting authority is likely to be introduced by persons or organizations outside the Metropolitan Service District; and

WHEREAS, Metro is responsible for operating solid waste disposal sites and has an interest, therefore, in the siting process; now, therefore,

BE IT RESOLVED,

That the Council of the Metropolitan Service District supports legislation establishing state landfill siting authority which:

1. Protects the environment of the people of the tri-county area;
2. Reduces the time frame for the landfill siting decision and appeal process;
3. Permits Metro to request initiation of the state landfill siting process;

4. Allows a landfill to be sited within the Solid Waste Management Plan area for Washington, Multnomah and Clackamas counties; and

5. Applies State Land Use Goals, the Solid Waste Management Plan for the tri-county area, and DEQ's Solid Waste Disposal Rules as the sole criteria for state action in siting a landfill only if local governments fail to select a site after an opportunity to do so.

ADOPTED by the Council of the Metropolitan Service District this _____ day of _____, 1985.

_____
Ernie Bonner, Presiding Officer

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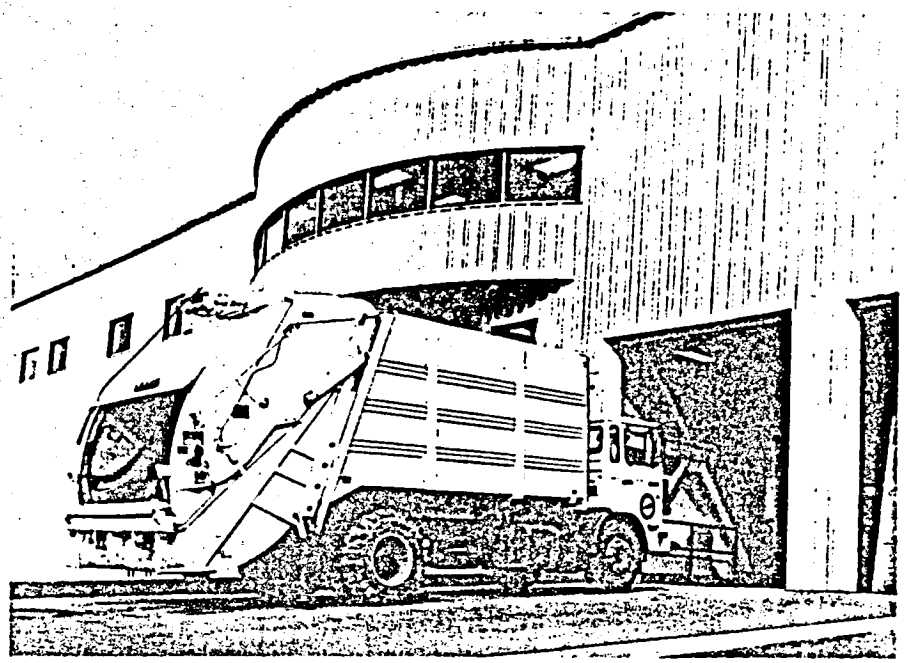
Process Effective For Wastes Disposal



THE OBC FACILITY in Madisonville takes all the refuse from the city for use in its mechanical composting operation.

By **Coles P. McKagen**
Assistant Editor

ORGANIC Bio-Conversions Inc. (OBC) has developed a process that may solve the problem of non-hazardous waste disposal. The process utilizes municipal solid waste along with sewage sludge to form a marketable end product: organic compost.

The idea is nothing new, according to Mark Dingman, international sales coordinator for OBC, which has built a showplace composting facility in Madisonville, Kentucky. The technology has been around for 26 years, he said, but it wasn't economically feasible until now.

The long-term disposal solution offers the following advantages:

- Virtual elimination of landfills.
- Safe and legal sewage sludge disposal.
- A totally non-polluting system.
- Low disposal costs.
- Total resource recovery by 100% recycling.
- No capital investment required by cities or municipalities.

The process itself is a six-day mechanical composting operation. OBC mixes municipal solid waste and sewage sludge in a 4:1 ratio to turn out organic compost called RealEarth, said Dingman, who is also the son of the company's founder, Jack Dingman.

"We take everything the city (of Madisonville) hauls," said Dingman, which is about 50 to 60 tons per day. The only wastes not used in the composting process are rags and tires. The tires are shredded and used for rip-rap; rags are landfilled.

The $8.5 million plant in Madisonville is designed to process up to 150 tons per day of municipal solid waste and 75 to 90 tpd of sewage sludge. Presently, the plant is only operating at about one-third of its total capacity. However, Dingman said OBC hopes soon to be receiving all the wastes from the county as well as the city of Madisonville.

Composting Process

Trucks enter the facility and dump into a receiving pit. The pit has a conveyor floor bottom that moves wastes to a metering gate that opens plastic bags, cardboard boxes and other such trash containers, exposing the contents for manual separation.

The material is separated by eight employees at the picking belt who remove plastic film bags, ferrous and non-ferrous metals and other items of recyclable value. These items are sold for scrap or reuse, Dingman said. What's left is a mostly high paper content material with some ferrous.

After separation, the remaining material goes into a 35-foot long drum where it is mixed with sewage sludge at about a 4:1 ratio. The sewage sludge is used as a wetting agent as well as a bacteriological base for decomposition, Dingman pointed out.

Out of the mixing drum, the now saturated waste falls into a large hammermill grinder that reduces the material to less than a five-inch diameter. These grinders are specially designed to grind glass into sand, Dingman explained. The material then proceeds through a series of six digester cells, staying in each cell for 24 hours. The rectangular box-like construction of the cells allows natural air flow while controlling the temperatures to provide the ideal environment for bacteria to increase in numbers.

After 24 hours in each digester cell the material is ground again and conveyed to a vibrating screening unit where items that have not decomposed adequately go back to the mixing drum to be reprocessed. Dingman said OBC intends to replace the vibrating screen with a rotating unit that screens the material more effectively. Finally, the finished product is conveyed to a loading chute where trucks wait to complete loading.

Composting takes place entirely as the result of a natural bacterial process. In the course of treatment, the material attains temperatures well beyond those required for pasteurization. Harmful bacteria and viruses along with weed seeds and vegetable seeds are destroyed.

The End Result

The end product of the OBC process is RealEarth Organic Compost, a pasteurized humus containing no harmful pathogens of any kind. Tested for more than six years on a variety of strip mine reclamation projects, the product has produced good results in revegetation and erosion control, Dingman said.

Other applications for RealEarth include embankment stabilization, reforestation, general erosion control, golf course and grounds maintenance, potting soil and landfill cover.

The product has been used mainly on coal mining sites that need organic matter and agricultural soils that are drained of organic matter from overfertilization and general use. "The (natural) soil can't build up as fast as we are taking out of it," Dingman said.

OBC has spent six years and $6 million developing a market in Appalachia for RealEarth. "The coal industry needed a product that would add organics back to the soil, provide nutrients to plants and get something to grow," he continued.

The company has tested its product sucessfully on several sites in Kentucky and West Virginia.

Reclamation Process

Dingman said OBC contracts with coal companies to perform the reclamation and with general contractors to supervise revegetation and top dressing. . In the process, OBC takes 75% of the compost to be used on a particular site along with a prescribed amount of lime and spreads both materials onto the site. An agricultural disc is used on the site to mix the soil and compost together to a depth of about six inches. Then the fertilizer and seed are spread.

Afterwards, the remaining 25% of the compost is put on as a top dressing for erosion control. The top layer "forms a paper-mache" spread over the soil, Dingman explained, which helps eliminate erosion.

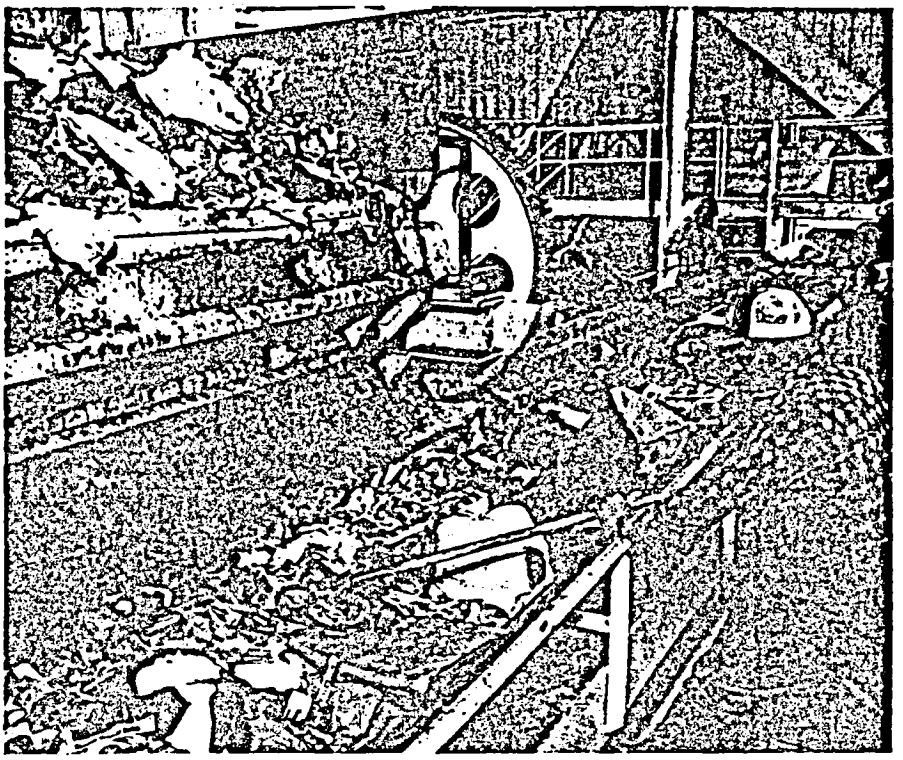
Plants can be developed wherever garbage disposal is a problem. To widen its appeal, OBC is working for the development of a major market for RealEarth in agriculture. RealEarth can hold moisture at a 5:1 ratio and plants can exist longer without rain.

Also, the company is looking at the use of RealEarth in desert areas of the United States that could be turned into some type of productive agricultural land if necessary.

Tipping Fees

A major problem with composting in the past, Dingman said, is that it has not been able to compete with fees for other disposal methods. Although composting fees have not changed that much, fees for other methods of waste disposal have increased sharply, making composting economically viable.

"We offer a city, with no capital outlay, a long-term disposal method because our fees support the plant independently," he said.



REFUSE IS SEPARATED by employees who remove plastic bags, ferrous and non-ferrous metals and other recyclable items.

Tipping fees are derived by adding capital costs of a facility to costs for financing, operation and transportation and dividing the sum by the number of tons of garbage to be taken in. This gives a "break-even" tipping fee, which is the fee charged per ton for a municipality to dispose of both municipal wastes and sewage sludge at an OBC facility.

According to Dingman, this formula guarantees a long-term disposal means for the municipality and ensures that the facility can operate for the term of the contract (20-25 years). In addition, profits from the sale of compost can be shared with the municipality to reduce the tipping fee expense considerably.

Plant Size

OBC plants can be designed with capacities from 100 tpd of municipal solid waste (combined with 25 tpd of sewage sludge at 3-6% solids) up to 400 tpd of municipal solid waste (combined with 100 tpd of sewage sludge). The capital costs for such facilities will vary from region to region, Dingman says, but will range between $7 and $16 million.

In cities with larger waste streams, Organic Bio-Conversions will construct multiple plants, locating each in proximity to the generation of the wastes. This will shorten the distance required for hauling, thus allowing collection trucks to get back on the job more quickly.

The facility is completely self-contained with its only byproducts being carbon dioxide and water vapor. The water used to clean the facility is recycled for use in the composting system, Dingman said. Nothing is discharged into rivers or community sewers. "The plants can be located anywhere in a city without any adverse effects to the environment," Dingman said.

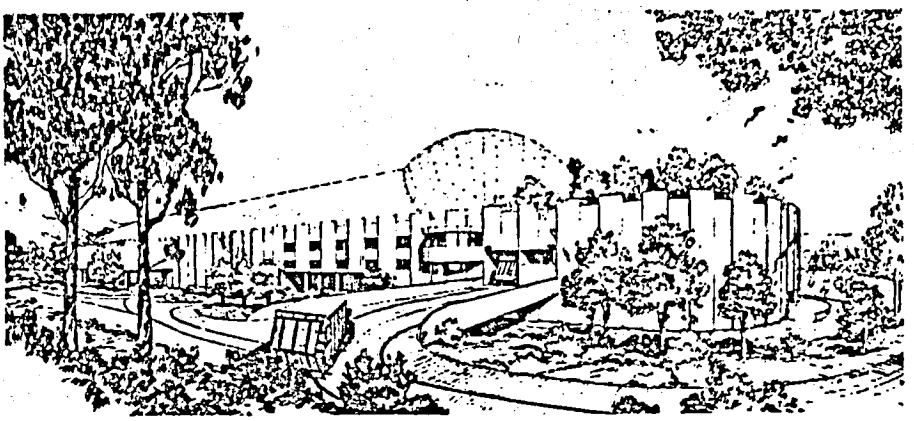
OBC can offer a variety of financing proposals for its facilities with many available options requiring no capital outlay by a municipality. OBC will retain management and ownership rights to any facility the company constructs.

There has been a tremendous amount of interest in the OBC process. "We have 1,000 or more inquiries right now," Dingman said.

OBC is presently talking with officials in St. Louis and Jefferson counties in Missouri; Paducah, Kentucky; Los Angeles, California and several other counties in Ohio and Massachusetts about possible new plants. The company anticipates opening approximately 30 new plants in the future with three in Los Angeles alone, Dingman said. He added that the company has been looking internationally as well, although its primary market is in the United States.

For additional details circle #252

Rapid Compost Process Plant Opens



ARTIST'S rendering of Madisonville composting plant.

By Lee Clark

COMPOSTING WASTE materials for use in rejuvenating poor soils is not a new idea. In fact, the ancient Romans recognized the wisdom of returning waste materials, rich in organic matter, to the soil. The Pilgrims learned from the American Indians to fertilize cornfields with composted fish, manure and river bottom muck.

Only with the advent of chemical fertilizer did the agriculturists of today stray from the natural means of revitalizing worn and over-worked soils to the synthetic, short-term method of chemical additives. In the past 10 years, the number of farmers who fertilize land only by natural organic materials — no chemical additives — has been steadily rising.

Through researching this market, Jack Dingman, president and founder of Organic Bio-Conversions Inc., found another, more pressing need for composted waste materials: that of coal mine reclamation. Organic Bio-Conversions, named for the process it uses (OBC for short), is building the first commercial-sized facility in the United States. It will take solid waste and, after recovering valuable salvage, mix it with sewage sludge and produce from the remaining refuse a rich organic compost called RealEarth. The compost has been found to be excellent for soil amendment and erosion control for mine land reclamation.

The author is a field technologist for Organic Bio-Conversions Inc. and a member of the Mining and Reclamation Council of America.

$6.5 Million Plant

The Madisonville, Kentucky plant is being built on about seven acres at a cost of $6.5 million and will accept 97% of the waste material normally sent to the city's landfill daily, or 150 tons of solid waste and 75 tons of sewage sludge per day from the neighboring wastewater treatment plant.

> *There are no unsightly or unpleasant odors, emissions or pollution from the process.*

Dumping of materials will take place inside the facility and salvage is moved underground to a storage facility on site. Dingman said there are no unsightly or unpleasant odors, emissions or pollution from the process. The plant will produce 170 tons per day of the clean, rich organic compost for use in reclamation of strip-mined land or to use as an organic potting soil.

The Madisonville Waste Recovery Plant is located next door to a multi-million dollar shopping complex and the city park, and was partly financed with Kentucky Pollution Abatement Bonds. The grounds are beautifully landscaped with a man-made waterfall at the entrance, and are considered a credit to the neighborhood and community.

The plant was due to go into production in August. Dingman expects to build 15 of the plants in the next year, and is currently negotiating contracts with many other municipalities.

OBC's process is an all-natural, six-day digestion system that converts solid waste and sewage sludge (3% to 6% solids) by thermophilic bacterial conversion into a safe sanitary organic compost. The process was developed by 25 years of testing at the pilot plant and, after seven years of marketing research, includes the most refined technology available, takes minimum land for construction and has low energy requirements. Additional attractive components of the process include the flow-through concept as opposed to batching, short-term retention of materials, ease of maintenance and demonstrated longevity of operations at the pilot facility.

"We actually speed up nature's process of decomposition," Dingman said in a simplified explanation of the process.

Over the past several years, much of Dingman's research centered on use of the compost product for mined land reclamation. One of the most pressing concerns of reclamation personnel has been an effective means of stablizing self-regenerating vegetation. Most areas of reclamation require as many as two subsequent top dressings before sufficient vegetation has been established and erosion is controlled.

Tests conducted on the use of composted waste material for revegetation show unparalleled results both as an organic soil amendment and as a mulch to control erosion, Dingman said.

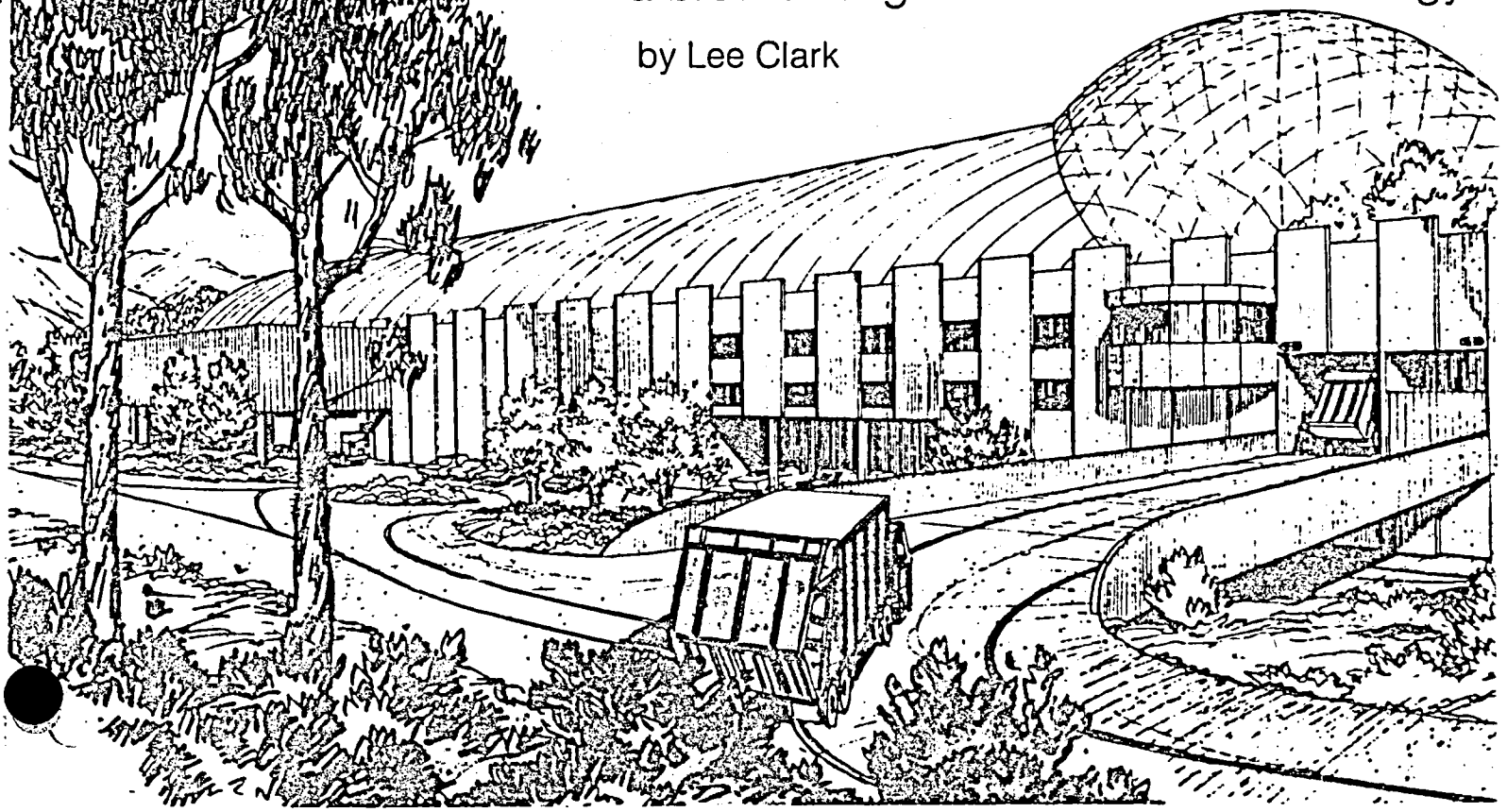
On areas where acidic spoil material or compaction complicate matters, the compost lowers the bulk density and buffers the soil, he said.

RealEarth Organic Compost from the Madisonville plant will cost $40 a ton and will be distributed exclusively through Organic Bio-Conversions. After soil analyses are taken to determine soil condition and proper application rates, the company will provide the service of reclamation by contract and guarantee bond release results. □

From Trash to Triumph

a breakthrough in reclamation technology

by Lee Clark



The First Commercial Plant in the Country. . .

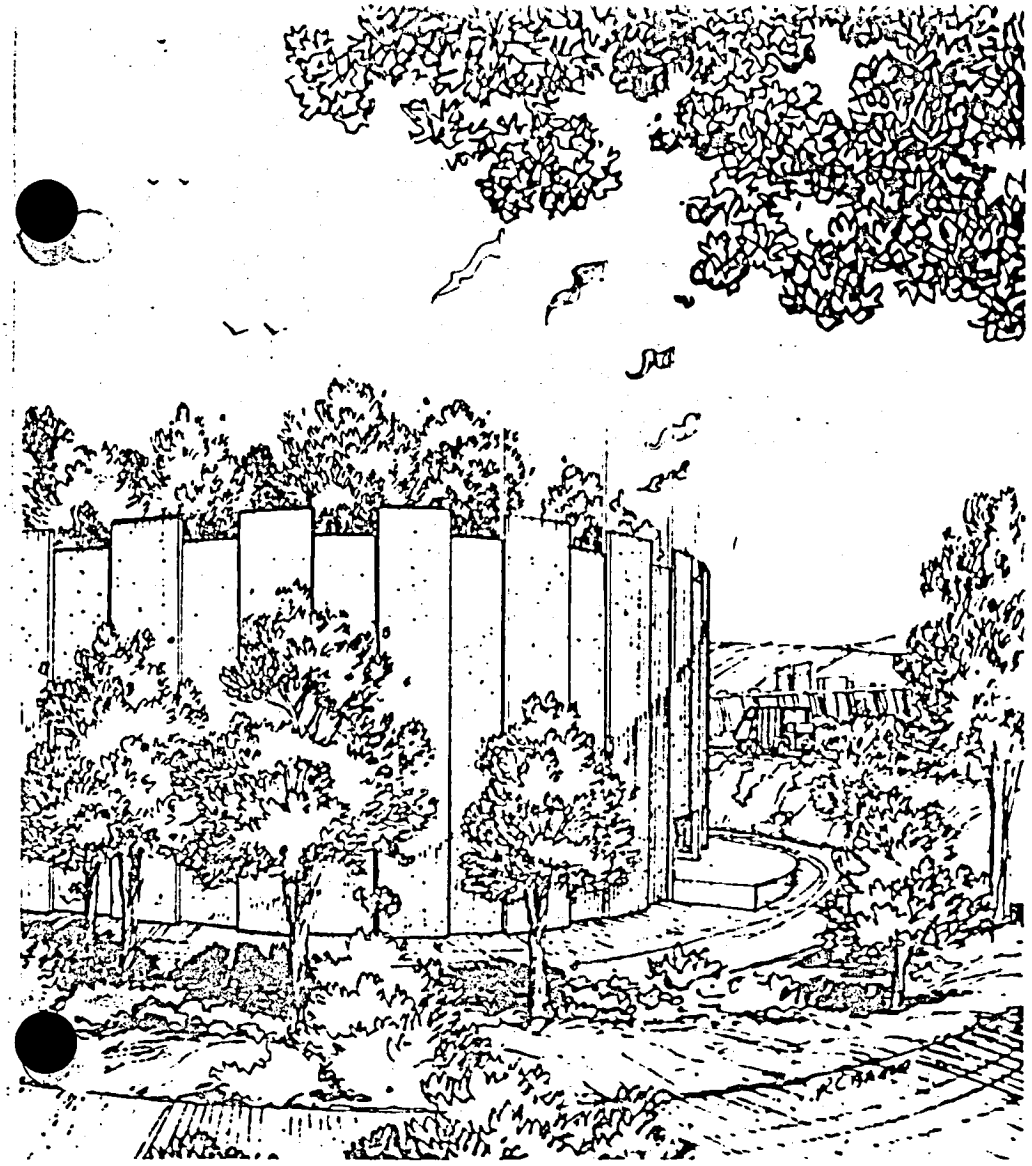
The Madisonville Waste Recovery plant will take the bulk of the city's solid waste stream, mix it with processed sewage sludge and produce a rich organic compost that is not only an excellent organic soil amendment, but an effective erosion control mulch as well.

Lee Clark is a field technologist for Organic Bio-Conversions, Inc., Madisonville, Kentucky, a member of the Mining and Reclamation Council of America.

In a day and age when dried pebbles poured from a packet are added to boiling water and hot soup is created; and where computerized electronic war games at the corner arcade are fast becoming a national pasttime, why shouldn't it be possible that the trash we set on our curb become a valuable resource capable of enriching and preserving the precious environment it has historically threatened? And if so, shouldn't a nation, highly renowned for its technical advancement, beat a path to the door of a man who has stimulated research, studied, refined and financed the development of such a process?

Jack Dingman, president of Organic Bio-Conversions, Inc., has spent seven years traveling and building toward a commercial-sized facility nearing completion in Madisonville, Kentucky, designed to perform this procedure.

Simply, this process takes waste volume, salvages and recycles what



is of resale value, and pasteurizes and produces from the remainder a rich odorless organic compost that research shows can control erosion, loosen and aerate compacted soils and provide a food source for plant life for years after application.

The many uses for the compost provide an almost insatiable market potential, but none so immediate or dramatic as that of reclamation of surface mined lands. No other past method of revegetating either abandoned or currently mined lands has shown the immediate advantage of stabilization and re-establishment of high productive yields in the first years after planting, or the long-term result of continued conditioning of the spoil material into a fertile growth medium without repeated seasonal maintenence.

Dingman, who plans to build 15 new plants in the next year, says several will be built within or with close access to the mining regions.

Compost History

The idea of using compost to rejuvenate the land is not a new one. In ancient Rome, man actually began to make compost for the purpose of renewing the soil's life giving properties. Nature's basic Law of Return has been passed down through the ages until the advent of chemical fertilizers presented a more convenient means to replenish the plant nutrients—but fertilizers must be reapplied yearly and feed only the plants, not the soil. Compost renews and feeds the soil—not just the plant.

Composting in its truest sense has been occurring since the beginning of time. Living organisms, plant and animal, and their waste, fall to the earths surface, begin decaying and become a part of the soil material in the advanced stage of their decomposition. This breaking down of cellular matter is accomplished by the bacteria and microbial population, present in healthy soils. The presence of organic matter, as well as moisture, air, and temperature, affect their rate of activity.

Through this chemical and physical activity, nature provides food stuff to the plant life in a continuous cycle. In areas where organic matter is scarce and moisture and air levels restricted, plant life is sparse and difficult to establish (e.g. surface mined or abandoned mine sites, and overworked farmlands).

And, until now, there has been no commercial means of producing organic matter in a volume supply.

The Technology Selection

The process of organic bio-conversion (see Process Flow Chart) will take 97% of the city's solid waste stream (landfill material), sort and recycle what is of value to resale, then grinds and mixes the remainder with approximately ½ its weight in sewage sludge. The material passes through a six-day digestor system and, by thermophilic bacterial conversion, produces the rich organic compost. The process brings the material to 168° F., Destroyed the pathogenic virus that are harmful to man.

"We actually speed up nature's process of decomposition," explains Dingman, "in a controlled environment." The pilot facility (50 TDP) was in operation 26 years and provided compost for the research projects. The Madisonville Waste Recovery plant has been built to incorporate the most refined technology Dingman gathered: low energy requirement, flow thru concept as opposed to batching, ease of maintenance, short term retention of materials, and demonstrated longevity.

The plant will accept about 150 TPD of solid material and 75 TPD of sludge, and can be easily scaled to accept a higher volume if needed.

"It's our goal to develop a method of handling everything that now goes to landfilling," said Dingman. The recovery facility in Madisonville is located on five acres adjacent to a park and a multi-million dollar shopping complex, and was designed with as much emphasis on aesthetics as practicality.

Review of Research

For the past several years much

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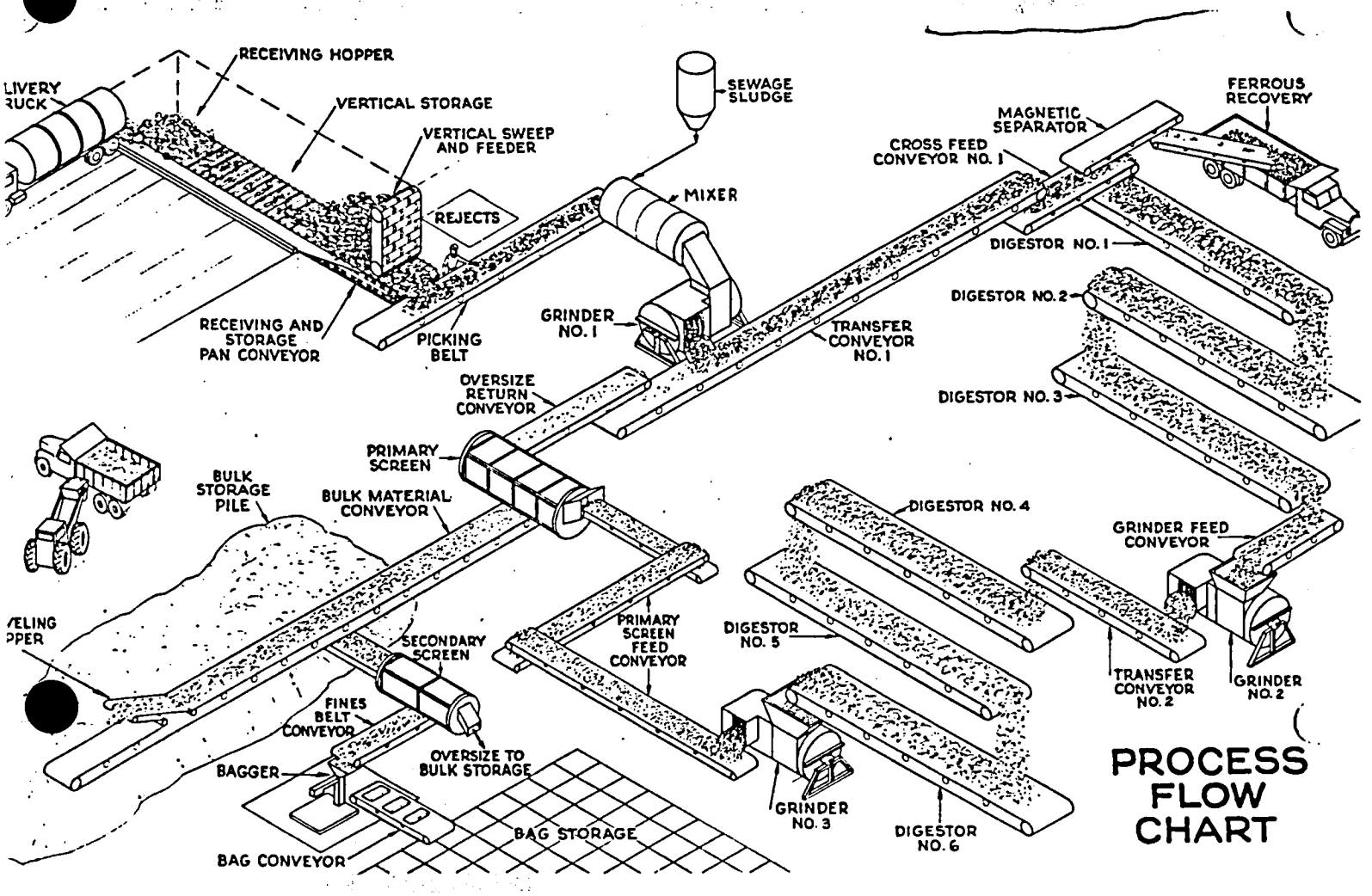


TEST LOCATION: Southeast Coal Co., Irvine, Ky.
Monitored by: University of Kentucky
Objective: Reclaim 1 acre of gob pile, using organic compost
Soil Analysis: Water pH 3.6
Results: 94.4% coverage; full coverage maintained 5 years without topdressing

Application rates: 40 T of compost
600 lbs. fertilizer
68 lbs. mixed seed
38 T of lime

One half of the fertilizer, lime, and 30 T of the compost incorporated, remainder topdressed.

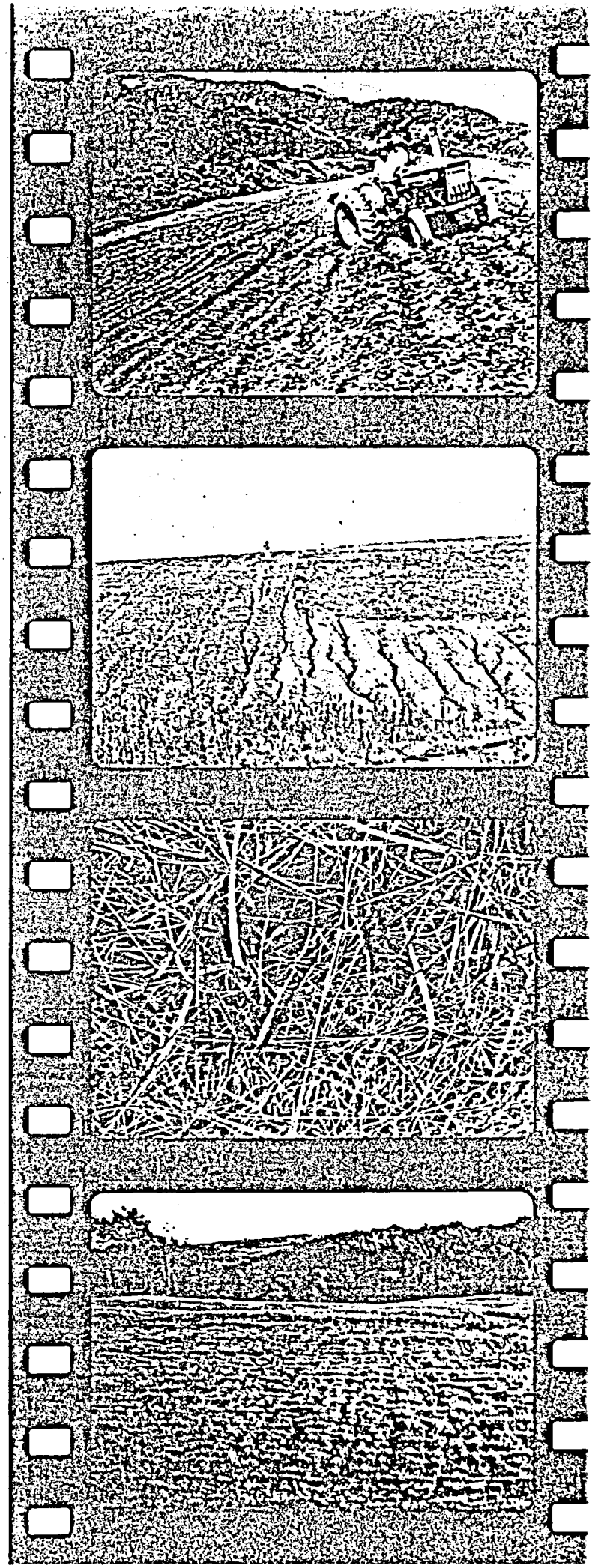
Dramatic Side by Side Comparison

At a cost of approximately $5,000 an acre, Southeast Coal came in beside the composted acre, and applied one foot of topsoil with conventional methods of reclamation. Comparison by sight shows the five year growth on the compost side (left) still full coverage, without maintenance. The topsoil area (right) shows the need for extensive maintenance after only one year's growth.

TEST LOCATION: Princess Beth Mine, Elkins, W. Va.
Monitored by: William T. Plass, U.S.D.A. Forestry Sciences Laboratory
Objective: Compare erosion control, vegetation and soil reconditioning of lime chips, wood fiber, shredded bark, and compost
Results: After two years, compost maintained best coverage, least erosion—plots required one half the fertilizer with compost.

TEST LOCATION: Jenkins Farm, near Morgantown, W. Va.
Monitored by: Dr. Orus L. Bennett, Supervisory Soil Scientist, U.S.D.A.
Objective: Compare straw, bark, Blue Plains sludge, and compost on revegetating abandoned mine spoil (3.4 pH)
Results: Because of accelerated root development, only the plots with RealEarth organic compost survived the severe winter of 1976–77.

Five years of unmaintained growth later, and the hillside is covered with vegetation that has continued to spread yearly over those barren plots and the pH has increased to 5.4.



STAFF REPORT

Agenda Item No. 9.1

Meeting Date March 14, 1985

CONSIDERATION OF CONTRACT AWARD TO DESIGN THE WASHINGTON TRANSFER & RECYCLING CENTER

Date: March 5, 1985 Presented by: Buff Winn

FACTUAL BACKGROUND AND ANALYSIS

Resolution No. 83-439 authorized staff to proceed with design of the Washington Transfer & Recycling Center (WTRC). Although a site has not yet been selected, the services of a design firm are required at this time to initiate conceptual design and complete the site selection process. A request for proposal (RFP) for design services was prepared and issued on January 18, 1985.

The RFP was directed toward the provision of architectural and engineering services to complete final plans for design of WTRC on a site in Washington County. The Scope of Work includes: services to complete the siting process, preparation of a development application, preparation of preliminary design for review, and completion of final plans for the facility.

The RFP was issued to 13 national firms with experience in design of transfer and recycling centers. In addition, an advertisement soliciting proposals was placed in three local newspapers: The Oregonian, Skanner, and Daily Journal of Commerce. A national advertisment appeared in Engineering News-Record. These advertisements resulted in 29 additional requests for a RFP by design firms.

Although there is not a specific Disadvantaged Business Enterprise goal applicable to this contract, proposers have been notified through the RFP that Metro has adopted a policy of encouraging the use of disadvantaged and women owned businesses. Proposers were also notified that a copy of Metro's Disadvantaged Business Program and certified list of disadvantaged businesses was available at the Metro office.

All proposals were to be submitted by February 12, 1985. This allowed 24 days, from date of issuance, for firms to respond.

Metro received a total of seven proposals from the following firms:

Brown and Caldwell (BC)
CH_2M HILL
Henningson, Durham, and Richardson, Inc. (HDR)

Norwest Engineering, Inc.
R. A. Wright Engineering, Inc.
Seton, Johnson & Odell, Inc. (SJO)
Swan Wooster Engineering Inc.

An evaluation team consisting of the following persons was formed to rank responding firms on the basis of their proposals.

Tim Davidson, WTRC Advisory Committee
Dan Durig, Metro
Norm Wietting, Metro
Doug Drennen, Metro
Buff Winn, Metro
Randi Wexler, Metro

The evaluation process was performed in two steps. The first step entailed assigning a rating of unacceptable, acceptable, or outstanding for five criteria. Each firm was evaluated for the criteria of experience, understanding of project work scope, technical experience, suitability of staffing and budget-cost proposal. Following a discussion of the first ranking process, four firms were selected for interviews; HDR, CH_2M HILL, SJO, and Swan Wooster. The three firms not invited for interviews did not adequately meet the selection criteria defined by the evaluation team. Two of the firms not invited for interviews represented the highest budget-cost proposals.

The second stage involved interviewing the top four firms. At the conclusion of these interviews, the top four firms were evaluated on the criteria of oral presentation and responses to questions. The evaluation team had previously prepared questions that each firm responded to during an hour and one-half long interview. The list of questions is attached.

Following the interviews, additional references were checked to obtain information about project managers and overall assessment of the firms' work. With reference information and the interviews completed, the evaluation team narrowed the four firms to two firms; HDR and Swan Wooster. After further discussion, the evaluation team chose Swan Wooster Engineering Inc. as the most qualified firm, according to the selection criteria to provide the services identified in the RFP.

Swan Wooster Engineering, Inc. was chosen for their experience and knowledge in materials handling, understanding of the project work scope, and their willingness to integrate ideas from the Metro Council, staff, advisory group, and operations firms into the design of the WTRC. The project leaders from Swan Wooster also possess experience with local permitting and design review processes.

The cost proposals of the four firms interviewed had a 28 percent spread in total cost. The cost proposals of the four

firms interviewed were:

CH_2M HILL	$240,700
HDR	$301,000
SJO	$284,000
Swan Wooster	$308,500

The three firms with higher budget cost proposals have an 9 percent spread in price. The budget cost proposal, contract summary form, and contract for Swan Wooster Engineering Inc. are attached. The cost for design services by Swan Wooster Engineering Inc. is $308,500 (Tasks 1-4). A decision on construction management services will be made by Metro at completion of Task 3 (final design).

Swan Wooster brings state of the art design techniques and invaluable local knowledge to the design phase of the WTRC.

EXECUTIVE OFFICER'S RECOMMENDATION

The Executive Officer recommends award of the contract to Swan Wooster Engineering Inc. for a not-to-exceed price of $308,500.

RW/gl
2973C/405-5
03/05/85

BY: GENERAL QUESTIONS FOR ALL CANDIDATE FIRMS

DFD 1. How do you envision the design effort being able to deal with the controversial nature of the project?

DFD 2. Metro has intended to allow operating firms, i.e., Genstar, Waste Management, etc., to review the design at the 80-90 percent level of completion. What do you see as the strengths and weaknesses of such a review?

DFD 3. Metro intends to bid both the facility construction and operations contracts concurrently. What suggestions or concerns do you have about the simultaneous bidding of both contracts?

DFD 4. What process do you intend to use to establish initial design parameters?

DFD 5. Do you have any preliminary conclusions on the direction that Metro should take with regard to the design?

DFD 6. There is no mandatory refuse collection service in the Metro region. What special provisions, if any, do you feel should be incorporated into the facility to account for this condition?

R.W. 7. How does your firm see the recycling facilities being incorporated into the facility?

BBW 8. What did you intend to provide in the way of soils report?

NW 9a. What experiences do you have related to litigation on engineering and construction projects?

NW 9b. Why do you think there has been such an increase in litigation in engineering projects in recent years?

R.W. 10. What do you see as the most important activities for the Consultant in the completion of Task I?

DAD 11. What concerns, if any, would you have about starting construction in the late fall or early winter?

DAD 12. What advantages, or disadvantages, do you see in having the design firm act as Construction Manager on a project such as this?

NW 13. What protective measures would you suggest to counteract the daily wear and tear a pit or tip floor takes?

BBW 14. With regard to the scope of work, what do you propose to supply in the way of an Operations Manual?

DFD 15. What would you have done differently in soliciting design firms for this project?

ATTACHMENT 1

SUMMARY OF COST BREAKDOWN

WTRC DESIGN SERVICES

ITEM	DESCRIPTION	COST
Task I	Site Evaluation	Time and materials; compensation not to exceed $10,000
Task II	Preliminary Design	Lump sum compensation $98,800
Task III	Final Design	Lump sum compensation $144,700
Task IV	Services during construction	Lump sum compensation $55,000
Total contractual commitment, Task I-IV		$308,500
Task V	Construction management services (at Metro's option upon completion of final design)	Time and materials compensation not to exceed $116,600

bl

ATTACHMENT 2

SUMMARY OF PROPOSALS

SUBMITTED BY	AMOUNT *	DBE **
Swan Wooster	$ 298,500	
HDR	291,400	
CH_2M Hill	230,700	
Seton, Johnson, Odell	274,000	
R. A. Wright	286,863	
Brown & Caldwell	334,759	
Norwest Engineering	322,300	

*
Amount reflects proposed cost for Tasks 2-4, including transportation study. Additionally, a ceiling price of $10,000 for Task 1 was allotted to each proposal (not shown above).

**
No prime consultant which proposed, is a certified Disadvantaged Business Enterprise.

bl

Memo

mailed 3/11/85

METROPOLITAN SERVICE DISTRICT 527 S.W. HALL ST., PORTLAND, OREGON 97201 503 221-1646
Providing Zoo, Transportation, Solid Waste and other Regional Services

Date: March 11, 1985

To: Metro Council

From: Phillip Fell, Government Relations Manager PF

Regarding: Resolution on landfill siting authority

Attached are copies of two resolutions pertaining to a Council position on legislation modifying state landfill siting authority.

At the Council's informal meeting on solid waste issues last Thursday evening, staff was instructed to submit two resolutions, one dealing with general principles, the second dealing specifically with Rep. Mike Burton's bill.

We do not have a copy of the printed Burton bill. The staff review of the legislative counsel draft of that bill has generated two pages of questions for Metro's legal counsel. We have been guaranteed answers to those questions prior to Thursday night's Council meeting. If the answers are received in sufficient time, I will mail the staff report to you before the meeting.

PF/cam

BEFORE THE COUNCIL OF THE
METROPOLITAN SERVICE DISTRICT

FOR THE PURPOSE OF ADOPTING A COUNCIL POSITION ON PROPOSED LEGISLATION MODIFYING STATE LANDFILL SITING AUTHORITY	)))))	RESOLUTION NO. 85-545 Introduced by Councilor Ernie Bonner and Executive Officer Rick Gustafson

WHEREAS, The process of siting a sanitary landfill is characterized by lengthy time requirements, ambiguous authority and criteria; and

WHEREAS, The need for a new sanitary landfill site in the Portland metropolitan area is manifest; and

WHEREAS, Legislation modifying existing state landfill siting authority is likely to be introduced by persons or organizations outside the Metropolitan Service District; and

WHEREAS, Metro is responsible for operating solid waste disposal sites and has an interest, therefore, in the siting process; now, therefore,

BE IT RESOLVED,

That the Council of the Metropolitan Service District supports legislation establishing state landfill siting authority which:

1. Protects the environment of the people of the tri-county area;
2. Reduces the time frame for the landfill siting decision and appeal process;
3. Permits Metro to request initiation of the state landfill siting process;

4. Allows a landfill to be sited within the Solid Waste Management Plan area for Washington, Multnomah and Clackamas counties; and

5. Applies State Land Use Goals, the Solid Waste Management Plan for the tri-county area, and DEQ's Solid Waste Disposal Rules as the sole criteria for state action in siting a landfill only if local governments fail to select a site after an opportunity to do so.

ADOPTED by the Council of the Metropolitan Service District this _____ day of _____, 1985.

_____
Ernie Bonner, Presiding Officer

PF/srs
2952C/405-1
02/19/85

BEFORE THE COUNCIL OF THE
METROPOLITAN SERVICE DISTRICT

FOR THE PURPOSE OF ADOPTING A COUNCIL POSITION ON SENATE BILL 662	))))	RESOLUTION NO. 85-554 Introduced by Councilor Ernie Bonner

WHEREAS, The process of siting a sanitary landfill is characterized by lengthy time requirements, ambiguous authority and criteria; and

WHEREAS, The need for a new sanitary landfill site in the Portland metropolitan area is manifest; and

WHEREAS, The Metropolitan Service District (Metro) is responsible for operating solid waste disposal sites and has an interest, therefore, in the siting process; and

WHEREAS, Legislation modifying existing state landfill siting authority has been introduced before the Oregon Legislative Assembly as Senate Bill 662; and

WHEREAS, Senate Bill 662 embodies the spirit of those principles which the Metro Council feels must be addressed by such legislation; now, therefore,

BE IT RESOLVED,

That the Council of the Metropolitan Service District supports passage of Senate Bill 662 and that this support does not preempt support of similar legislation which may be introduced at a later date.

ADOPTED by the Council of the Metropolitan Service District this _____ day of _____, 1985.

_____
Ernie Bonner, Presiding Officer

PF/gl/3077C/411-1
03/08/85

Agenda Item No._____

Meeting Date Mar. 14, 1985

STAFF REPORT

AMENDMENT TO CONTRACT WITH AMERICAN MACHINE AND GEAR FOR THE REPAIR OF THE DRIVE SYSTEM FOR TRAIN ENGINE #2 (ZOOLINER)

Date: March 14, 1985 Presented by: A. McKay Rich

FACTUAL BACKGROUND AND ANALYSIS

The Zoo contracted with American Machine and Gear, Inc., for the repair of specific parts of the drive system on train engine #2 (Zooliner). This is Contract #84-12-737-Z, dated December 5, 1984 and for a sum of $8,494.25. The contract called for inspections of unseen components with quotes for additional work. After disassembling, cleaning and inspecting the drive system additional work was required as follows:

1. Rebuild bearing retainers
2. Rebuild torque transfer tubes
3. Rebuild bearing and seal bores
4. Rebuild pinion input shaft

The additional cost to complete this work is $4,930.00, increasing the contract to $13,424.25.

This additional work must be completed by March 30, 1985 in order for Engine #2 to be in service by April 1, 1985, when the train runs are made to the Washington Park Station.

EXECUTIVE OFFICER'S RECOMMENDATION

The Executive Officer recommends the approval of this contract amendment.

CG:can

GRANT/CONTRACT SUMMARY

METRO METROPOLITAN SERVICE DISTRICT

GRANT/CONTRACT NO. 84-12-737-Z BUDGET CODE NO. 20 03 00 8550 23300

FUND: Zoo DEPARTMENT: Bldgs.& Grounds (IF MORE THAN ONE) _ _ _ _

SOURCE CODE (IF REVENUE) _____ _ _ _ _

INSTRUCTIONS

1. OBTAIN GRANT/CONTRACT NUMBER FROM CONTRACTS MANAGER. CONTRACT NUMBER SHOULD APPEAR ON THE SUMMARY FORM AND ALL COPIES OF THE CONTRACT.
2. COMPLETE SUMMARY FORM.
3. IF CONTRACT IS —
   - A. SOLE SOURCE, ATTACH MEMO DETAILING JUSTIFICATION.
   - B. UNDER $2,500, ATTACH MEMO DETAILING NEED FOR CONTRACT AND CONTRACTOR'S CAPABILITIES, BIDS, ETC.
   - C. OVER $2,500, ATTACH QUOTES, EVAL. FORM, NOTIFICATION OF REJECTION, ETC.
   - D. OVER $50,000, ATTACH AGENDA MANAGEMENT SUMMARY FROM COUNCIL PACKET, BIDS, RFP, ETC.
4. PROVIDE PACKET TO CONTRACTS MANAGER FOR PROCESSING

---

1. PURPOSE OF GRANT/CONTRACT Increased work on gear boxes

2. TYPE OF EXPENSE ☐ PERSONAL SERVICES ☒ LABOR AND MATERIALS ☐ PROCUREMENT
   ☐ PASS THROUGH AGREEMENT ☐ INTER-GOVERNMENTAL AGREEMENT ☐ CONSTRUCTION
   ☐ OTHER

   OR

   TYPE OF REVENUE ☐ GRANT ☐ CONTRACT ☐ OTHER

3. TYPE OF ACTION ☒ CHANGE IN COST ☒ CHANGE IN WORK SCOPE
   ☐ CHANGE IN TIMING ☐ NEW CONTRACT

4. PARTIES American Machine & Gear, Inc.

5. EFFECTIVE DATE 12/5/85 TERMINATION DATE 3/30/85
   (THIS IS A CHANGE FROM _____)

6. EXTENT OF TOTAL COMMITTMENT:

ORIGINAL/NEW	$	8,494.25
PREV. AMEND		
THIS AMEND		4,930.00
TOTAL	$	13,424.25

7. BUDGET INFORMATION

   A. AMOUNT OF GRANT/CONTRACT TO BE SPENT IN FISCAL YEAR 198 4 8 5 $ 13,424.25

   B. BUDGET LINE ITEM NAME Equip./Veh. AMOUNT APPROPRIATED FOR CONTRACT $ 13,424.25

   C. ESTIMATED TOTAL LINE ITEM APPROPRIATION REMAINING AS OF 3/1 ,1985 $ 27,738.38

8. SUMMARY OF BIDS OR QUOTES (PLEASE INDICATE IF A MINORITY BUSINESS ENTERPRISE)

SUBMITTED BY	$ AMOUNT	☐ MBE
SUBMITTED BY	$ AMOUNT	☐ MBE
SUBMITTED BY	$ AMOUNT	☐ MBE

9. NUMBER AND LOCATION OF ORIGINALS _____

10. A. APPROVED BY STATE/FEDERAL AGENCIES? ☐ YES ☐ NO ☐ NOT APPLICABLE
    B. IS THIS A DOT/UMTA/FHWA ASSISTED CONTRACT ☐ YES ☐ NO

11. IS CONTRACT OR SUBCONTRACT WITH A MINORITY BUSINESS? ☐ YES ☐ NO
    IF YES, WHICH JURISDICTION HAS AWARDED CERTIFICATION _____

12. WILL INSURANCE CERTIFICATE BE REQUIRED? ☐ YES ☐ NO

13. WERE BID AND PERFORMANCE BONDS SUBMITTED? ☐ YES ☐ NOT APPLICABLE

    TYPE OF BOND _____ AMOUNT $ _____

    TYPE OF BOND _____ AMOUNT $ _____

14. LIST OF KNOWN SUBCONTRACTORS (IF APPLICABLE)

    NAME _____ SERVICE _____ ☐ MBE

    NAME _____ SERVICE _____ ☐ MBE

    NAME _____ SERVICE _____ ☐ MBE

    NAME _____ SERVICE _____ ☐ MBE

15. IF THE CONTRACT IS OVER $10,000
    A. IS THE CONTRACTOR DOMICILED IN OR REGISTERED TO DO BUSINESS IN THE STATE OF OREGON?
    ☐ YES ☐ NO

    B. IF NO, HAS AN APPLICATION FOR FINAL PAYMENT RELEASE BEEN FORWARDED TO THE CONTRACTOR?

    ☐ YES DATE _____ INITIAL _____

16. COMMENTS:

GRANT/CONTRACT APPROVAL

INTERNAL REVIEW

A. M Rud
_____
DEPARTMENT HEAD

_____
FISCAL REVIEW

_____
BUDGET REVIEW

CONTRACT REVIEW BOARD
(IF REQUIRED) DATE_____

1. _____
COUNCILOR

2. _____
COUNCILOR

3. _____
COUNCILOR

COUNCIL REVIEW
(IF REQUIRED)

_____
DATE

LEGAL COUNSEL REVIEW AS NEEDED:

A. DEVIATION TO CONTRACT FORM _____

B. CONTRACTS OVER $10,000 S B Brandale

C. CONTRACTS BETWEEN GOVERNMENT AGENCIES _____

METRO CONTRACT NO. 84-12-737-Z

METRO BUDGET NO. 20-03-00-8550-23300

CONTRACT ADDENDUM NO. 1

1. This is an amendment to the contract effective December 5, 1984 by and between the METROPOLITAN SERVICE DISTRICT (Metro) and AMERICAN MACHINE & GEAR (Contractor). This Addendum shall be effective as of March 15, 1985.

2. SCOPE OF WORK. Contractor shall provide additional repairs to the gear boxes for mechanical defects that were unknown upon bidding the contract:

    1. Grind chrome and bearings and seal fits on shafts and yokes.

    2. Bore and bush 4 bearing boxes.

3. FEES. The maximum sum payable shall increase to $13,424.25.

4. All other terms and conditions of the original agreement shall remain unchanged.

METROPOLITAN SERVICE DISTRICT

BY:_____

DATE:_____

AMERICAN MACHINE & GEAR, INC.

BY:_____

DATE:_____

This report was distributed by a representative of the Sierra Club at the 3/14/85 Council Meeting in response to questions raised by Councilors on 2/28/85 regarding alternatives to landfills. This relates to the 3/14/85 agenda item number 8.2.

Organic Bio-Conversions, Inc.

Dear Sir:

This information packet was developed to explain the co-composting process of Organic Bio-Conversions, Inc. for the benefit of individuals concerned with waste disposal at the city and county level. On behalf of my staff, I would like to thank you for taking the time to review this material.

I am not sure, of course, what specific knowledge you may already have about our operation, but this information is quite complete. I think you will be very impressed by the description of the process as well as the philosophy and structure of the company itself.

For your convenience, I would like to point out the most significant aspects of our composting process.

1) Organic Bio-Conversions, Inc. provides a complete service for disposal of both MSW and sewage sludge. Our first commercial-scale plant, located in Madisonville, Kentucky, is in daily operation and has been since the first of January, 1983. Future plants will use the same well-proven composting process, and will be even more operationally efficient.

2) Organic Bio-Conversions, Inc., or a subsidiary operating company, will be completely responsible for the design, construction and operation of each plant. Disposal of MSW, which is a major problem for most communities, and disposal of sewage sludge (which almost no one can dispose of safely or economically), does not have to be a concern of local government anymore.

3) The basic composting process takes only six days and begins with hand and mechanical separation of marketable salvage items such as plastic, glass, aluminum cans, copper, brass, and other such metals. This is followed by mechanical grinding, mixing with sewage sludge, and incubation during which the waste is reduced in volume and weight while the compost naturally heats to thermophilic temperatures which destroy pathogenic bacteria, weed seeds, etc.

4) Our plants are absolutely pollution free. There is no objectionable odor, waste water, or even smoke. The only by-products are water vapor; carbon dioxide; and heat, which in itself can be used beneficially.

Silver
LA-213-821-8177

P. O. Drawer 908 - 680 Davis Wells Road - Madisonville, Kentucky 42431 - (502) 825-1500

5) Because our plants are "good neighbors," they can be located almost anywhere in a community, which eliminates much of the time and expense normally associated with hauling MSW to a landfill.

6) Municipal solid waste and sewage sludge are processed on a break-even basis; company profits are derived from the sale of the compost, which is marketed under the trademark of RealEarth™. Dumping fees are based only on the cost of operation of the plant and debt service. This means the more help we receive in lowering the cost of constructing and operating a plant, such as in land acquisition and low interest Industrial Revenue and Pollution Abatement Bonds, the lower the dumping fee. We also share the profits of our compost sales with the city or county, which lowers the actual cost of dumping even more.

7) RealEarth™ compost has been approved for land application by the Commonwealth of Kentucky, Natural Resources and Environmental Protection Cabinet.

Although modern society has almost totally neglected composting, it is a part of the cycle of life. It is a necessary step in the proper use of our natural resources. I am convinced that composting is the only practical long-term solution for the disposal of waste. As you learn more about composting, I am sure you will agree.

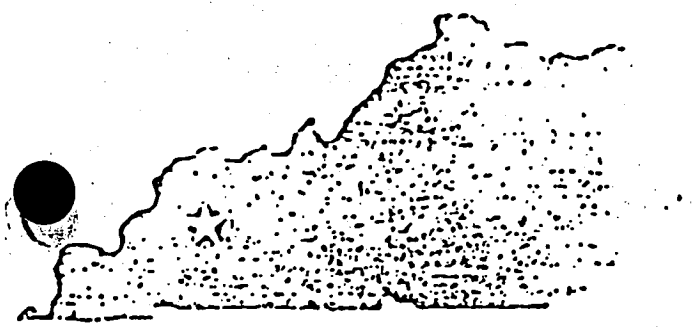
If you have any questions, feel free to contact me any time. The company telephone number is (502) 825-1500. If you have not already been to our composting facility, let me extend a personal invitation for you and your associates to visit us at your earliest convenience. We are open for business six days a week, 52 weeks a year, and we would be more than happy to give you a guided tour.

Sincerely yours,

ORGANIC BIO-CONVERSIONS, INC.

Jack Dingman
President

ldh



"HEART OF THE COAL FIELDS"

Hanson D. Slaton
Hopkins County Judge-Executive
Madisonville, Kentucky 42431

Telephone 502-821-8294

Mr. Jack Dingman,
Madisonville Waste Recovery,
P.O. Box #456
Madisonville, Kentucky.

Dear Mr. Dingman:

I would like to thank you for taking a big load off my shoulders. Up until the time that you began taking Hopkins County's garbage, it gave me nothing but trouble. Now, by bringing our garbage to your facility, we have reduced costs of operation, maintenance and hauling, increased efficiency and basically solved a big problem.

I am proud to be using the first of what will probably be the future of the waste disposal industry. Your facility is centrally located, pollution free, and most of all, reliable. In the months we have been delivering materials to you, to my knowledge there has not been any interruption in service to the County. In addition, our employees that deliver to you have commented on the convenience of not being exposed to the weather as they were at the landfill.

As far as saving money, the County has experienced tremendous savings since we began using your service. Our maintenance costs, hauling costs, and operational costs in general have been reduced because of the convenience and central location of your facility. In addition to this, the computer readouts that you provide have enlightened me as to the locations, amounts and types of waste which the County disposes. These reports have been invaluable to me for future planning.

It is very apparent to me that you have the solution for a problem that 9 out of 10 (if not 10 out of 10) counties face-solid waste disposal. The reliability, cost savings, convenience,and lack of any type of pollution have convinced me that your system works more efficiently than any other Iv'e seen.

Thank you again, and if you should ever need a reference for your system, I would be happy to give them my opinion of the fine operation you have.

Sincerely,

Hanson D. Slaton

HANSON D. SLATON
COUNTY JUDGE EXECUTIVE

INTRODUCTION

The Federal Government has used grants in aid for research and demonstration to encourage industry to apply its resources to finding a solution to sludge and solid waste disposal problems but the response by industry has been minimal and no solution has emerged.

A complete review of the literature and interviews with numerous government officials undertaken in 1975 by the company indicates that the failure of industry to respond is due primarily to three factors:

1. The belief that there is no commercial market for composted waste materials - an idea which has been endorsed and promulgated by government. This belief discourages profit-motivated industrial involvement.
2. A prevailing belief that compost can be used in row crop production only on a limited and selective basis - a conclusion of government caused by the concentration of heavy metals in composted sludge. The use and supervision problems associated with selective, permissive use of a product create seemingly insurmountable marketing problems.
3. The belief, advanced by government, that high rate composting cannot compete successfully with current disposal methods such as landfilling, incineration, ocean dumping, etc.

In early 1975 the company undertook to re-examine these conclusions because:

1. The conclusion that no market place for compost exists had resulted from past marketing efforts conducted under the auspices of local governmental agencies. Since marketing is not a traditional government activity, it was suspected a private sector marketing effort might produce distinctly different results.

2. The concern that heavy metals would be absorbed by plants resulted from scientific investigations founded on tests designed to determine the maximum amount of compost which could be deposited in a given area. A significant body of research had indicated that no danger of heavy metals uptake by food crops exists when application is held to optimum levels required for satisfactory plant growth and crop yield. Since the company viewed compost as a resource rather than a nuisance and planned to sell it, not dump it, marketing the compost to price conscious users could be expected to control the tendency to overload treated soil, thereby eliminating the heavy metals problem.

3. The belief that high-rate composting was not an economically viable alternative resulted from examinations which failed to consider the present and potential effect of the following two emerging trends:

   a. The increasing cost of traditional energy intensive products, such as fertilizers, and the associated application and land preparation requirements; and

   b. The increasing cost of waste disposal caused by more stringent environmental safeguards, the failure of private industry to respond to the appeal of government for new disposal technology and pollution concentration in urban areas which lack nearby landfill or other acceptable disposal facilities.

Because of the significant potential benefits of composting to the environment it appeared essential to resolve these conflicts. To that end, in mid-1975, the company adopted the following business plan.

STEP 1. Selection and development of a composting technology which is conducted indoors in an odorless, pest-free, non-polluting environment, using a minimum of space. These factors resolve the principal political objections to solid waste disposal programs.

STEP 2. Commencement of operations at a pilot facility of a design consistent with the goals in Step 1 in order to produce a continual supply of compost for testing and permit the performance of sophisticated analysis of costs of plant construction and operation.

STEP 3. Generation of interest among and commencement of testing by government agencies from which negative results had previously emanated and by other similarly reputable and respected testing facilities.

This step is necessary to prove the effectiveness of compost in the reclamation of strip mine spoiled lands and to cause government to reverse its prior negative opinion. It also provides the mining industry with test results from sources it relies upon and respects. Strip mined lands were chosen as target areas because they presented no food chain problems but permitted testing of the uptake of heavy metals into food chain plants on a selective basis as a bonus while <u>not</u> involving essential agricultural acreage.

STEP 4. Establishment, through testing, of the fact that compost will revitalize previously devastated lands and of the quantities of compost required to achieve the desired speedy and permanent revegetation of high acid mine spoils.

STEP 5. Proceeding from the establishment of the viability of the product and minimum application rate for efficacy, the determination and organization of a price structure which makes the product attractive to the mining community, keeps municipal disposal costs at an acceptable level and still yields an attractive return to investors.

STEP 6. Armed with prospective rates of application, a proforma price per ton, and positive test results from the scientific community, convincing the mining industry to test the product itself in reclamation operations.

STEP 7. After the mining industry has convinced itself of the viability and efficacy of the process and the economics thereof, measurement of the potential magnitude of the immediate market to ascertain the saleability of the entire output of a plant installed in a mining region.

STEP 8. Once it is determined that there is an immediate demand for the product sufficient to support a compost facility, that the system is politically desirable and economically appealing to an appropriate community, and that the product can be marketed to the mining industry at an attractive price, identification of a community located within the mining regions which is confronted with making a solid waste and sludge disposal decision and contacting that community for purposes of negotiating a contact whereby:

a. A plant is installed at no cost to the municipality;

b. The company operates the plant to utilize its superior knowledge of the technology and to insure operational efficiency;

c. The community pays predetermined gate fees (a sum certain per ton plus provision for periodic cost-of-living increases) to deposit sludge and solid waste at the facility; and

d. The supply of solid waste and sludge and the gate fee schedule are guaranteed for a minimum 20-year period with appropriate options.

In establishing the foregoing approach the company sought to develop a successful financial plan which did not involve the use of government grants and was therefore capable of demonstrating that the composting industry merits a commitment of private sector energy and resources because of its profit potential. The accomplishment of Steps 1 through 8 of the business plan renders the project a promising solution to solid waste and sludge disposal problems.

Recognizing that the Appalachian region may fail to provide a market outlet for compost generated by plants installed in major cities in the eastern United States because the shipping costs incurred could be prohibitive, the business plan addresses itself to this possible problem in Steps 3 and 9. Some states (e.g. Ohio, Indiana and Illinois) require surface mined lands originally employed in row crop production to by returned to that use.

Historically, the absence of topsoil has rendered it impossible to re-achieve the required row crop production levels on at least one-third of the area of the affected lands. Using RealEarth compost in resolving the problem of returning mined lands to row crop production (Step 3) will provide a wealth of information essential to:

STEP 9. The determination that composted waste can be used effectively and economically in general agriculture, especially on deficient soil.

Just as a favorable determination of the economic efficacy of the material is capable of establishing a regional market for compost in Appalachia, those same determinations with respect to restoring mine spoil lands to row crop production will signal the existence of a major market in the agricultural communities surrounding high density population areas. This market, when established, will tend to minimize the outlet and transportation problems which may be experienced by plants located in major population centers.

STEP 10. The belief that composted waste can be effectively employed in restoring lands and hillsides devastated by forest fires.

These lands have suffered a severe loss of ground cover and the disaster is further compounded by the ever present possibility of

mudslides. Since composted waste has also been recognized as a valuable tool in arresting soil erosion there are definite possibilities in utilizing compost to both reestablish and maintain growth on lands ravaged by fire.

STEP 11. An essentially unexplored potential exists for the use of composted waste in the logging process leaves the land in a similarly disrupted condition as unreclaimed surface mined lands. Essentially the acreage is robbed of its groundcover. Revegetation must be established in preparation for reforestation.

DESCRIPTION OF PROCESS

Mechanical and Biological.

Composting is a biological process for the conversion of organic solid waste into a stable, humus-like product. The process uses an accelerated mechanical system, which transforms municipal, animal, agricultural solid wastes and sewage sludge through thermophilic bacteriological conversion within six (6) days, to produce an organic composted product beneficial to the soil and to growing vegetation. The physical effects of humus on the soil are perhaps more important than the nutrient effects. Soil structures are as important to fertility as is its complement of nutrients. Solid aggregation or crumb tendency as promoted by humus improves the air-water relationship of soil, thus increasing water retention capacity and encouraging more extensive development of root systems of plants. Other beneficial effects of bacterial metabolism associated with humus include increased ability of the soil to absorb rapid changes in acidity and alkalinity, and the neutralization of certain toxic substances.

The process to be utilized will be the bio-conversion method, which was developed in the 1950's and subsequently improved through operations at the pilot facility during its 26 years in production. An overview of a typical installation is depicted by an artist's rendering of the facility - Figures 1 and 2 of the Flow Chart Section. The truck receiving station is shown in Figure 2, which allows the incoming trucks to drive through within an enclosed building to discharge their loads into a covered pit. Flow of material through the

plant, from raw refuse to finished compost, follows the sequence shown in the rendering. These charts illustrate the flow of material through the plant, from raw refuse to finished compost. Refuse discharged from the collection vehicles into the receiving hopper is deposited on a broad belt which is controlled by an operator whose duty it is to see that the refuse arrives at the picking belts at a proper rate, and that effective use is made of the refuse storage hopper.

Material fed to the sorting belt is handpicked for savable items such as large metallic objects, tires, and other materials not desirable for use in compost. A magnetic separator removes ferrous metals. The material is then conveyed to the pulverator at which time animal and agricultural wastes, water and sewage sludge will be added to provide the added moisture needed to insure an optimum rate of composting. Next, the material passes through Grinder No. 1 to reduce the material to a size which will present a greater surface area for the digesters. The material is then deposited into the digester cells which are tiered one above the other. These rectangular composter cells are a unique feature of the bio-conversion process. Slow moving slat conveyors advance the freshly ground refuse from the receiving end of the top cell to the discharge end from which it falls by gravity onto the reverse-flow belt of the second unit, which likewise discharges into a third unit. This third unit discharges the partially composted load into Grinder No. 2. This secondary grinding reduces the particle size of the mass; and, at the same time, provides a more thorough aeration than would be provided by merely dropping the mass from cell to cell. The process, from primary to secondary grinding, requires three days.

From secondary grinding the material is transported by conveyor to the final three digester cells and then discharged into Grinder No. 3. The tertiary grinder reduces the compost to its final stage particle size.

From the tertiary grinder the mass is conveyed to a primary screener. Material which does not pass through the primary screen is returned by the conveyor to Grinder No. 1, where it is combined with, and serves as, the bacterial feed stock for the new raw material.

Compost which passes through the primary screener is either conveyed to bulk storage for future use or to a second screener. Compost passing through the second screener is used in the bagging operation for the consumer market.

It is important to be brought to the readers attention that this process is totally accomplished through a "mother nature" phenomena, and although the material reaches heat temperatures of approximately 168° F., which takes them far beyond the point of pasteurization of milk, there are no chemicals, heat treatments or any outside influence other than "nature" through the thermophilic bacteriological conversion of the material. These temperatures are sufficient to kill any harmful bacteria, fecal coloforms, viruses, and even weed seeds and tomato seeds, which produces an extremely pure material which is being used for strip mine reclamation landscaping and in agriculture with outstanding results.

SELECTION OF TECHNOLOGY

An exhaustive investigation of high-rate composting technology in the United States, Europe and the Middle East caused the conclusion that the Organic Bio-Conversion process which was developed during the late 1950's, contains features which most nearly meet the requirements of the business plan. This plan contemplates the engineering and biological considerations as well as the political criteria for acceptance by municipalities. Its features include:

Engineering

1. Relatively low energy requirements (1000 H.P. at peak load).
2. Flow through concept (as opposed to batching).
3. Relative simplicity and ease of maintenance.
4. Capacity to handle 97% of the mass of a typical waste stream (leaving 3% to landfilling).
5. Complete adaptability to resource recovery applications.
6. Demonstrated longevity.
7. Demonstrated operations (the pilot facility was constructed in 1957).
8. Short term retention of material (6 days).
9. Capability of handling both solid waste and sewage sludge (accepts sludge from 3% to 12% solid).
10. Sufficient storage capacity to permit continued acceptance of waste materials during anticipatable down times.
11. Capacity range from 50 to 300 tons per day of solid waste plus sewage sludge at 50% of the weight of solid waste.

BIO-CONVERSION - A POSSIBLE DISPOSAL OPTION

AN ARTICLE BY

R.P. ALBERTSON

FOR THE BOOK ENTITLED

SOLID AND LIQUID WASTES: MANAGEMENT AND METHODS

PENNSYLVANIA ACADEMY OF SCIENCE

1984

BIO-CONVERSION - A POSSIBLE DISPOSAL OPTION

INTRODUCTION

There are only three possible options for disposing of waste; in to our atmosphere, our waterways, or on our land. During the past twenty years, all three options have been severely limited by environmental concerns and spiraling cost increases. Water disposal is for all practical purposes no longer an option. Burning, or atmospheric disposal, is proving a risky alternative because of the increasing mass of industrial and automotive pollution and the inevitable legislative response which can be expected to further tighten emission standards. Present day landfill engineering seems to enjoy almost universal acceptance as being environmentally safe. Nonetheless, growing urban density continues to push landfill sites further from the point of waste generation. Each mile added to the haul brings us closer to prohibitive cost levels.

In an atmosphere of declining options, it may be wise to reexamine some disposal options we have previously rejected. This article addresses one such option; bio-conversion. As used here, bio-conversion means composting, which is the controlled decomposition of organic matter. Bio-conversion does not include all methods of composting. It is a highly mechanized procedure employing sophisticated material handling equipment which produces the ability to closely control the conditions under which the decomposition process takes place. Most bio-conversion programs are conducted entirely inside large industrial structures. Many bio-conversion systems are designed to compost municipal solid waste in combination with raw sewage sludge. This is to be distinguished from windrow composting, which is customarily conducted out of doors with relatively unsophisticated equipment and lacks the high-tech environmental control offerred by bio-conversion systems.

Since your author is not a scientist this will not be a scientific article. The material is offerred from the perspective of an attorney and business consultant with ten years of experience in consultation with both municipalities and bio-conversion enterprises. The focus of the article is the economic, political and sociological considerations which appear to have prevented bio-conversion technology from emerging as a viable waste disposal option in the United States. Because of the nature of the subject matter, some technical discussion is unavoidable. In this regard, the reader is cautioned that the author's conclusions consist of hearsay and readings from a variety of sources and his admittedly untrained observations. The reader is asked to independently judge the accuracy of these statements.

At the outset, it is the opinion of your author that bio-conversion is not a panacea for American cities. This is not due to the unavailability of proven technology. As is the case in most areas of technological development, there are systems which work extremely well, others which are average in performance and some which barely work at all. There are bio-conversion systems which have been operating successfully, consistent with design, for many years. Most of the successful systems are of European design. There is a facility operating at Madisonville, Kentucky which reports that it is "on line" and performing satisfactorily. It has always seemed strange that this technology, having enjoyed a fairly good record of success world wide, has failed to become a useable disposal option in the United States.

The reason this technology has remained unavailable to large numbers of communities because of two problems it encounters each time it is considered. First, the existing waste management infrastructure in the United States is not particularly well suited to the needs of a bio-conversion program. Second, the

infrastructure necessary to the successful marketing of composted municipal wastes is virtually non existent. Resolving these problems on a national level is a considerable task. Nonetheless, there are probably some communities whose particular circumstances and geograpical location are such that a bio-conversion program may be feasible. The purpose of this article is to define the problems and to outline an approach to their resolution.

The undertaking is believed to be worth the effort because this disposal method offers some exceptionally valuable potential benefits,when properly managed: the technology works, it can be performed without insult to the environment and it should prove both permanent and highly cost effective once eastablished.

THE MISSING INFRASTRUCTURE

There is a story about Henry Ford that describes the infrastructure problem. No one knows if it's true, but it is a good story. Ford didn't get in to business immediately. The cars worked just fine, but the idea of everyone having one was something for which the country wasn't quite ready. The original Model T was designed to run on alcohol. A group of oilmen proposed that Ford switch to gasoline. Ford responded "why on earth would I want to do that. Anyone can make alcohol, but only oilmen can make gasoline". The oilmen said that was precisely why it was a good idea. They pointed out that the holdup in getting Ford's program moving (for all of its potential to accelerate American economic development) was the absence of highways, street signs, gas stations, repair garages, etc. They added that if Ford could see his way clear to converting to gasoline, they were confident that the government would tax gasoline at the source and use the funds to build the absent infrastructure. We all know what happened.

Bio-conversion equipment and processing are relatively expensive. To establish

successful program, it is essential to be able to sell the composted materials at prices which will serve to reduce the overall cost of disposal to acceptable levels. At this point, in time compost is generally considered to have insufficient dollar value to support an economically viable program. The reason for this situation is the absence of infrastructure. As used in this context, infrastructure consists of a generally held knowledge regarding the optimum utilization of compost in achieving agricultural or land reclamation goals. If the knowledge of how and when to use compost was equal to the knowledge presently held regarding the use of chemical fertilizers, we could say that the infrastructure existed. As will be discussed later, a careful examination of the world wide scientific literature on the subject supports the reasonable belief that compost (once a reliable, continuing supply source is established) will prove to have a considerably higher dollar value than is presently expected. The knowledge of scientists is not equivalent to the knowledge of the target consumer group. Traditionally, scientific data has served only to induce the potential purchaser of agricultural products to try the material to see if it really works. Farmers and reclamation people believe only that which is growing out of the ground.

Customarily, new agricultural products undergo extensive testing as part of the marketing effort. The purpose of the testing program is to demonstrate the cost effectiveness of the product in achieving the agricultural goals of the intended purchasers. Composted municipal wastes, which are an agricultural product, have not been universally tested in the United States. There is precious little of the material available to test because there are so few bio-conversion programs in existence in this country. Catch-22.

THE OPPOSITE DIRECTION INFRASTRUCTURE

The existing waste management infrastructure is directed at the concentration of waste at specified locations. This makes perfectly good sense when the waste stream is perceived as a dangerous health hazard. The underlying rationale of bio-conversion is that the organic portion of the waste stream is biologically converted from a potentially hazardous substance into a non-hazardous resource. At the moment the waste stream ceases to be hazardous it is removed from the jurisdiction of the waste management fraternity. At the instant the material passes out of the jurisdiction of waste management regulation it enters the jurisdiction of agricultural regulation. The concerns of these two vertically oriented divisions of government are essentially unrelated. It is analogous to driving the wrong way on a one way street. Before compost can enter the marketplace as a generally useable soil amendment, the conflicting requirements of the various regulatory jurisdictions must be resolved. This task will be complex and require a cooperative attitude, especially when interstate shipment of compost is desired.

Coupled with this jurisdictional problem is the expectable fear that economic displacement will result from a change in the system. This is not intended to attribute an ulterior motive to those that might resist a bio-conversion program on jurisdictional grounds. Waste regulators are trained to believe that the material they supervise is fundamentally hazardous and from that fact it can be assumed that their beliefs are honestly held. Nonetheless, the fear of economic displacement presented by accelerating technological change is a fact of life for most Americans. This fact should not be ignored or fought; it should be acknowledged and managed in a sensitive and concerned fashion.

If one can get past the initial reactions, it becomes apparent that very little

displacement is actually required. Collectors still need to collect. It is true that a bio-conversion facility could be located closer to the points of waste generation and this would serve to shorten and/or reduce the collection routes. It is also true that finished compost needs to be trucked to the countryside for use. Transfer trucks, with minimal changes, are ideally suited to perform this work and existing collectors are the ideal choice for the job. Waste management officials need to continue to supervise the waste stream until it ceases to be hazardous. Bio-conversion systems employing aerobic, thermophilic processes are able to manage the decomposition process so that intense heat (172 degrees F) develops in the entire mass of material. This heat must be held long enough to exceed the "death rates" of disease causing organisms. The task of insuring that this procedure is properly conducted would be the mission of waste management officials. The level of supervision required is probably equal to, or greater than, that required to supervise a landfill. People who perform services at landfills will find that many of the tasks to be performed in a bio-conversion facility are quite similar to the work they presently perform. There really isn't any need for an argument. There is a great need for adjustment and accomodation.

These are the principal considerations. If they are not addressed in an appropriate manner, the difficulties which will result may prove insurmountable. The members of the existing waste management infrastructure must be assisted in seeing themselves as an integrated and essential element of a bio-conversion program. The missing infrastructure must be put in place. The citizens of the community must see the project as a community asset and not as an experiment in which they are the guinea pigs. These tasks will most likely require considerable time, expense and sensitivity to accomplish. It is the opinion of the author that these goals can be achieved in a timely and cost effective fashion.

The critical ingredient for success will be a realization on the part of the planners of the program that: their waste management problems are not of the slightest concern to anyone but themselves; and, innovative solutions seldom emerge from the use of traditional methods.

THE TECHNOLOGY-HARDWARE

This article is not a technology assessment. There are many different bio-conversion programs throughout the world. There are two or three in the United States. As mentioned before, some are considerably better than others and part of any successful program is a thorough technical review. The elements of a technical review will be discussed later.

Your author is deliberately avoiding a detailed discussion of the available technology. This is not to beg the issue of whether bio-conversion works. A thorough review of operating systems, world wide, appears periodically in Bio-Cycle Magazine published by J.G. Press of Emmaus, Pennsylvania. This would be an excellent starting place for anyone interested in becoming familiar with bio-conversion technology. The article will cover the critical elements of selecting a system which can meet the needs of a succesful program.

THE TECHNOLOGY-SOFTWARE

There are technical issues which are appropriate for discussion here. These involve compost rather than composting. Each time the bio-conversion option is considered, two technical problems emerge which are seldom overcome. The first is that there is no marketplace of any signifigance for composted municipal wastes. The second is that heavy metals and/or toxic substances found in the waste stream will find their way into the food chain if composted municipal wastes are used in general agriculture.

The existence of a market for composted municipal wastes is probably the most signifigant issue to be resolved before bio-conversion can be a viable disposal option. The true test of any innovative engineering concept is its cost effectiveness. For bio-conversion to be cost effective, the compost must be sold at prices which are considerably higher than it is generally believed to be worth. The method which has been previously employed to determine the value of compost (and which produced the low estimate of market value) appears to be scientifically incorrect.

In almost every previous study of the bio-conversion option, the dollar value of compost has been determined by the weight of Nitrogen, Phosphorus and Potassium in each ton of compost multiplied by the prevailing price for these chemicals. These three substances are the principal constituents of chemical fertilizers. There are several problems with this approach. The most significant problem is that composted municipal wastes seldom contain more than three percent of each of these chemicals, by weight. Chemical fertilizers customarily contain four to six times more of these chemicals than are found in compost. The result of this computation is an extremely low value for a ton of compost when compared to the value of a ton of chemical fertilizer. This has always been the key point which supported the conclusion that bio-conversion was not cost effective; the expected income from compost sales was considered insufficient to offset higher processing costs.

Compost is not a chemical fertilizer. In addition to Nitrogen, Phosphorus and Potassium, compost contains trace elements and an uncountable variety of living organisms. All of these substances interact amongst themselves and with the soil to increase soil fertility. Chemical fertilizers bypass the soil and provide direct food delivery to the plant. This is not to say that compost is

good and chemical fertilizers are bad. In fact, the most successful tests have used a combination of these materials. The entire point is that they are different. Since compost is not a chemical, it is impossible to determine how it will perform in a given situation by simple chemical analysis. The dollar value of compost is measureable only by comparison to the cost of achieving the same agronomic or reclamation objective through alternative means.

The second task which should be undertaken in the development of a bio-conversion program is a serious review of the research which has been done around the world regarding the utilization of composted municipal wastes. The investigator should be satisfied themself that a composting facility can be properly configured and properly operated in a manner consistent with community goals. A critical review of the literature, coupled with the consultation of persons knowledgeable in the fields of agronomy and soil science, should lead to an understanding that compost is able to resolve agronomic and reclamation problems for which the presently available solutions are either unsatisfactory or extremely expensive. Failure to take this step will leave lingering doubt that a bio-conversion program can achieve economic viability. This doubt has often been fatal to the serious consideration of bio-conversion.

A review of the literature will produce an understanding that compost, or other organic matter, works with soil in a manner which produces conditions which no other substance can duplicate. A primary example is the manufacture of fertile topsoil. Topsoil has two principal elements; chemistry and structure. When soils are depleted of their organic matter, soil chemistry changes; as a consequence soil stucture is lost. One small example is helpful. As the organic constituent of a soil is replaced, food is provided for earthworms. The worms drill little tunnels in the soil as they move around. The tunnels allow the infiltration of the atmosphere into the soil. Living organisms in this "refer-

tilized" soil are capable of "fixing" nitrogen from the atmosphere into the soil. Nitrogen is a fertilizer for plants. It is a self replenishing phenomenon which depends entirely on the establishment of an organics based soil chemistry and the subsequent development of soil structure. In certain reclamation problems, no amount of chemical fertilizers will produce a permanent, self sustaining vegetative cover. Organic matter is an indispensable element in these circumstances. In these cases (and many others) compost will have considerable value to those who believe that they must achieve reclamation. Today, there is a great deal of concern regarding the declining inventory of topsoil in our country. The ability to manufacture highly fertile topsoil may prove to be exciting news.

Another factor affecting the dollar value of compost is that the method and materials employed in its production will cause its quality to vary. Making compost is analogous to making beer. All brewmasters use essentially the same ingredients, but because their procedures differ, they produce distinctly different products. Each bio-conversion system produces compost of differing quality notwithstanding their use of identical waste streams. Identical bio-conversion systems will produce compost of differing quality if the waste material is varied.

There are experts that can evaluate the quality of compost. This is accomplished by an analysis of texture, temperature, particulant size, maturity, microbial population and chemical analysis. This expert is an indispensable member of the technical evaluation team which might be charged with the responsibility of evaluating bio-conversion systems.

The operators of each bio-conversion system take a different approach to marketing their technology. The more enlightened operators have realized that the

principal challenge to marketing in the U.S. is the ability to market compost. In fact, some see themselves engaged in the compost manufacturing business and treat tipping fees as an ancillary profit center. These organizations are immediately recognizable by the considerable effort they expend in testing their product's ability to perform in resolving various agricultural and reclamation problems. They also expend considerable effort in seeking markets for the non compostable elements of the waste stream. Look for these signs.

There is a second technical issue which any thorough discussion of bio-conversion must address. This is the serious problem of heavy metal and/or toxic chemical concentrations found in many municipal waste streams. Your author has no technical knowledge of the implications of this problem in relation to bio-conversion. However there is more than one position on the subject and it may prove helpful to attempt to balance the dialogue in this article. There is little question that compost containing high levels of these materials should not be used in soils intended for food production. This unfortunate situation has been perceived as an absolute barrier to the establishment of bio-conversion projects. Some knowledgeable persons express the belief that this absolute approach results from oversimplification.

There are many communities, essentially residential, where neither the solid waste stream nor the sewage system contain these dangerous substances. There are major cities where a portion of the community's waste stream does not contain these substances. The source of these substances is almost invariably commercial or industrial. As major urban areas collect solid waste, the tendency is to commingle residential with commercial and industrial materials. This practice renders the entire mass suspect.

It is quite true that even residential waste streams will contain some heavy

metals and dangerous chemicals. However, when related to the entire mass of the waste stream, the percentages are normally well below levels considered dangerous. Most bio-conversion methods include a number of grinding, turning, mixing, blending and sifting procedures which tend to homogenize the constituent materials throughout the mass. If the introduction of hazardous materials is occasional and limited in quantity, the overall product is likely to be benign in this respect.

It is highly unlikely that bio-conversion is going to take the nation by storm. The development of this method will be evolutionary rather than revolutionary. It will most likely start in residential communities or in the residential portions of larger communities. Assuming that well structured programs can be successful, their success may serve as an incentive to larger communities to enforce the presently existing laws that make the uncontrolled disposal of hazardous materials a crime. Interestingly, the City of Los Angeles recently tried and convicted the President of a large, nationally recognized water purification company for dumping heavy metals into the sewer system. Instead of the customary nominal fine the defendant was fined $100,000. and sentenced to a jail term. There is no way to be certain, but the reason for this response may have something to do with the fact that the city's sludge is composted by a private concern and sold to the public. The city and county have avoided the need for expansion of their treatment facilities partially because of this relationship.

Heavy metals and toxic waste are serious problems, but not everywhere. Communities which are either free of the problems, or those that wish to address the resolution of the problem, will not find this to be an impediment to the establishment of a bio-conversion program. There are a great many questions

which have not been answered exclusively because there have been few samples of the material available for testing. The early developing bio-conversion programs will serve to answer many of these questions.

A BIO-CONVERSION PROGRAM - DESIGN CRITERIA

The Resource Recovery and Conservation Act established that waste management had become a sufficiently serious national problem that it required a statewide perspective. Local communities seldom have the financial resources to secure the services necessary for a thorough evaluation of innovative concepts. Within each state, there are invariably a number of communities which would benefit from the development of more effective methods of addressing their disposal problems. An extremely useful combination would be a community government and its state government cooperating in the development of a bio-conversion facility. The combination would be even more powerful if federal involvement could also be secured.

If state and/or federal involvement is possible, it makes sense to structure the project in a fashion which permits its immediate application in other communities. Assuming there are no other bio-conversion facilities in the area, a joint project should address itself to the need to build the missing agronomic infrastructure and to adjust the existing waste management infrastructure to the point where additional facilities become more feasible.

If the initial facility will be a model, designed for replication in other communities, it is essential that the waste stream selected be representative of that found in most communities throughout the region. If the community selected has a signifigant concentration of a paticular waste substance, this will defeat the universal application of agronomic test results. For instance, if there were a large shoe factory producing leather wastes, the composted

material would be very high in nitrogen content. This would produce an extremely high quality compost but it would be a formulation which other facilities could not duplicate. The first facility should produce an average product, capable of replication elsewhere. Super composts are possible using specialized substances, but their development should be a secondary target to the development of a universally applicable system.

The design of the facility should be dictated by the real needs for such systems as they appear in the communities within the region which generate the greatest quantity of compostable wastes. This will often be the major cities. Since space tends to be a problem in dense urban settings, the technology selected should be compact even if not required in the community where the initial facility is established. The procedure should also be capable of being performed entirely inside an industrial type structure, without excessive noise, without odor and in an orderly and sanitary fashion. There are systems which meet this criteria. If universal application is the ultimate goal, these requirements should be imposed even though not necessarily required by the initial site selection.

The collection and landfilling of solid waste is often conducted by a community rather than a private sector enterprise. A technologically complex procedure such as bio-conversion does not lend itself to community operation. Most bio-conversion technologists will be willing to build and operate the facility, providing the contractual arrangement with the community offers the opportunity to make a profit. A private sector response to waste disposal will permit a smoother proliferation of facilities throughout the region because of the private company's ability to standardize its operations. Assuming the program is successful, a private sector group should be able to secure construction and

operating capital from the investment community. This would relieve government of the financing burden.

The primary goals of the program are to establish a bio-conversion facility which:

1. Works consistent with design.
2. Is completely benign; environmentally.
3. Produces compost to be employed in testing programs which demonstrate its cost effectiveness in achieving agronomic or reclamation goals, at a price per ton which achieves waste disposal cost stabilization.
4. Stabilizes or reduces the cost of disposal.
5. Provides a permanent waste disposal solution.
6. Makes profits considered attractive by the investment fraternity.
7. Permits the citizens to share in the value of their waste stream as that value develops.
8. Can be replicated within the region at a rate nearly equal to the development of demand for compost at satisfactory prices.

A BIO-CONVERSION PROGRAM - THE STEPS

STEP ONE- This may be the most important step in the entire program. The planners and the community at large must decide if they are prepared to do a considerable amount of study and work in pursuing the goal. If the traditional method of procuring services, the "Request for Proposals", is used to invite bio-conversion technologists to convince the community that the concept is sound, the effort is doomed to failure. The planners must be initiators rather than responders. The process of negotiating a workable agreement is arduous and seldom produces success if one party is not convinced that the goal is worthy. If this attitude does not prevail, it would be wiser to select a

disposal option with which the community is more comfortable. A second element of this step is to determine if the community is an appropriate candidate for bio-conversion. A checklist would include an evaluation of:

1. The potential for contamination of the waste stream with heavy metals and/or toxic materials.
2. Existing contractual relationships between the community and others bearing directly or indirectly on the program.
3. Charter limitations of the ability to contract for waste disposal services for extended periods. A bio-conversion facility will need twenty years of operation to justify its expense.
4. The true cost of current disposal methods and other methods presently under consideration.
5. The ability of the community to pass clear title to the waste stream.
6. An alternative method of disposal which could be used if a bio-conversion facility were to fail after it is established.

STEP TWO- The planners should undertake a literature study designed to satisfy themselves that there is reason to believe that bio-conversion technology is developed to the point where it offers a potential solution to the communities' disposal problems. The study should also explore the literature which deals with the potential benefits to be derived from compost utilization. If the planners are not attracted to the idea once this step is completed, the effort should be abandoned.

STEP THREE- The planners should consult with agricultualists and land reclamation experts familiar with prevailing conditions (in their area of interest) within a 400 mile radius of the community. The purpose of this step is to evaluate the market potential for materials which may prove to be cost effective solutions to the problems disclosed. The planners should complete this

step believing that there would be a sufficient demand for composted wastes to support the facility if the efficacy of the material could be proven through the means of a testing program.

STEP FOUR- The planners should consult with community officials to determine if there are sites available for a bio-conversion facility which will avoid a negative citizen response to the program. In doing so it should be presumed that the facility will be received as a "garbage factory" until it is better understood. Consideration should also be given to the route which collection vehicles will travel to reach the site. If the available sites are not excellent, in the sense that no one will be disturbed as a result of the program, the planners should anticipate citizen litigation.

STEP FIVE- The planners should investigate existing bio-conversion programs for the purpose of satisfying themselves that the technology works. During this step it should be determined which systems can be configured in a fashion consistent with the design criteria for the program. The systems should be ranked on the basis of overall acceptability. A sanitary engineer who enjoys the respect of the waste management fraternity at the state and local level should participate in this evaluation. Be prepared for foreign travel if the widest choice of systems is considered desireable.

STEP SIX- A critical evaluation of the compost produced by each of the systems considered satisfactory is necessary. This step will require the assistance of a microbiologist, a land reclamation soil scientist and an agriculturalist with experience in organic agriculture. Each of the persons selected should be known to, and enjoy the respect of, the state regulatory agencies supervising agriculture. The composts should be ranked by quality and the result correlated with the ranking of the bio-conversion systems.

STEP SEVEN- Evaluate the operators of the systems considered satisfactory. People with business problems can be expected to create more business problems. It is not essential that the operators have a great deal of money. Having lots of money tends to be inconsistent with being a pioneering technologist. Nonetheless, the operators should display a responsible business attitude toward those resources they control. High marks should be given for those enterprises which demonstrate a preexisting sensitivity to the need for testing and marketing their product. The operator will be primarily responsible for arranging the testing programs which will be essential to building the missing infrastructure.

STEP EIGHT- The planners, should pause and reflect at this point and ask themselves seriously if they still feel that the project is a good idea. This is where the hard work starts.

STEP NINE- The members of the waste management fraternity and the regulatory agencies supervising agriculture must be polled to determine their attitudes toward the project. The presentation made to these groups should be sensitive to the concerns they can be expected to express as described earlier in this article. It would be wise to have the personnel which assisted in the completion of steps two and three available at these presentations.

STEP TEN- The planners should pause once again and ask themselves if they emerged from step nine with the belief they were working in a cooperative environment. Enthusiasm is not essential, however, open hostility to the idea portends struggle with entities whose cooperation is essential to the success of the program.

STEP ELEVEN- Assuming the project has survived to this point, this would be an

appropriate time to commence negotiations with bio-conversion operators.

STRUCTURING THE PROGRAM

There will always be some special local condition which will require a particularized response. It is impossible to anticipate those concerns here. There are several elements which are generally important to the legitimate needs of the community and the operator of the facility. Foremost is, the contractual arrangements should permit the agreement to work. Driving a hard bargain will serve no purpose here even though it makes sense elsewhere.

The goal of the community is to stabilize its disposal costs and produce a permanent and desireable program. The incentive to the community should be that a highly successful program will reduce its costs. In other words, at the worst, the community should pay at or near the cost of its other alternatives, and at the best, a sale of the entire output of compost should reduce those costs.

The goal of the operator is to operate the facility at a modest profit and to fully exploit the opportunity provided by the first facility to establish other facilities within the region. The incentive is to do the foregoing, but to make significant profits in the process.

The operator should be required to finance the facility without the assistance of the community. The community may wish to participate as required for a bond issue, but the essential element is that the operator is responsible for providing all funds necessary to bring the facility to operational status.

To have any chance of securing financing, the operator must have in hand a binding agreement which will produce sufficient income to operate properly,

retire the debt, pay interest and produce a profit. This will be in the form of a contract with the community to provide disposal services and to be paid specified sums for the service. If there is any contingency (other than the satisfactory operation of the facility) which would reduce the operators income below the point where operations can continue, some form of loan guarantee will be necessary. There are a number of state governments and a number of federal programs that could be expected to provide such guarantees for a well conceived program to be executed by competent parties.

A structure which meets the foregoing considerations could be as follows:

1. The total cost of disposal by means other than bio-conversion would be established as the cost per ton of disposal. This fee should be subjected to escalation clauses relating to actual increases in the operator's costs, rather than economic indices.

2. The total cost to the community, on a daily basis, should be determined (price per ton multiplied by number of tons to be disposed). This total sum should be divided by three. The agreement would provide that the community will pay one third of the total as a tipping or disposal fee. It would also provide that the community would pay the other two thirds of the total as the purchase price of the compost produced. All of these fees should be expressed in terms of dollars per ton. An example will be helpful:

   Assume the community will generate 100 tons per day of solid waste and their expected cost by other methods is $50.00 per ton. This produces a total of $5000.00 per day. Dividing this sum by three produces a sum of $1667.00. This amount would be divided by the 100 tons and the disposal fee would be $16.67 per ton. Assume the facility will produce 75 tons per day of compost from the 100 tons of

waste (this is the average shrinkage rate for most systems). The 75 tons would be divided into the $3333.00 remaining to be paid, which would produce a price per ton for compost of $44.44.

3. The community would become the consumer of last resort for compost produced by the facility. The operator would be required to sell the compost or use it in testing programs at a nominal cost per ton. Income received from this activity, reduced by sales expenses, would be employed to reduce the city's obligation.

The foregoing arrangement is designed to counterbalance the community interest in participating in the value of the compost and the operator's need to be assured of sufficient total income to operate the facility. Presumably the compost would ultimately be sold in its entirety, leaving the community with an extremely low disposal cost as their reward for program participation. It is true that the operator would be in a position to do nothing at all and the community would be required to pay for the material anyway. The community may be able to overcome their concern in this regard with the realization that the operator's opportunity for success, beyond the nominal profits offerred by the initial facility, is in using the material for tests which will expand the demand for compost. This will lead to the establishment of other facilities.

It is not essential that the arrangement take the form suggested above. It is essential that the agreement be structured in a manner which provides the parties with signifigant incentives to perform acts which will benefit all of the parties to the agreement.

Some may view this arrangement as a governmental subsidy of private enterprise. In considering the validity of this concern it might be appropriate to point out that there are thousands of private sector enterprises making profits by

supplying the needs of the existing waste management programs. Government pays every single penny of these costs. The distinction this program offers is that it would be the only waste management program which held the potential of getting someone else to share some of that expense. Getting socially desireable concepts moving, to the point where they are self sustaining, has always been a legitimate use of taxpayer funds. Solar energy tax credits are a recent example.

CONCLUSION

The human life cycle is perceived by many as starting at conception and concluding at death. This is only half the biological cycle. It might be called the "composition" phase, because it is during this period that elemental substances contained in the food we eat are converted by the human laboratory into the complex substances of which new life is composed. The purpose of "decomposition", which is the other half of the life cycle, is to break down the complex compounds created during composition and return them to their elemental state. Gravity insures that these elemental substances will be stored in the soil where they will be available for the composition of food to support new life. And so it goes.

By continuing to bury and/or burn organic matter, nutrients which were previously caused to be stored in the soil, are misdirected or destroyed. The soil is not self replenishing of these substances. This pactice may be an interdiction of our own life cycle.

We often read of the growing mass of "farmed out" lands and frightening losses of precious topsoil. Could it be that the answer to this expanding crisis is as close to home as the garbage can ?

NEW ISSUE

MOODY'S RATING: Aaa

In the opinion of Bond Counsel and Special Tax Counsel, interest on the Bonds is exempt from present Federal income taxation and, in the opinion of Bond Counsel, from present Kentucky income taxation under existing statutes, regulations, court decisions and administrative rulings, except for interest on any Bond for any period during which such Bond is held by a person who is a "substantial user" of the Project or by a "related person" within the meaning of Section 103(b)(9) of the Internal Revenue Code of 1954, as amended. Bond Counsel are further of the opinion that the Bonds will be exempt from ad valorem taxation by the Commonwealth of Kentucky and all of its political subdivisions.

$5,000,000

KENTUCKY POLLUTION ABATEMENT AUTHORITY
SMALL BUSINESS POLLUTION CONTROL REVENUE BONDS, 1981 SERIES A
(MADISONVILLE WASTE RECOVERY PROJECT)

(Base Loan Payments Fully Guaranteed By
The United States Small Business Administration)*

Dated: March 1, 1981 **Due: As shown below**

* The 1981 Series A Bonds (the "Bonds") are special revenue obligations of the Kentucky Pollution Abatement Authority (the "Authority") payable solely from and secured by a pledge of revenues to be received by the Authority under a Loan and Security Agreement to be entered into with Madisonville Waste Recovery, a Kentucky general partnership (the "Company"), to finance the Project as described herein. *Neither the faith and credit nor the taxing power of the Authority or the Commonwealth of Kentucky or the United States of America or any agency or political subdivision thereof is pledged to the payment of the principal of or interest on the Bonds, and no officer or employee of the United States of America or any agency thereof is personally liable for any payment on the Bonds.*

The payment of Base Loan Payments under the Loan and Security Agreement, which includes amounts sufficient to pay the principal of and interest on the Bonds, will be fully guaranteed by the United States Small Business Administration, and pursuant to Section 404(b)(2) of the Small Business Investment Act of 1958, as amended, such guarantee is a full faith and credit obligation of the United States.

The Bonds are issuable as coupon Bonds in the denomination of $5,000, registrable as to principal only, and as fully registered Bonds in denominations of $5,000 and any integral multiple thereof. Principal and semiannual interest (which interest is payable on March 1 and September 1 of each year, commencing September 1, 1981) will be payable at the corporate trust office of the First National Bank of Louisville, as Trustee and Paying Agent, in Louisville, Kentucky. The Bonds are subject to redemption, prior to maturity, as further described herein.

$2,990,000 SERIAL BONDS

Due March 1	Amount	Coupon Rate	Due March 1	Amount	Coupon Rate
1982	$ 45,000	7 %	1989	$245,000	8.20%
1983	160,000	7.10	1990	265,000	8.40
1984	170,000	7.25	1991	285,000	8.55
1985	180,000	7.40	1992	310,000	8.75
1986	195,000	7.60	1993	335,000	9
1987	210,000	7.80	1994	365,000	9.20
1988	225,000	8			

$2,010,000 9.75% TERM BONDS DUE MARCH 1, 1997

Price of All Bonds 100%

(plus accrued interest)

The Bonds are offered when, as and if issued and received by the Underwriter, and subject to approval of legality by Harper, Ferguson & Davis, Louisville, Kentucky, Bond Counsel, the approval of certain matters by Orrick, Herrington & Sutcliffe, A Professional Corporation, San Francisco, California, Special Tax Counsel and Counsel to the Underwriter, and certain other conditions. It is anticipated that the Bonds will be available to the Underwriter on or about March 18, 1981, in Louisville, Kentucky.

BLYTH EASTMAN PAINE WEBBER
INCORPORATED

March 3, 1981

No person has been authorized to give any information or to make any representations other than those contained in this Official Statement in connection with the offering made hereby and, if given or made, such information or representations must not be relied upon as having been authorized by the Authority, the Company named herein or the Underwriter. Neither the delivery of this Official Statement nor any sale hereunder shall under any circumstances create any implication that there has been no change in the affairs of the Authority or the Company since the date hereof. This Official Statement does not constitute an offer or solicitation in any jurisdiction in which such offer or solicitation is not authorized, or in which the person making such offer or solicitation is not qualified to do so or to any person to whom it is unlawful to make such offer or solicitation.

The information set forth herein concerning the Project and the Company, and in the Appendices hereto, has been obtained by the Authority from the Company and other sources which are believed to be reliable but which are not guaranteed as to accuracy or completeness and is not to be construed as a representation by the Authority, the Underwriter or the U.S. Small Business Administration.

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(Base Loan Payments Fully Guaranteed By The United States Small Business Administration)

INTRODUCTION

This Official Statement is provided to furnish information in connection with the sale of $5,000,000 aggregate principal amount of Small Business Pollution Control Revenue Bonds, 1981 Series A (Madisonville Waste Recovery Project) (Base Loan Payments Fully Guaranteed By The United States Small Business Administration) (the "Bonds"), of the Kentucky Pollution Abatement Authority (the "Authority"). The Bonds are authorized to be issued by a resolution adopted by the Authority (the "Resolution"), to provide funds for the acquisition and construction of solid waste and sewage sludge processing and disposal facilities (the "Project") to be owned by Madisonville Waste Recovery, a Kentucky general partnership (the "Company") in Madisonville, Kentucky.

Prior to the issuance of the Bonds, the Authority and the Company will enter into a Loan and Security Agreement dated as of March 1, 1981 (the "Loan Agreement"), pursuant to which the Authority will loan money to the Company for the acquisition and construction of the Project. The Bonds will be payable solely from revenues derived from the payments made by the Company pursuant to the Loan Agreement and will be secured by a pledge of such revenues and of certain other funds pursuant to an Indenture of Trust dated as of March 1, 1981, between the Authority and First National Bank of Louisville, as Trustee (the "Indenture"). The Loan Agreement will require Base Loan Payments sufficient, together with any other funds available for that purpose, to pay when due the principal of and interest on the Bonds. (See the caption "The Loan Agreement—Term of Loan Agreement and Loan Payments" below.) The Loan Agreement also creates a security interest in the Project equipment, and, in addition, the Bonds will be secured by a mortgage on the Project real property. Prior to the delivery of the Bonds, the United States Small Business Administration will issue its guarantee of 100% of the Base Loan Payments of the Company under the Loan Agreement (the "Guarantee").

There follow brief descriptions of the Authority, the Project, the Bonds, the Loan Agreement, the Guarantee, and the Indenture. Such descriptions do not purport to be comprehensive or definitive. All references herein to the Loan Agreement, the Guarantee, and the Indenture are qualified in their entirety by reference to such documents, and references herein to the Bonds are qualified in their entirety by reference to the form thereof included within the Indenture and the information with respect thereto included within the aforesaid documents, all of which are available for inspection at the office of the Authority. Information with respect to the Company is set forth in Appendix A hereto and a copy of the form of the Guarantee is reproduced in Appendix B hereto. During the period of the offering, copies of the forms of the Loan Agreement and the Indenture may be obtained from Blyth Eastman Paine Webber Incorporated at 555 California Street, 43rd Floor, San Francisco, California 94104, Attention: Anthony E. Cone, Telephone Number (415) 362-8005.

THE AUTHORITY

The Authority is a body corporate and a political subdivision of the Commonwealth of Kentucky (the "State") organized under Chapter 224A of the Kentucky Revised Statutes ("KRS"). The principal statutory purpose of the Authority, which was established by the General Assembly of the State in

1972, is to assist in the abatement of the pollution of the waters of the State and the resulting danger to the public health and well-being. The Authority is specifically authorized, *inter alia*, pursuant to KRS Chapter 224A to issue revenue bonds and to make certain repayable state grants to local governmental units in the State to assist in the construction of wastewater treatment works and related sewer facilities which constitute eligible projects, and in this connection the Authority has previously issued four separate series of its revenue bonds, currently outstanding in the aggregate principal amount of $33,885,000. The security for such bonds is separate and distinct from, and unrelated to, the security for the Bonds.

The Authority, by virtue of a 1978 amendment to KRS Chapter 224A, is also authorized to issue pollution control revenue bonds to finance "pollution control facilities" as defined in KRS 103.246 (which term includes the Project) and in the manner provided in KRS 103.246, pursuant to KRS 103.200 through 103.285, and to loan the proceeds of such bonds to an industrial concern to enable it to finance such pollution control facilities. The cited statutory sections of KRS Chapter 103, together with KRS Chapter 224A, are collectively referred to hereinafter as the "Act."

The Bonds constitute the fourth series of pollution control revenue bonds issued by the Authority to finance pollution control facilities for an industrial concern. The first three such series, dated February 1, 1980, June 1, 1980 and November 1, 1980, were issued and are currently outstanding in the principal amounts of $3,145,000, $1,525,000 and $1,500,000, respectively. The Bonds constitute a separate, limited obligation of the Authority, not on a parity with any other revenue bonds of the Authority, although Additional Bonds may hereafter be issued on a parity with the Bonds under certain conditions.

The governing body of the Authority is a Board consisting of six Members, two of whom are appointed by the Governor of the State for terms of four years each. The remaining four members are (pursuant to Executive Orders of the Governor) the Secretary of the Commerce Cabinet, the Secretary of Natural Resources and Environmental Protection, the Secretary of Finance and the Commissioner of Community and Regional Development of the State. Four Members of the Authority constitute a quorum for the transaction of business. The Secretary of the Commerce Cabinet serves as Chairman of the Authority, and other officers of the Authority consist of a Vice Chairman, chosen from the Members, and an Executive Director, Deputy Director and Secretary-Treasurer who are not Members.

The Authority's office is located at Room 225, Capitol Annex, Frankfort, Kentucky 40601.

THE SMALL BUSINESS ADMINISTRATION GUARANTEE PROGRAM

The United States Small Business Administration ("SBA") is a permanent, independent agency established pursuant to the Small Business Act of 1953 to aid, counsel, assist and protect the interests of small businesses. Pursuant to Public Law 94-305, enacted on June 4, 1976, it is authorized to guarantee the full amount of payments of rentals or other amounts due under qualified contracts for financing the installation of pollution control facilities for small businesses.

The Company has made an application to the SBA, through the Authority, for a guarantee of its Base Loan Payments under its proposed Loan Agreement with the Authority. The Company was sponsored by a commercial bank, which certified to the Authority and the SBA that, in the sponsoring bank's opinion, the Company was creditworthy and, based upon the Company's projections of income from and expenses for the Project, should be able to service its obligation to the Authority, that the Company was at a disadvantage to major companies in being able to obtain financing for solid waste and sewage sludge processing and disposal facilities, that the sponsoring bank recommended that the Authority issue Bonds to assist the Company in financing the Project, and that the sponsoring bank had in its files available for inspection by the SBA and the Authority the data upon which its recommendation was based. The sponsoring bank also submitted a financial analysis of the Company in support of its recommendation.

Upon determining that the Company's application met the SBA's eligibility criteria (which include size limits and profitability for at least three out of the previous five years), the SBA has delivered to the

Authority a written commitment with respect to the Company that it will issue its Guarantee of the Company's Base Loan Payments under the proposed Loan Agreement, the definitive Guarantee to be delivered by the SBA not later than the date of delivery of the Bonds. In determining to give its commitment to issue a Guarantee, the SBA made an independent review and investigation of the Company's application, but relied in part on the recommendation of the sponsoring bank.

SBA regulations require that the Company deposit into an escrowed reserve fund three months' Base Loan Payments under the Loan Agreement, and that the Company pay to the SBA an application fee and a guarantee fee. The guarantee fee, to be deposited in the SBA fund described in the paragraph below, is 3½% of the total amount of payments to be guaranteed over the term of the Loan Agreement, or about 7% of the principal amount of the Bonds. The funding of the Reserve Fund and payment of the SBA's fees are taken from Bond proceeds.

P.L. 94-305 authorized the appropriation of a $15,000,000 fund for the purpose of paying expenses of the program and paying any claims under guarantees resulting from defaults under financing contracts. The Congress has appropriated $15,000,000 to establish the fund. Additionally, the 3½% guarantee fees, the administrative and processing fees, and any moneys, property or assets derived from operations of the program are also deposited in the fund. In the event that the fund were to become depleted, additional appropriations would be required to be authorized and made to provide for the payment of any future claims under the guarantee. As of December 31, 1980, the fund had a balance of approximately $29,000,000. As of December 31, 1980, the SBA has issued guarantees for 170 financings in 23 states, with an aggregate of payments guaranteed of approximately $398,000,000 (not taking account of monthly payments which have already been made by each such company). As of December 31, 1980, the SBA has been called upon to make a payment under its guarantee in only one instance (not involving any bond issued by the Authority) since this program began in June 1977. The SBA has commenced to make payments as required under this guarantee.

See the caption "The Guarantee" below for a description of SBA's obligations under the Guarantee to be issued for the Company.

THE PROJECT AND USE OF PROCEEDS

The Project consists of a solid waste and sewage sludge processing and disposal facility to be constructed by the Company in the City of Madisonville, Kentucky. A brief description of the Project and the Company appears in Appendix A.

The proceeds of the Bonds are expected to be applied as follows:

Total Amount of Issue	Reserve Fund Deposit⊙	Costs of Issuance⊙	Available for Project⊙
$5,000,000	$ 159,585	$ 576,800	$4,263,615

⊙ Equal to approximately one-fourth of average annual Base Loan Payments.

⊙ Includes SBA Guarantee Fee and Processing and Administration Fee, the Authority's expenses, Trustee's initial fees, Underwriter's discount and printing, Bond Counsel's fees and other similar expenses.

⊙ Includes capitalized interest on bonds during construction in the amount of approximately $332,177.

THE BONDS

The Bonds are special, limited obligations of the Authority payable out of revenues received by the Authority pursuant to the Loan Agreement to be entered into by the Authority with the Company to

finance the Project, any amounts paid to the Trustee pursuant to the SBA Guarantee of Base Loan Payments under the Loan Agreement, and certain other moneys. The Bonds, and the interest thereon, will not constitute an obligation or liability of the State, any political subdivision thereof (other than the Authority), the United States of America or any agency thereof, nor will they constitute a debt or pledge of the faith and credit of the Authority, the State, any political subdivision thereof, or of the United States of America or any agency thereof.

The Bonds will be issued in the aggregate principal amount of $5,000,000, will be due in the maturities, and will bear interest at the rates, set forth in the table below. The principal of and interest on the Bonds will be payable at the principal office of the Trustee in Louisville, Kentucky. The Bonds are issuable as coupon Bonds in the denomination of $5,000, registrable as to principal only, and as fully registered Bonds in denominations of $5,000 or any integral multiple thereof. Interest on the Bonds will be payable semiannually on March 1 and September 1 of each year, commencing September 1, 1981. The Bonds will not be subject to redemption except as set forth under "Mandatory Redemption," "Extraordinary Optional Redemption," and "Optional Redemption."

The average life of the Bonds, after giving effect to mandatory sinking fund payments, is 11 years and 2 days.

Maturity Schedule

Maturity Date March 1	Amount	Interest Rate	Maturity Date March 1	Amount	Interest Rate
1982	$ 45,000	7 %	1989	$ 245,000	8.20%
1983	160,000	7.10	1990	265,000	8.40
1984	170,000	7.25	1991	285,000	8.55
1985	180,000	7.40	1992	310,000	8.75
1986	195,000	7.60	1993	335,000	9
1987	210,000	7.80	1994	365,000	9.20
1988	225,000	8	1997	2,010,000⊙	9.75

⊙ Final Maturity.

Term Bonds due on March 1, 1997 are subject to mandatory sinking fund redemption without premium in the amounts specified below commencing March 1, 1995.

Mandatory Redemption

Sinking Fund Redemption. The term Bonds due on March 1, 1997 shall be subject to mandatory redemption in part by lot, from sinking fund payments at the principal amount thereof, without premium, plus accrued interest to the redemption date, in the amounts and on the dates set forth in the table below:

Redemption Date March 1	Principal Amount⊙
1995	$615,000
1996	665,000

⊙ There will remain $730,000 principal amount of term Bonds for payment at maturity on March 1, 1997.

Extraordinary Mandatory Redemption. The Bonds shall also be subject to redemption at any time, in whole but not in part, without premium,to the extent that the Company shall be required to prepay its

loan upon the impossibility of performance of the Loan Agreement or operation of the Project due to certain specified changes in governing law, or upon a declaration of taxability of the Bonds. (See the caption "The Loan Agreement—Prepayment Terms" below.)

Extraordinary Optional Redemption

The Bonds shall be redeemable in whole, but not in part, at the principal amount thereof, without premium, plus accrued interest to the redemption date at any time in the event of exercise by the Company of its right under the Loan Agreement to prepay the loan upon the happening of certain specified events including: (i) the Project or buildings, equipment or machinery used by the Company at the site of the Project shall have been damaged, destroyed or taken by eminent domain to the extent provided in the Loan Agreement; (ii) unreasonable burdens or excessive liabilities have been imposed on the Company or any court or administrative body shall have entered a judgment, order or decree, which shall, in the opinion of the Company, prevent it from carrying on its normal operations at its facility where the Project is installed for a period of eight consecutive months, as set forth in the Loan Agreement; or (iii) changes in economic availability of raw materials or operating supplies shall have occurred which make continued operation of the Project facilities uneconomical, as set forth in the Loan Agreement. (See the caption "The Loan Agreement—Prepayment Terms" below.)

Optional Redemption

The Bonds maturing on or after March 1, 1992, shall be subject to redemption in whole, or in part by lot, from any source of available funds (except that the excess in the Bond Fund attributable to Base Loan Payments, other than any prepayments made pursuant to Section 14(a) of the Loan Agreement, may not be used to redeem Bonds unless they are redeemed as a whole), on any date on or after March 1, 1991, at the option of the Authority (to be exercised only upon the request of the Company) prior to their respective maturities, at the respective redemption prices (expressed as a percentage of each Bond or portion thereof to be redeemed) set opposite the periods in the following table, plus interest accrued to the date of redemption:

Redemption Date	Redemption Price
March 1, 1991 or September 1, 1991	103 %
March 1, 1992 or September 1, 1992	102½
March 1, 1993 or September 1, 1993	102
March 1, 1994 or September 1, 1994	101½
March 1, 1995 or September 1, 1995	101
March 1, 1996 or September 1, 1996	100½

When any redemption is made by the Trustee pursuant to any of the provisions of the Indenture and less than all of the outstanding Bonds are to be redeemed, the Trustee shall redeem Bonds in inverse order of maturities, and by lot within the same maturity.

Notice of Redemption

The Trustee shall cause notice of any intended redemption of the Bonds to be published at least once prior to the redemption date in a newspaper published and of general circulation in Kentucky and a financial newspaper or journal of general circulation in New York, New York, not less than 30 days nor more than 60 days prior to the redemption date. A similar notice shall also be mailed by the Trustee to the respective registered owners of the Bonds designated for redemption at their addresses appearing on the Bond registration books. Failure to mail or any defect in such notice shall not affect the validity of the proceedings for the redemption of such Bonds. Notice of redemption having been duly given, and moneys for payment of the redemption price being held by the Trustee, the Bonds to be redeemed shall become due and payable; and from and after the date so designated, interest on the Bonds called for redemption shall cease to accrue, the coupons for interest thereon maturing subsequent to the date so designated shall be

void and the holders of said Bonds shall have no rights in respect thereof, except to receive payments of the redemption price.

Security for the Bonds

The Bonds are special, limited obligations of the Authority payable out of Revenues (as defined in the Indenture) derived by the Authority under the Loan Agreement with the Company and out of the Reserve Fund established pursuant to the Indenture. The Authority will assign to the Trustee for the benefit of the holders of the Bonds issued under the Indenture all rights of the Authority under and pursuant to the Loan Agreement and the SBA's guarantee of Base Loan Payments thereunder, and all Revenues received by the Authority in respect of the Project financed by the Bonds.

Revenues are defined in the Indenture to mean all receipts, loan payments and other income derived by the Authority from the sale or lease or other financing of the Project (other than Administrative Expenses, as defined hereinafter, due under the Loan Agreement), and any income or revenue derived from the investment of any money in any fund or account established pursuant to the Indenture, including all loan payments made by the Company pursuant to the Loan Agreement, and any payments received pursuant to the guarantee of the Company's Base Loan Payments under the Loan Agreement by the SBA, and any amounts obtained from enforcement of any mortgage or security interest in the Project.

Prior to receiving any payments from the SBA pursuant to its guarantee of the Base Loan Payments of the Company, the Trustee shall be required first to exhaust the Reserve Fund, containing three months' Base Loan Payments. (See the caption "The Indenture—Construction, Reserve and Bond Funds" below.)

THE GUARANTEE

Pursuant to the authority vested in the SBA by Section 404 of the Small Business Investment Act of 1958, as amended (Section 102 of P.L. 94-305, June 4, 1976), the SBA has determined that the Company is an eligible small business concern which is at a financing disadvantage when compared with other business concerns with respect to the acquisition of pollution control facilities. The SBA has also determined that the acquisition and construction of the facilities and equipment described in the application will be used for the collection, storage, treatment, utilization, processing, or final disposition of solid or liquid waste.

Pursuant to such purposes and in furtherance of such law and in consideration of the receipt of a guarantee fee, the SBA will, not later than the date of delivery of the Bonds, guarantee the payment of the Base Loan Payments required to be made by the Company pursuant to the Loan Agreement. The SBA shall pay amounts guaranteed upon receiving a notice of the Company's default and the depletion of the Reserve Fund established under the Indenture, but the SBA shall not be obligated to make such payments otherwise than as the Company would be required to make in accordance with the terms of the Loan Agreement (but SBA will not pay any premium on any Bonds).

The Bonds are not redeemable solely because the SBA makes payments on its Guarantee in lieu of Base Loan Payments by the Company. SBA's payments, together with any Base Loan Payments by the Company, will be sufficient to pay principal of and interest on the Bonds as the same become due, whether at maturity, by redemption or by acceleration, as provided in the Loan Agreement and the Indenture. The SBA Guarantee is limited as to the total dollar amount which the SBA is obligated to pay. This limit is calculated to be the total amount of principal and interest payable on the Bonds over the full life of the Bonds (less the Reserve Fund), and thus is sufficient to assure timely payments to the Trustee if the Company is unable at any time to make Base Loan Payments.

The SBA will certify that its Guarantee is a full faith and credit obligation of the United States pursuant to Section 404(b)(2) of the Small Business Investment Act of 1958, as amended. A copy of the form of SBA's Guarantee and of the opinion of the SBA's General Counsel with respect to the Guarantee is set forth in Appendix B hereto. No official or employee of SBA shall have any personal liability on any Guarantee.

Under SBA regulations, prior to making payments under the Guarantee, SBA must receive notice of the default of the Company, and the Trustee must deplete the Reserve Fund for the Company. In addition, the Trustee must use the period in which there are moneys in the Reserve Fund in reasonably diligent efforts to minimize losses. Once called upon, as set forth above, payments will be made by SBA to the Authority, once the Company's Reserve Fund is depleted, prior to interest, principal and sinking fund payment dates on the Bonds. The Authority will deposit such amounts with the Trustee so that such payments may be made in a timely manner. In the event of a default under the Loan Agreement resulting in a call upon the Guarantee, to the extent of payments received thereunder, the Authority and the Trustee have agreed that the SBA shall be the successor to the respective rights of the Trustee and the Authority under the Loan Agreement, and, if requested by the SBA, the Trustee has agreed to act as the SBA's agent for collection under the Guarantee. However, the inability of the SBA to effect a recovery from the Company will not excuse any of the SBA's obligations under its Guarantee of the Base Loan Payments due under the Loan Agreement.

The terms of the Guarantee do not contain a waiver of any suretyship defenses that may be available to the SBA in connection with its obligations under the Guarantee. In general, suretyship defense may be characterized as follows: if a party for whose benefit a guarantee is made takes any action injurious to the guarantor or inconsistent with the guarantor's rights, or if such party fails to take a required action and such omission increases the guarantor's risk or otherwise injures its rights, the guarantor may assert a right to be discharged to the extent of the injury it has thus sustained. The Trustee, under the Indenture, has covenanted to take all the steps outlined in the preceding paragraph to call upon the SBA's Guarantee as necessary, and has covenanted to take no action without SBA's written consent to exercise remedies, waive any defaults, or make any amendments to the Loan Agreement or Indenture, or to do anything which would materially or adversely affect SBA's rights or materially increase its risks under the Guarantee.

THE LOAN AGREEMENT

The Bonds shall be secured by the Loan Agreement and the payments thereunder. The terms of the Loan Agreement are summarized below.

Term of Loan Agreement and Loan Payments

The Loan Agreement shall be dated as of March 1, 1981, and shall remain in effect until the Company's obligations under the Loan Agreement are discharged, which shall in any event be no later than March 1, 1997.

Pursuant to the Loan Agreement, the Company agrees to pay monthly to the Authority amounts of Base Loan Payments which will provide the Authority with, not later than five business days prior to each principal and interest payment date, an aggregate amount which will be sufficient to enable the Authority to pay when due the principal of and interest on the Bonds ("Base Loan Payments").

In addition to Base Loan Payments, the Company shall pay to the Authority the amount of any premium due on the Bonds, no later than five business days prior to the payment date when such amount is due. The Company shall also pay Additional Payments in amounts equal to all fees, charges and expenses of the Trustee and any fees and expenses of the Authority, all taxes and assessments of any type charged to the Authority or to the Trustee affecting the site of the Project, all accountants' fees for the preparation of reports required by the Trustee, the amount, if any, required to replenish the Reserve Fund to the sum of $159,585 (an amount equal to approximately one-fourth of average annual Base Loan Payments) and other related items as set forth in the Loan Agreement ("Additional Payments"). (Base Loan Payments and Additional Payments are hereafter jointly referred to as "Loan Payments.") Any installment of Base Loan Payments accruing under the Loan Agreement which shall not be paid when due shall bear interest at the rate of 1% above the net interest cost of the Bonds per annum from the date when said payment is due until the same shall be paid, which amount will be deposited in the Reserve Fund.

The obligations of the Company to make Loan Payments and perform its other agreements under the Loan Agreement shall be absolute and unconditional. The Loan Agreement shall be deemed and construed to be a "net contract" and the Company agrees that the Loan Payments provided for shall be an absolute net return to the Authority, free of any deductions, without any abatement, diminution or setoff whatsoever.

Construction of the Project

The Company will supervise and provide for the completion of construction and installation of the Project to be financed pursuant to the Loan Agreement.

The Authority is issuing the Bonds to provide funds for the payment of the costs of acquisition and construction of the Project and will deposit the proceeds of the Bonds with the Trustee. The Authority will direct the Trustee to transfer the proceeds of the sale of the Bonds, less accrued interest on the Bonds and the required reserves, to a Construction Fund (the "Construction Fund") established pursuant to the Indenture. The sums in such Construction Fund are available for costs of issuing the Bonds, for costs of constructing, acquiring and installing the Project, and for payment of interest on the Bonds during the period of construction of the Project. If moneys in such Construction Fund available for the Project are not sufficient to pay all such Project costs in full, the Company is obligated to pay at its own expense from its own funds and without any right of reimbursement in respect thereof all such Project costs which are in excess of the available moneys in the Construction Fund.

If, upon completion of the Project, there remains any balance in the Construction Fund, such balance shall be transferred to a Surplus Account within the Bond Fund and applied as set forth below in the caption "The Indenture—Construction, Reserve and Bond Funds."

Maintenance, Alteration or Transfer of Project

During the term of the Loan Agreement, all maintenance and repair of the Project shall be the responsibility of the Company, and the Company shall pay for or otherwise arrange for the payment of all utility services supplied to the Project, and shall pay for or otherwise arrange for the payment of the costs of the repair and replacement of the Project resulting from ordinary wear and tear or want of care on the part of the Company. The Company shall have the right during the term of the Loan Agreement to make alterations or improvements or to attach fixtures, structures or signs to the Project, so long as the qualification of the Project as a solid waste disposal facility under the Internal Revenue Code and the Act is not adversely affected.

The Company may make alterations or improvements, or substitute machinery or equipment, in the Project, provided the qualification of the Project for tax-exempt financing is not adversely affected. The Company may, with the prior written consent of the Authority, the Trustee and SBA, lease, transfer or assign all or part of the Project, provided the tax-exempt status of the Bonds is not adversely affected, but in such case the Company shall remain liable to make all Base Loan Payments and to perform all other covenants under the Loan Agreement. The proceeds of any sale of the whole or any part of the Project shall be deposited with the Trustee as a prepayment of Base Loan Payments.

Security Agreement and Mortgage

As part of the Loan Agreement, the Company grants the Authority a present security interest in the machinery and equipment of the Project, and all additions, changes, and supplements thereto, and all proceeds of the disposition (including insurance) thereof, to secure the Company's performance of all of its obligations and covenants under the Loan Agreement. Also, the Company will deliver to the Trustee a mortgage covering the real property upon which the Project is located together with all fixtures, buildings, structures and improvements thereon. Such mortgage will be recorded, and financing statements relating to such security interest, which is assigned to the Trustee under the Indenture, will be filed prior to the delivery of the Bonds to the purchasers thereof. There can be no assurance that enforcement by the Trustee of the security interest and the mortgage would yield a value equivalent to the outstanding principal amount of the Bonds.

Insurance

The Company agrees that throughout the full term of the Loan Agreement it will maintain public liability insurance in respect of the operation of the Project and insurance for property damage in amounts not less than $1,000,000 for any one occurrence and $100,000 for property damage, with a loss deductible clause of not to exceed $50,000. In addition, it will maintain insurance on its interest in the Project against fire and extended coverage risks in the amount of the greater of (i) the then replacement value of the Project (excluding such values as are not insured by standard fire insurance policies) or (ii) the then total unpaid principal of the Bonds outstanding, with loss deductible provisions of not to exceed $50,000. In the event of damage or destruction of the whole or any part of the Project, unless the Company shall have exercised its option to prepay the loan and discharge its obligations under the Loan Agreement (see "The Loan Agreement—Prepayment Terms"), the Company shall notify the Authority and the Trustee in writing as to the nature and extent of such damage or loss and whether it is practicable or desirable to rebuild, repair or restore such damage or loss. If the Company shall determine that such rebuilding, repairing or restoring is practicable and desirable, it shall forthwith proceed with and complete such rebuilding, repairing and restoring. If the Company shall determine that such rebuilding, repairing or restoring is not practicable, and the Company chooses not to exercise its option to cause the Bonds or a portion thereof to be redeemed, the net proceeds of all such insurance shall be paid by the Company into the Bond Fund established by the Trustee pursuant to the Indenture and shall be applied by the Trustee as the Company shall direct to (i) reduce or prepay Base Loan Payments, (ii) purchase Bonds in the open market, to the extent practicable, or (iii) any combination of (i) and (ii) above.

Eminent Domain

In the event the whole or any part of the Project shall be taken under the power of eminent domain, unless the Company shall exercise its option to prepay the loan and discharge its obligations under the Loan Agreement (see "The Loan Agreement—Prepayment Terms"), it shall notify the Authority and the Trustee as to the nature and extent of such taking and whether it is practicable or desirable to acquire or construct substitute improvements. If the Company shall determine that such substitute improvements are practicable and desirable, the Company shall forthwith proceed with the acquisition or construction of such substitute improvements. If the Company shall determine that such substitute improvements are not practicable and desirable, and the Company chooses not to exercise its option to cause the Bonds or a portion thereof to be redeemed, the net proceeds of any eminent domain proceeding shall be applied by the Trustee as the Company shall direct to (i) reduce or repay Base Loan Payments; (ii) purchase Bonds in the open market, to the extent practicable; or (iii) any combination of (i) and (ii) above.

Prepayment Terms

(a) The Company has the option to prepay its loan without premium or penalty in whole but not in part at any time if any of the following events shall have occurred:

(i) The Project or buildings, equipment or machinery used by the Company on the site of the Project shall have been damaged or destroyed to such extent that, in the opinion of the Company (expressed in a certificate filed with the Authority and the Trustee) (a) it is not practicable or desirable to rebuild, repair or restore the Project within a period of eight consecutive months following such damage or destruction, (b) it is or will be thereby prevented from carrying on its normal operations for a period of eight consecutive months, or (c) the cost of restoration thereof would substantially exceed the net proceeds of insurance carried thereon;

(ii) Title to, or the temporary use of, all or substantially all of the Project or the site of the Project shall have been taken under the exercise of the power of eminent domain, including such a taking as results (or is likely to result) in the Company being prevented from carrying on normal operations for a period of eight consecutive months, or as renders the Project (or the site of the Project) unsuitable for use by the Company;

(iii) Unreasonable burdens or excessive liabilities shall have been imposed on the Company, including, without limitation, Federal, State or other ad valorem, property, income or other taxes not being imposed on the date of the Loan Agreement, or any court or administrative body shall enter a

judgment, order or decree requiring the Company to cease all or any substantial part of its operations at the site of the Project to such extent that, in the opinion of the Company (expressed in a certificate filed with, and supported by such additional evidence as may be required by, the Authority and the Trustee), it is or will be thereby prevented from carrying on its normal operations for a period of eight consecutive months; or

(iv) Changes in economic availability of raw materials, operating supplies or facilities necessary to operate the Project or technological or other changes shall have occurred which make the continued operation of the Project facility uneconomical in the opinion of the Company (expressed in a certificate filed with, and supported by such additional evidence as may be required by, the Authority and the Trustee) and which shall have resulted in a cessation of all or substantially all of the normal operations of the Project.

(b) The Company is required to prepay its entire outstanding loan under the Loan Agreement without premium or penalty:

(i) if, as a result of any changes in the Constitution of the State or the Constitution of the United States of America or as a result of legislative, judicial or administrative action, the Loan Agreement shall have become void or unenforceable or impossible of performance in accordance with the intent and purposes of the parties as expressed in the Loan Agreement, or shall have been declared unlawful; or

(ii) if, due to the untruth or inaccuracy of any covenant, representation or warranty made by the Company in the Loan Agreement or in connection with the offer and sale of the Bonds, interest on the Bonds, or any of them, is determined to be includable in the gross income for Federal income tax purposes of the holders thereof (other than a holder who is a "substantial user" of the Project or a "related person" within the meaning of Section 103(b)(9) of the Internal Revenue Code of 1954, as amended) by a final administrative determination of the Internal Revenue Service or judicial decision of a court of competent jurisdiction in a proceeding of which the Company received notice and was afforded an opportunity to participate to the full extent permitted by law. A determination or decision will be considered final for this purpose when all periods for administrative and judicial review have expired.

In the event the Company prepays its loan under the conditions (a) or (b) set forth above, the amount of such prepayment (which shall be used to redeem the outstanding Bonds) shall be the sum of (i) an amount of money to be paid into the Bond Fund which, when added to the amount then on deposit with the Trustee and available for such purpose, will be sufficient to pay or redeem, at the principal amount thereof, but without premium, the then outstanding Bonds affected by such prepayment, including principal and all interest accrued and to accrue to the payment or redemption date and redemption expenses, and (ii) an amount of money equal to the fees and expenses of the Trustee and any Paying Agent and of the Authority accrued and to accrue until such final payment and redemption of the Bonds to be redeemed.

(c) In addition to the right or obligation to prepay the loan under certain conditions as set forth above, the Company may at any time on or after March 1, 1991 prepay all or part of its loan, and such prepayments shall be applied toward redemption of Bonds maturing on or after March 1, 1992 under the terms thereof, provided that no redemption of less than $25,000 shall be permitted unless after such redemption no Bonds will be outstanding. (See the captions "The Bonds—Optional Redemption" and "The Bonds—Mandatory Redemption" above.)

Special Covenants

The Company and the Authority covenant that use will not be made of proceeds (or of any other moneys) which would cause the Bonds to be "arbitrage bonds" within the meaning of Section 103(c) of the Internal Revenue Code. The Company and the Authority further covenant to comply with the requirements of Section 103(c) and any regulations thereunder.

In the Loan Agreement, the Company agrees that it will maintain its existence during the term of the Loan Agreement, that it will not dissolve or dispose of all or substantially all of its assets, and that it will

not consolidate with or merge into another entity; provided, however, that the Company may form a successor partnership or successor corporation (as permitted under the terms of the Loan Agreement) or consolidate with or merge into another corporation or otherwise transfer all or substantially all of its assets to another corporation, provided that the surviving, resulting or transferee entity (i) assumes and agrees in writing to pay and perform all of the obligations of the Company under the Loan Agreement, (ii) qualifies to do business in the State, (iii) has a net worth after such transaction at least equal to 90% of that of the Company prior thereto and (iv) has obtained the prior written consent of the Authority, which has agreed not to provide such consent without the prior written consent of the SBA.

The Company and the Authority have covenanted that neither will take or permit any action to be taken which results in interest paid on any Bonds being includable in Federal gross income of the holder thereof (other than a substantial user or related person) for purposes of Federal income taxation.

Events of Default; Remedies

The Loan Agreement provides that the following events shall constitute Events of Default:

(1) failure by the Company to make Loan Payments required to be paid under the Loan Agreement when due;

(2) failure by the Company to observe and perform any covenant or obligation on its part in the Loan Agreement for a period of 30 days, or such additional time as is reasonably required to correct any such default, after written notice by the Authority or the Trustee of such failure;

(3) the making of any representation or warranty by the Company in connection with the Loan Agreement which is materially false or misleading;

(4) the taking of any administrative action by any governmental authority which materially and adversely affects the Company's condition, operations or ability to meet its obligations to make Loan Payments under the Loan Agreement;

(5) default by the Company in the payment of any bond, debenture, note or other evidence of indebtedness which has resulted in the acceleration thereof or a default when the same is due and payable, whether at maturity or by declaration, call or redemption or otherwise, subject to the right of the Company to contest the liability in question;

(6) the dissolution or liquidation of the Company except as permitted by the covenant summarized in the second paragraph under "Special Covenants" above;

(7) certain events of bankruptcy, insolvency, assignment or reorganization as set forth in the Loan Agreement; or

(8) an assignment or transfer, either voluntarily or by operation of law, of the Company's interest in the Loan Agreement without the written consent of the Authority except as permitted by the Loan Agreement.

Under the terms of the Loan Agreement, certain of the obligations of the Company thereunder (other than the obligation to make Loan Payments) may be suspended if by reason of *force majeure* (as defined in the Loan Agreement) the Company is unable to carry out such obligations.

Whenever any such Event of Default shall have occurred, the following remedial steps may be taken by the Authority or its assignees:

(1) Declare all installments of Loan Payments under the Loan Agreement to be immediately due and payable, whereupon all such installments shall become immediately due and payable. "All installments of Loan Payments" shall mean an amount equal to the entire principal amount of the Bonds outstanding, together with any premium payable on, and interest accrued or to accrue on such Bonds prior to, the next succeeding date on which such Bonds can be redeemed, plus any other payments due or to become due under the Loan Agreement prior to the time that the Company's obligations under the Loan Agreement are paid in full.

(2) Take any actions at law or in equity as may appear necessary or desirable to collect the moneys then due and thereafter to become due, to effect entry on or take possession of the Project or to

enforce performance and observance of any obligation, condition or covenant of the Company under the Loan Agreement.

(3) Deliver to the Trustee a certificate declaring that an Event of Default has occurred and directing the Trustee to make no further disbursements of funds pursuant to the Indenture until such time as the Authority or its assignees may direct.

If an Event of Default shall occur under the Loan Agreement, the terms of the Guarantee permit the Authority to make a claim for Base Loan Payments due, and to the extent of payments made under the Guarantee, the SBA shall be the successor to all rights of the Authority under the Loan Agreement. Payments by SBA as guarantor shall not cure any default, but, to the extent of any such payments, the Authority shall not exercise any remedies against the Company without SBA's consent. Each and all of the remedies under the Loan Agreement are cumulative and the exercise of one right or remedy shall not impair the right of the Authority to any and all other remedies. All remedies of the Authority described above may be exercised by the Trustee and by the holders of the Bonds, subject to the provisions of the Indenture. The Trustee has covenanted, in the Indenture, to notify SBA within 30 days of any Event of Default by the Company under the Loan Agreement.

Amendments, Changes and Modifications

Except as otherwise provided in the Loan Agreement, subsequent to the initial issuance of the Bonds and prior to their payment in full (or provision for the payment thereof having been made in accordance with the provisions of the Indenture) the Loan Agreement may not be effectively amended, changed, modified or terminated without the written consent of the Trustee who has agreed not to provide such consent without the prior written consent of the SBA.

THE INDENTURE

The Bonds shall be issued pursuant to an Indenture. The terms of the Indenture are summarized below:

Security

Pursuant to the Indenture, the Bonds shall be secured by a first and exclusive lien on the Reserve Fund established pursuant thereto and on all Revenues received by the Authority in respect of the Project financed by the Bonds, including all payments made by the Company under the Loan Agreement with the Authority, any payments received under the SBA's Guarantee of Base Loan Payments under the Loan Agreement, all income or revenues derived from the investment of any money in certain funds or accounts established under the Indenture, and any moneys received by enforcement of any security interest in and mortgage on the Project. All such moneys are irrevocably pledged to the punctual payment of the principal of and interest and premium, if any, on the Bonds, provided that certain Additional Payments, as referred to on page 7 hereof, may be applied and expended for their indicated purposes.

In and by the Indenture the Authority transfers, assigns and sets over to the Trustee all of the Revenues and any and all rights, privileges and obligations it has under the Agreement, including, without limitation, (i) the right to collect and receive directly all of the Revenues, all Revenues collected or received by the Authority being deemed to be held and to have been collected or received by the Authority as the agent of the Trustee and forthwith being paid by the Authority to the Trustee, and (ii) the security interest in the Project equipment and machinery granted by the Agreement, together with any interest of the Authority in the mortgage on the Project real property granted by the Company directly to the Trustee, as provided in the Agreement.

Covenants of the Authority

The Authority has covenanted to punctually pay, but only from Loan Payments made by the Company pursuant to the Loan Agreement, any Guarantee payments received, and any income or revenue derived from the investment of moneys in certain funds or accounts established under the Indenture, the

principal and interest (and premium, if any) to become due in respect of the Bonds. The Authority has further covenanted not to take any action, without the written consent of the Trustee, which will impair the pledge and assignment of such revenues under the Indenture and the Authority's assignment of rights under the Loan Agreement to the Trustee or the Trustee's enforcement of any such rights. So long as any such Bonds remain outstanding, the Authority has also agreed that it will not create or suffer to be created any pledge, lien or charge of any kind upon the revenues to be received by the Trustee pursuant to the Loan Agreement and Indenture.

Construction, Reserve and Bond Funds

The Indenture provides for the establishment of a Construction Fund, a Reserve Fund and a Bond Fund to be held in trust by the Trustee. Initially, the proceeds of the sale of the Bonds will be deposited in the Construction Fund for purposes of the payment of the cost of acquisition and construction of the Project, and related costs of issuance of the Bonds, except for the sum of $159,585 (an amount equal to approximately one-fourth of average annual Base Loan Payments) which will be deposited in the Reserve Fund and except for accrued interest which will be deposited in the Bond Fund.

Upon completion of the Project, as certified by the Company pursuant to the Loan Agreement, the Trustee is authorized to transfer to a Surplus Account to be established in such circumstances in the Bond Fund any moneys then remaining in the Construction Fund, after provision for payment of costs payable from the Construction Fund but not yet due. Moneys in the Surplus Account may be used as the Company directs the Trustee in writing for constructing improvements to the Project, purchase of Bonds in the open market, redemption of Bonds prior to maturity (as authorized by the Indenture), or payment of principal of the Bonds, *provided* that the Company shall in each case obtain an opinion of nationally recognized bond counsel that the proposed use of such surplus moneys will not cause interest on the Bonds to become taxable.

There shall be deposited in the Bond Fund under the Indenture, as monthly Base Loan Payments are received, but in any event on or before one business day prior to each interest payment date of the Bonds, sufficient revenues for the payment of the semiannual interest on all of the Bonds then outstanding. In addition, there shall be so deposited into the Bond Fund, for purposes of payment of the principal of the Bonds as they mature or as they are required to be redeemed from sinking fund payments, sufficient revenues for the payment of the principal of such Bonds. In the event the Company exercises its option to prepay the loan following one of the events described under the caption "The Loan Agreement—Prepayment Terms," the Loan Payments provided therefor shall also be deposited into the Bond Fund under the Indenture.

If on any interest or principal payment date, there is a deficiency in the Bond Fund, to the extent such amount is on deposit in the Reserve Fund, the Trustee shall use such amounts to cure any such deficiency. No payments will be made by the SBA under its Guarantee of the Base Loan Payments due under the Loan Agreement until the Reserve Fund has been depleted.

Permitted Investments

Any moneys held in the Construction Fund and Bond Fund shall be invested and reinvested by the Trustee, at the request of and as directed by the Company, to the extent permitted by law, in the following: (i) obligations issued or guaranteed by the United States or by any person controlled or supervised by and acting as an instrumentality of the United States pursuant to authority granted by Congress, (ii) obligations issued or guaranteed by any state or political subdivision thereof rated A or higher by Moody's Investors Service, Inc., or by Standard & Poor's Corporation, both of New York, New York, or their successors; (iii) commercial or finance paper which is rated either P-1 or A-1 or an equivalent by Moody's Investors Service, Inc. or Standard & Poor's Corporation, both of New York, New York, or their successors; (iv) banker's acceptances drawn on and accepted by commercial banks; (v) certificates of deposit of banks or trust companies, including the Trustee or any commercial bank affiliated with the Trustee, organized under the laws of the United States of America or any state thereof, having a reported capital and surplus of at least $5,000,000 in dollars of the United States of America, such certificates to be fully secured by obligations of the type specified in (i) above (to the extent not insured by the Federal Deposit Insurance Corporation); and (vi) repurchase agreements, including those of the Trustee, fully secured by obligations of the type specified in (i) above; provided that any such investment or deposit is not prohibited by applicable law.

Any moneys held as part of the Reserve Fund shall, at the request of the Company, be invested or reinvested by the Trustee in direct obligations of, or obligations guaranteed as to principal and interest by, the United States, or in insured savings accounts (up to the amount of insurance) in any institution the accounts of which are insured by the Federal Savings and Loan Insurance Corporation. Any moneys held as part of such Reserve Fund not so invested shall be deposited in a separate bank account (up to the amount of insurance) in any institution the accounts of which are insured by the Federal Deposit Insurance Corporation or may be (i) invested in time certificates of deposit maturing within 1 year or less (up to the amount of insurance), issued by any bank or trust company which is so insured, or (ii) deposited in a savings account of such bank or trust company (up to the amount of insurance). Notwithstanding the foregoing, if the SBA submits written instructions to the Trustee stipulating the securities in which Reserve Fund moneys shall be invested, such Reserve Fund investments shall be made as set forth in such written instruction, provided such securities are not other than those described above and provided that the SBA shall consult with the Company and the Authority to the extent necessary to ensure that the Bonds do not become arbitrage bonds as defined in Section 103(c) of the Code.

Any interest accruing on, or profit realized from, or loss resulting from the investment of moneys in the Bond Fund, Reserve Fund or Construction Fund will be credited or charged to the particular fund from which such investment was made. Interest earned on investment of moneys in the Construction Fund may be applied to the cost of construction of the Project including interest on the Bonds prior to the completion of the Project.

Supplemental Indentures

The Authority and the Trustee may, without the consent of any of the bondholders, amend or modify the rights and obligations of the Authority and of the bondholders by entering into a supplemental indenture or indentures for any one or more of the following purposes:

(a) to add to the covenants and agreements of the Authority in the Indenture, or to assign or pledge additional security for the Bonds, or to surrender any right or power therein reserved to or conferred on the Authority, provided that any such covenant, agreement, assignment, pledge or surrender shall not adversely affect the interests of the holders of the Bonds;

(b) to cure any ambiguity or to cure, correct, or supplement any defective provision contained in the Indenture or in regard to questions arising under the Indenture, which shall not adversely affect the interests of the holders of the Bonds;

(c) to modify the Indenture in order to permit the qualification thereof under the Trust Indenture Act of 1939, so long as such modification shall not adversely affect the interest of the holders of the Bonds; and

(d) to provide for the issuance of Additional Bonds (as defined hereinafter).

The holders of not less than 66⅔% in aggregate principal amount of the Bonds then outstanding shall have the right, except as stated above, to consent to and approve the execution by the Authority and the Trustee of supplemental indentures for the purposes of amending or modifying the Indenture or any supplemental indenture; provided, however, no such supplemental indenture shall (i) without the consent of the holder of each Bond so affected, extend the fixed maturity or the time of payment of interest or reduce the principal amount of, or reduce the interest rate or reduce any premium payable on redemption of, any Bond, or (ii) without the consent of all the bondholders, reduce the aforesaid percentage of Bonds the holders of which are required to consent to any such supplement, create any lien on revenues pledged to secure the Bonds prior to or on a parity with the lien of the Indenture (except as permitted therein), create any preference of any bondholder over any other bondholder, extend the time of payment or reduce the amount of any Sinking Fund Payment or deprive the holders of the Bonds of the lien of the Indenture. No supplemental indenture may be entered into by the Authority and the Trustee without the prior written consent of SBA.

Additional Bonds and Refunding Bonds

In addition to the Bonds, in the event (i) an additional series of bonds ("Additional Bonds") has been authorized to finance completion of, or additions or betterments to, the Project or the construction

of other facilities constituting pollution control facilities under the Act for the Company, (ii) the Loan Agreement (or other financing contract) to be financed has been guaranteed by the SBA, and (iii) certain other conditions of the Indenture have been complied with, then the Authority may execute and deliver Additional Bonds to the Trustee in such principal amount as it shall determine. The Bonds and any such Additional Bonds issued pursuant to the Indenture shall rank *pari passu*.

Refunding Bonds may be authorized and issued by the Authority for refunding purposes in an aggregate principal amount sufficient to provide for the payment of all Bonds of any series then outstanding, interest and premiums, if any, on the outstanding Bonds of any series, and expenses in connection with such refunding. Additional Bonds and Refunding Bonds may not be issued without the prior written consent of the SBA.

Default and Remedies

The following events are described as Events of Default under the Indenture:

(1) a default in the payment of the principal of, or interest or premium, if any, on, any Bond when and as the same shall become due and payable, whether at the stated maturity thereof, or upon proceedings for redemption, by declaration or otherwise; and

(2) subject to certain provisions of the Indenture described below, default by the Authority in the performance or observance of any covenant, agreement or condition in the Indenture or in the Bonds for a period of 60 days after written notice by the holders of not less than 25% in aggregate principal amount of the outstanding Bonds.

Upon the occurrence of any Event of Default and so long as such event is continuing, the Trustee may, and upon written request of the holders of not less than 25% in aggregate principal amount of the Bonds then outstanding shall, by notice in writing to the Authority and the Company, declare the principal of all of such Bonds then outstanding and the interest accrued thereon due and payable. If, at any time after the Bonds shall have been so declared due and payable, and before any judgment shall have been obtained, there shall be deposited with the Trustee a sum sufficient to pay all principal and interest then due and any and all other defaults shall have been cured, then the holders of at least a majority in principal amount of the Bonds may, on behalf of the holders of all Bonds, rescind and annul such declaration and waive such default. No such rescission and annulment shall extend to any subsequent default or impair any right or power consequent thereon. An Event of Default under the Indenture does not create any obligation of SBA under its Guarantee, which relates only to the Loan Agreement.

In the event the Trustee shall recover any moneys following an Event of Default under the Indenture, such moneys, after payment of all the Trustee's fees and expenses, shall be applied by the Trustee pro rata first to the payment of any interest in default in the order of the maturity thereof, and then to the payment of the principal of the Bonds then due and unpaid and the premium thereon, if any, in each such instance such payment to be made ratably to the persons entitled thereto without discrimination or preference.

The Trustee

First National Bank of Louisville in Louisville, Kentucky, will be the Trustee under the Indenture and will act as paying agent. The Indenture requires that there at all times be a Trustee thereunder which is a bank or trust company organized and doing business under the laws of the United States or of a state thereof, authorized to exercise corporate trust powers, having a combined capital and surplus of at least $10,000,000, and subject to supervision or examination by Federal or state authority.

Limitation of Liability

The Bonds, together with interest thereon, shall be limited, special revenue obligations of the Authority payable solely from the Revenues as defined in the Indenture and shall be a valid claim of the respective holders thereof only against the moneys held by the Trustee pursuant to the Indenture and against the Revenues. The Authority has not obligated itself except as to the application of the Revenues as provided in the Indenture and the Agreement.

UNDERWRITING

The Bonds will be purchased from the Authority by the Underwriter, Blyth Eastman Paine Webber Incorporated, pursuant to a Purchase Contract. The Underwriter has agreed to purchase the Bonds from the Authority at a discount of 2.7%. The Purchase Contract provides that the Underwriter will purchase all the Bonds, if any Bonds are purchased. The Company will deliver to the Underwriter a Letter of Representation containing, among other things, an agreement to indemnify the Authority and the Underwriter against certain civil liabilities arising under securities laws.

The initial offering prices set forth on the cover page may be changed by the Underwriter from time to time without notice.

RATING

The Authority has applied to Moody's Investors Service, Inc. for an investment rating on the Bonds, which rating is reflected on the cover page of this Official Statement. No application was made to any other rating agency for the purpose of obtaining an additional rating thereon. Any explanation as to the significance of the rating assigned may only be obtained from Moody's Investors Service, Inc. There is no assurance that any rating will obtain for any given period of time or that it will not be lowered or withdrawn entirely if, in the judgment of the agency establishing the rating, circumstances so warrant. The Underwriter has taken no responsibility either to bring to the attention of the holders of the Bonds any proposed downward revision in the rating of the Bonds or to oppose any such proposed revision. Any change in or withdrawal of such rating could have an adverse effect on the market price of the Bonds.

TAX EXEMPTION

In the opinion of Harper, Ferguson & Davis, Bond Counsel, and Orrick, Herrington & Sutcliffe, A Professional Corporation, Special Tax Counsel, interest on the Bonds is exempt from present Federal income taxation and, in the opinion of Bond Counsel, from present Kentucky income taxation under existing statutes, regulations, court decisions and administrative rulings, except for interest on any Bond for any period during which such Bond is held by a person who is a "substantial user" of the Project or by a "related person" within the meaning of Section 103(b)(9) of the Internal Revenue Code of 1954, as amended. Bond Counsel are further of the opinion that the Bonds will be exempt from ad valorem taxation by the Commonwealth of Kentucky and all political subdivisions thereof.

APPROVAL OF LEGAL PROCEEDINGS

Certain legal matters incident to the issuance of the Bonds and with regard to the tax-exempt status of the interest thereon are subject to the approving legal opinion of Harper, Ferguson & Davis, Louisville, Kentucky, Bond Counsel. A signed copy of that opinion, dated and speaking as of the date of original delivery of the Bonds to the Underwriter, will be delivered at the time of original delivery of the Bonds. While Bond Counsel have participated in the preparation of portions of this Official Statement describing the Authority, the Bonds, the Loan Agreement, the Indenture, the Guarantee and that portion under the heading "Tax Exemption," Bond Counsel have not been engaged to confirm or verify, and express and will express no opinion as to, the accuracy, completeness or fairness of any statements in this Official Statement or in other reports, financial information, or offering or disclosure documents that may be prepared or made available by the Company, the Authority or others to the purchasers of the Bonds or others. Certain legal matters pertaining to the Company will be passed upon by King, Deep, Branaman & Sheffer, Henderson,

Kentucky. Certain legal matters will be passed upon by Orrick, Herrington & Sutcliffe, A Professional Corporation, San Francisco, California, as Counsel to the Underwriter and as Special Tax Counsel.

CONCLUDING STATEMENT

To the extent that any statements made in this Official Statement involve matters of opinion or estimates, whether or not expressly stated to be such, such statements are made as such and not as representations of fact or certainty, and no representation is made that any of such statements will be realized. Certain information herein has been furnished by the Company and other sources that are believed to be reliable, but the Authority, the Underwriter and the SBA neither have nor assume any responsibility as to the accuracy or completeness of such information, which information is not to be construed as a representation by the Authority, the Underwriter or the SBA. Neither this Official Statement nor any statement which may have been made orally or in writing is to be construed as, or as part of a contract with the original purchasers or holders of the Bonds.

The information and expressions herein are subject to change without notice, and neither the delivery of this Official Statement nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in the affairs of the Company since the date hereof.

The foregoing and subsequent references and summaries or descriptions of provisions of the Bonds, the Loan Agreement, the Indenture, the Guarantee and all references to other materials not purporting to be quoted in full are only brief outlines of some of the provisions thereof and do not purport to summarize or describe all of the provisions thereof.

The execution and delivery of this Official Statement have been approved by the Authority and the Company.

KENTUCKY POLLUTION ABATEMENT AUTHORITY

By /s/ W. BRUCE LUNSFORD
Chairman

MADISONVILLE WASTE RECOVERY

By /s/ JACK DINGMAN
Partner

APPENDIX A

THE COMPANY AND THE PROJECT

The information contained in this Appendix A has been furnished by the Company and, while such information is believed to be reliable, it is not warranted as to accuracy or completeness by, and is not to be construed as a representation of the Authority, the Underwriter or the SBA.

MADISONVILLE WASTE RECOVERY

Madisonville Waste Recovery (the "Company"), a Kentucky partnership, was recently formed for the purpose of processing and disposing of solid waste and sewage sludge in Madisonville, Kentucky. The Company has entered into a long-term contract with the City of Madisonville (the "City") to receive and dispose of the City's solid waste and sewage sludge and expects to market the compost produced by the waste disposal process to be utilized. Its partners are Robert Anderson, Jack Dingman and Fred Ellis. Robert Anderson has owned and operated A & M Rubbish Company, a solid waste disposal company in Simi Valley, California, since 1963. Jack Dingman is a general partner in Real Earth, Ltd. ("Real Earth"), which has certain technical expertise with respect to the waste disposal process which will be employed in the Project (described below). Mr. Dingman will be superintendent of construction for the Project pursuant to contract. The Company presently contemplates that the operation of the Project will be managed by Real Earth pursuant to a long-term management contract to be executed later this year.

The Company's headquarters are located at the site of the Project: 680 Davis Wells Road, Madisonville, Kentucky.

THE PROJECT

The Project consists of a facility (including the site thereof) to process and dispose of both solid waste (such as garbage, refuse and the like) and sewage sludge from the City's sewage treatment plant. The process to be used by the Company involves the mixing of precise quantities of municipal, residential and industrial solid waste (which has been processed to remove ferrous metals and large components) with sewage sludge. The mixture is shredded and then processed in digester chambers in which the mixture decomposes. The natural bacterial action which occurs during decomposition generates sufficient heat to pasteurize the mixture. This process produces a safe product which is usable as a compost. This compost will be sold for use in land reclamation, particularly where there has been strip mining.

The disposal process which will be employed in the Project does not generate or emit any air or water pollution. No landfilling will be necessary because all waste material and sewage sludge will be processed for sale as compost or recycled for use in other products. The Project is expected to be constructed and put into operation by the end of this year or early 1982.

APPENDIX B

FORM OF SMALL BUSINESS ADMINISTRATION POLLUTION CONTROL FACILITY PAYMENT GUARANTEE AND OPINION OF GENERAL COUNSEL

Date:_____

Guarantee No.:_____

Aggregate Amount: $_____

This pollution control facility payment guarantee is issued pursuant to the authority vested in the Small Business Administration (SBA) by Section 404 of the Small Business Investment Act of 1958, as amended.

Obligor shall mean

Obligee shall mean

Pursuant to its authority, SBA has determined that the Obligor is an eligible small business concern and is at a financing disadvantage with other business concerns with respect to the acquisition of pollution control facilities.

Further, SBA has determined that the acquisition of the equipment described in the application of the Obligor is likely to help prevent, reduce, abate or control noise, air or water pollution or contamination or will be used for the collection, storage, treatment, utilization, processing or final disposal of solid or liquid waste.

Pursuant to such purposes in furtherance of the cited Law and in consideration of a guarantee fee, receipt of which is acknowledged, SBA does hereby guarantee the full amount of the installment payments, but not exceeding the aggregate amount stated above, required to be made by the Obligor to the Obligee pursuant to of that qualified contract between them dated as of

This guarantee is a full faith and credit obligation of the United States and may be assigned only with the prior written approval of SBA.

SBA shall pay the obligation guaranteed within thirty days of receiving a notice of the Obligor's default in payment from the Obligee or its approved assignee, but SBA shall not be obligated to make such payments otherwise than in accordance with the terms of the cited part of the qualified contract.

SBA shall be the successor to any and all rights, security and collateral of the Obligee or its assignee to the extent of any payments made under this guarantee to the Obligee or its assignee.

SMALL BUSINESS ADMINISTRATION

By:_____

The assignment of the foregoing guarantee to by the Obligee's instrument of assignment dated is hereby approved.

SMALL BUSINESS ADMINISTRATION

By:_____

As General Counsel of the United States Small Business Administration, I am of the opinion that the within Guarantee has been duly authorized in accordance with the lawful delegated authority that, when executed and delivered by , will be a legal, valid, and binding obligation of the United States Small Business Administration in accordance with its terms. The full faith and credit of the United States of America are pledged to the obligations set forth in said Guarantee.

_____

General Counsel

"Compost is the core of nature. Compost is the life giving fertilizer. It has proven itself through thousands of years as the best means of rejuvenating worn or abused soils."

The pages of history are filled with emphatic evidence that nothing is more fundamental to man's prosperity - or to civilization itself - than a lasting productive agriculture. This, the past proves, can stem only from heeding the most primary of nature's laws (The Law of Return), the very cycle of life itself.

Wherever a nation has adhered to this principle, there alone has a people survived and a land flourished. Where it has been violated and abused, whether through ignorance or mistaken customs, there has a race perished, a metropolis fallen to ruin, and a country's soil withered and blown to sterile waste.

In the United States, compost has been used since the pilgrim set foot on Plymouth Rock. Early colonial farmers abandoned the fish in every hill of corn when they discovered that by properly composting two loads of muck (muck as referred to in the old books, meant rich soil, usually river bottom soil) to one load of barnyard manure, they obtained a product equivalent in fertilizing value to three laods of manure. New England farmers continued to use fish as well as manure in their compost heaps. Ten or twelve loads of muck to one load of fish was their formula. The process of composting the muck effectively prevented other waste of ammonia or nitrogen.

Nothing is more certain than continual cropping without manure deprives the soil of its fertility (James Madison, 1818).

George Washington Carver, famed botanist, chemist, and agriculturist, advised the farmer to compost materials and return them to the land.

Sir Albert Howard, father of the organic method, spent from 1905-1934 in India, where he evolved the organic concept. He found that it took three times as much plant matter as manure, to compost the soil and to maintain the equilibrium of the land.

J.I. Rodale (1942), pioneer of the organic method in America, began publication of a monthly magazine, Organic Farming and Gardening, assimilating the ideas of Howard and adding the knowledge of further experimentation.

The history of compost is both ancient and new. In its narrowest sense, composting has been going on ever since life began. Composting is the necessary transition by which life is renewed. Man began to actually make compost for the express intent of renewing soil fertility in ancient Rome.

After centuries man strayed from the natural idea, depending more and more on the use of synthetic chemical fertilizers to replace compost. It was Howard who pointed out the importance of compost as an integral part of the life cycle. Compost could do more to maintain the fertility of the soil today than ever before in history, but it is being called upon to do less than 100 years ago.

Learned men of the past, teachers, botanists, and agronomists of today have told us how important it is to obey the Law of Return, the life cycle of all. Now, we have in our backyards the means to help accomplish this, our trash, garbage and sewage. Organic Bio-Conversions, Inc. has the means to convert these waste products into a valuable resource, a life giving organic compost.

When you study composting you automatically become an amateur biologist and learn what part bacteria play in the organic destruction.

You must have water for these microscopic wrecking crews to perform their chemical magic. They are the yeasts and ferments, the agents of decomposition.

Organic matter represents the remains of all kinds of plants, animals, and micro-organisms. Organic matter also contains inorganic substances. Organic matter promotes a granular structure which permits soil to hold more water and air. All chemical and physical activity takes place on the surface of each soil particle. The more surface activity that takes place, the more plant nutrient is made available.

Micro-organisms that cause the organic matter to decay and dissipate are so active that any average soil can handle easily many times the amount of organic matter applied to it. It acts as a rough conditioner to open up and aerate the soil. It allows rain to soak into soil and prevents wind and rain erosion. Micro-organisms are most active when it is needed during the period of plant growth due to the warmer temperature. Essential plant nutrients are also most available during this period.

There are many factors in the soil environment that influence the number and activity of soil micro-organisms. Most important are:

1. Temperature - Under 50°, no activity; 50° to 60°, activity picks up; and 85° to 90°, there is a high state of activity. Soil must be warm for micro-organisms to decay plant material and to develop nitrates at a rapid rate. Over 100° retards or stops activity.

2. Moisture - When soil is dry there is little or no microbial activity.

3. Aeration - Well ventilated soil supports the growth of micro-organisms that convert nutrients to available forms essential for high crop productivity.

Acidity and alkalinity must be in balance for micro-organisms to become active. In the soil certain bacteria decompose the old roots into substances which are worked over by other organisms and are transformed into food for plants. In an experiment described in the book The Living Soil, soil from a field where chemical fertilizers were used took four months to decay 10% of a piece of cottonwood. But in soil rich in organic matter, 91% of the piece of cottonwood decayed in that period of time. One of the important functions of soil bacteria then, is to provide plants with food and if the tenders of the soil can so regulate their methods as to consider the well-being of the micro-organisms of the soil so that they can multiply to abundance, they will be well rewarded for their efforts.

Swigart

JACKIE SWIGART
SECRETARY

JOHN Y. BROWN, JR.
GOVERNOR

OCT 5 1983

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
OFFICE OF THE SECRETARY
FRANKFORT, KENTUCKY 40601
TELEPHONE (502) 564-3350

Sept. 26, 1983

The Honorable Byron L. Hobgood
City Attorney
Franklin, Hobgood, Hibbs & Troop
47 S. Main Street
P. O. Box 547
Madisonville, Kentucky 42431

RE: Madisonville Waste Recovery Compost

Dear Mr. Hobgood:

This letter is written at the request of Organic Bio-Conversions, Inc., and Madisonville Waste Recovery in response to your question as to whether the Natural Resources and Environmental Protection Cabinet has approved the use of the compost manufactured by Madisonville Waste Recovery on surface mined lands.

Briefly stated, the Cabinet would allow the use of the compost as a soil supplement or amendment for surface mined lands in the Commonwealth. A review has been conducted from both the legal and scientific viewpoints.

Recently, the compost was approved as a topsoil substitute material on two locations in Western Kentucky. In those applications, the Cabinet agreed with the surface mine operator that the use of compost in conjunction with an alternative soil layer would result in a growing medium equivalent to the normal removal and replacement of the original topsoil material. Our scientific review was extensive concerning this question and we were satisfied prior to the issuance of the permit.

At the present time, the Cabinet has not approved the use of compost for the reclamation of "prime farmland". This is not to say that the Cabinet has denied such approval, but no one has yet applied for permission to do so.

In addition to the above, a chemical analysis performed on samples of the compost reveals that any leachate resulting from compost runoff should readily comply with the drinking water standards promulgated by this Cabinet and the Federal Environmental Protection Agency. Needless to say, the samples that were tested did not indicate a level of contamination anywhere near the hazardous waste standards.

Evidence of the Cabinet's position that the material satisfies applicable statutes and regulations is perhaps best demonstrated by our Abandoned Lands Division contract to use the material on an abandoned surface mine in Harlan County, Kentucky. Although the size of the job is only 4.4 acres, the Cabinet would not have approved the use of compost if health or environmental hazards were likely to occur.

This letter is not written to endorse the product of Madisonville Waste Recovery. Just as this Cabinet does not endorse mulches, seeds or fertilizers, we cannot endorse compost. However, we can state, just as we would with certified seeds or fertilizers, that the use of the subject material has been approved by this Cabinet.

A copy of this analysis of the compost sample is included for your review and reference. I hope this letter addresses the concerns of the City of Madisonville and if additional information is necessary, please do not hesitate to contact me.

Sincerely,

Jackie Swigart
Secretary

Office and Laboratories:
Lexington, Kentucky
Madisonville, Kentucky
Paducah, Kentucky
Pikeville, Kentucky

McCOY
& McCOY, INC.
Environmental Consultants

P. O. Box 907 • 85 East Noel Avenue • Madisonville, Kentucky 42431 • Phone 502-821-7375

May 12, 1983

Mr. Mark Dingman
Organic Bio-Conversion
Box 908
Madisonville, Kentucky 42431

Dear Mark:

After reviewing the results of laboratory tests, which were conducted on your Real Earth product over a two-month period, I have made the following observations:

This material consists of high quantities of the nutrients nitrogen and potassium. As you well know, these nutrients are extremely important concerning the production of vegetation. Another important nutrient, phosphorous, has been found to exist in much lower quantities.

One of the better assets your material has concerning the betterment of strip mine spoil is its high organic matter content. Organic matter is necessary in the formation of good soil structure and it improves water relations, thus decreasing the erosion hazard.

At a first glance, you might speculate that there is some problem with the potential of this material to produce acidity. Keep in mind that since the material has an alkaline pH, it probably has some neutralizing potential also.

If you have any questions or if you need further clarification, please feel free to contact me.

Sincerely,
Robert Whittington
Robert Whittington,
Agronomist

RW/ls

CKIE SWIGART
S[redacted]ARY

JOHN Y. BROWN, JR.
Governor

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

Report No.: B02-332
SA No.: 83-2003

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re.: Organic Bio-Conversions Corp., Madisonville

FROM: William E. Davis, Director wep
Division of Environmental Services

DATE: September 22, 1983

ATTN: Russell Barnett

Sample Collector: Cecile Thomas Date: 06/17/83 Time: 1400

Sample Identification: Composite of 6 solid samples

REPORT OF ANALYSIS

Date:
Received: 06/20/83 Started: 06/20/83 Finished: 09/06/83

Results: EP Leachate Toxicity Procedure

PARAMETER	CONCENTRATION (mg/l)
Arsenic	0.003
Cadmium	0.001
Chromium	0.025
Copper	0.06
Lead	0.010
Manganese	4.74
Mercury	0.0004
Nickel	0.200
Selenium	0.001
Zinc	2.99
Silver	0.025
Hexachlorobenzene	<0.001
Hexachlorocyclohexane, alpha isomer	<0.001

Hexachlorocyclohexane, gamma isomer	<0.001
Heptachlor	<0.001
Aldrin	<0.001
Heptachlor Epoxide	<0.001
t-Chlordane	<0.001
c-Chlordane	<0.001
P, P' - DDE	<0.001
Dieldrin	<0.001
Endrin	<0.001
P, P' - DDD	<0.001
Total Chlordane	<0.003
P, P' - DDT	<0.001
Total DDT	<0.001
Methoxychlor	<0.004
Toxaphene	<0.005
Aroclor 1016	<0.005
Aroclor 1221	<0.005
Aroclor 1232	<0.005
Aroclor 1242	<0.005
Aroclor 1248	<0.005
Aroclor 1254	<0.005
Aroclor 1260	<0.005
Aroclor 1262	<0.005
2,4-Dichlorophenoxyacetic Acid	<0.01
2-(2,4,5-Trichlorophenoxy)-Proopionic Acid	<0.005
2,4,5-Trichlorophenoxyacetic Acid	<0.005

Results: Total

PARAMETER	CONCENTRATION (MG/KG)
Ammonia Nitrogen	100.
Total Kjeldahl Nitrogen	2300.
Total Phosphorus	0.355
Arsenic	1.19
Cadmium	0.297
Chromium	14.0
Copper	0.55
Lead	132.
Manganese	2.50
Mercury	0.5
Nickel	0.187
Selemium	0.099
Zinc	5.00
Silver	5.94
Methylene Chloride	0.47
1,2-Dichloroethene	<0.05
Chloroform	0.16
1,2-Dichloroethane	<0.05
1,1,1-Trichloroethane	<0.05

Report No.: B02-332
SA No.: 83-2003

Carbon Tetrachloride	<0.05
Bromodichloromethane	<0.05
Trichloroethene	0.93
1,2-Dichloropropane	<0.05
Dibromochloromethane	<0.05
Chloroethylvinyl ether	<0.05
Bromoform	<0.05
Tetrachloroethene	<0.05
Chlorobenzene	<0.05
Phenol	<5.0
2-Chlorophenol	<5.0
Bis-(2-Chloroethyl) ether	<5.0
1,3-Dichlorobenzene	<5.0
1,4-Dichlorobenzene	<5.0
1,2-Dichlorobenzene	<5.0
Bis-(2-chloroisopropyl) ether	<5.0
Hexachloroethane	<5.0
N-Nitroso-di-n-propylamine	<5.0
Nitrobenzene	<5.0
Isophorone	<5.0
2-Nitrophenol	<5.0
2,4-Dimethylphenol	<5.0
Bis-(2-chloroethyoxy) methane	<5.0
2,4-Dichlorophenol	<5.0
1,2,4-Trichlorobenzene	<5.0
Naphthalene	<5.0
1,1,2,3,4,4-Hexachloro-1,3-Butadiene	<5.0
4-Chloro-3-methylphenol	<5.0
1,2,3,4,5,5-Hexachloro-1,3-Cyclopentadiene	<5.0
2,4,6-Trichlorophenol	<5.0
2-Chloronaphthalene	<5.0
Acenaphthylene	<5.0
Dimethyl phthalate	<5.0
2,6-Dinitrotoluene	<5.0
Acenaphthene	<5.0
2,4-Dinitrophenol	<5.0
2,4-Dinitrotoluene	<5.0
4-Nitrophenol	<5.0
9H-Fluorene	<5.0
4-Chlorophenylphenyl Ether	<5.0
Diethyl Phthalate	<5.0
4,6-Dinitro-2-Cresol	<5.0
N-Nitrosodiphenylamine	<5.0
4-Bromophenylphenyl ether	<5.0
Hexachlorobenzene	<5.0
Pentachlorophenol	<5.0
Phenanthrene	<5.0
Anthracene	<5.0
Dibutyl Phthalate	<5.0
Fluoranthene	<5.0
Pyrene	

Benzidine	<5.0
Benz/A/Anthracene	<5.0
Chrysene	<5.0
3,3'-Dichlorobenzidine	<5.0
Di-N-Octyl Phthalate	<5.0
Benzo/B/Fluoranthene	<5.0
Benzo/K/Fluoranthene	<5.0
Benzo/A/Pyrene	<5.0
Indeno/1,2,3-CD-Pyrene	<5.0
Dibenz/A,H/Anthraacene	<5.0
Benzo/G,H,I/Perylene	<5.0

Office and Laboratories:
Lexington, Kentucky
Madisonville, Kentucky
Paducah, Kentucky
Pikeville, Kentucky

McCOY
& McCOY, INC.
Environmental Consultants

P. O. Box 907 • 85 East Noel Avenue • Madisonville, Kentucky 42431 • Phone 502-821-7375

May 12, 1983

Mr. Mark Dingman
Box 908
Madisonville, Kentucky 42431

Dear Mark:

Enclosed please find our observations after completing testing on four sets of the compost material. I will make comments concerning the concentrations of metals in the samples and Rob Whittington, our agronomist, will make comments concerning the agricultural parameters.

As can be seen from our analysis and as might be expected, we see a wide variance in the total metals contents of the material itself. This is expected due to the nature of the sample itself and therefore would prove very hard to control.

After talking with officials of the EPA Solid Waste Disposal Department the main concern in using a material for landspreading is, of course, the eight heavy toxic metals with special concern given to cadmium and lead since these effect plant growth directly.

Their determinations of hazardous, non-hazardous are based again on leachate testing and accumulation of the heavy metals with heavy amounts being landspread. Again, the maximum contaminant levels are based on 100 times the drinking water maximum and has been the experience with the leachate testing we have not approached those levels.

As we get further information and conduct further tests on the materials, we will provide additional input but as you already know, this is a new field with very little known and a lot to learn.

If I may be of further assistance, feel free to contact me at 821-7375.

Sincerely,

Doug Wolfe

Doug Wolfe, Director
Hazardous Waste Testing

DW/ls
Enclosure

Office and Laboratories:
Lexington, Kentucky
Madisonville, Kentucky
Paducah, Kentucky
Pikeville, Kentucky

McCOY
& McCOY, INC.
Environmental Consultants

P. O. Box 907 • 85 East Noel Avenue • Madisonville, Kentucky 42431 • Phone 502-821-7375

April 7, 1983

Mr. Mark Dingman
Box 908
Madisonville, Kentucky 42431

Dear Mark:

Having completed the two leachates on the compost material from your firm, I am writing to comment on the water quality which may be affected by the landspreading or stockpiling of this material. First of all, let me point out that initial leachate results show no heavy metal toxicity problems from water leaching from the compost material.

As I have outlined for you, we ran the EPA Leachate Test on March 4, 1983 maintaining a pH of 5.0 and then, to simulate an even more extreme rain event, we maintained a pH of 2.8 on another leachate. The guidelines for establishing toxicity for heavy metals are gauged by maximum contaminant levels established by the Safe Drinking Water Act (1975). They are as follows:

Arsenic	0.05	mg/l
Barium	1.0	mg/l
Cadmium	0.010	mg/l
Chromium	0.05	mg/l
Lead	0.05	mg/l
Mercury	0.002	mg/l
Selenium	0.01	mg/l
Silver	0.05	mg/l

Toxicity or the classification of solid materials as hazardous for heavy metals is based on one hundred times these contaminant levels.

After reviewing the initial leachate results, you will find that the pH and percent solids of the material are in line with those for landspreading materials and in even the most extreme case; i.e., the leachate results when maintained at pH 2.8, you will find no toxic metals approaching anywhere near the toxic levels.

I hope these and additional comments on the materials to be tested in the future will prove helpful and if I may clarify or provide additional information, please feel free to contact me at 502-821-7375.

Sincerely,

Doug Wolfe

Doug Wolfe
Director of Hazardous Waste Testing

DW/ls

MARKETING PROSPECTUS

It has been projected that a total of 12 billion tons of coal will be surface mined in this country in the next 30 year period. Approximately 1.5 million acres of land will be disturbed for that production at an average cost of $4,000 per acre for the reclamation, a total expenditure of six billion dollars (Rowe, 1979). In the three years since these figures were published, the average cost per acre has doubled, so nearly two hundred million per year will be spent on efforts to re-establish a stable vegetative cover, often one of the most difficult tasks the coal operator faces.

Under newly imposed legislation, an operator must restore those areas mined to equal or higher productivity in a reasonable length of time, especially farmlands. His responsibility to the area does not end until he has accomplished this, and failure to do so means forfeiture on Bonds posted prior to mining, from $500 to $1,500 per acre.

Although topsoil must be segregated and stockpiled, a tedious and costly procedure - designed by new laws to 'save' the highest quality soil available and thereby assure revegetation efforts - the very nature of removing overburden disturbs and often destroys established chemical properties and the vital balance of elements of the soil necessary to support plant growth, namely organics (the living portion of the soil).

Many products have been tested in search of the most effective and cost efficient method to re-establish organic matter on reclaimed areas, including tree bark, chicken manure, wood chips, etc. Straw is probably the most common form of organic mulch used. In every case the by-product presented one or more of the following drawbacks:

Vegetative response not rapid enough
Lack of consistent volume supply
Prohibitive means of application
Unwanted or growth-hindering residue
Negligible long-term results

Our RealEarth Organic Compost, after many years of rigorous field and laboratory tests, has met the criteria of a much needed, successful organic soil amendment for reclaimed lands, in many cases surpassing expected results, with none of the negative aspects listed above. Our compost even shows the potential of being an effective soil substitute where topsoil or subsoils are not available in adequate supply and when incorporated with sterile cover material (e.g. silt, crushed slate, or spoil) has proven capable of producing surprisingly high yields of cover and permanently stabilizing areas regardless of grade or rainfall levels.

RealEarth Organic Compost possesses the following unique properties which enable it to accomplish these heretofore unparalleled results:

1) Adds organic matter to the soil - in itself, one of the four basic and most required elements essential for plant survival: minerals, 45%; water, 25%; air, 25%; organics, 5%. Without any one of the four, plants cannot live.
2) Provides for vital circulation of air through the soil; aereation.
3) Lowers the bulk density or compaction of the soil (the necessary traffic flow of the heavy-duty earth moving equipment used to replace the soil or cover material after mining causes compaction - which severely inhibits normal plant root development) active organics loosen soil and attract roots deeper for optimum growth and drought resistance.
4) Effects high moisture retention level by allowing rainwater to penetrate slowly and prevents erosive splash action of soil particles.
5) Generally establishes the most favorable habitat possible for seed and plant life, neutralizing an otherwise hostile environment - eventually restoring the natural plant-soil life cycle.

RealEarth Organic Compost continues to enhance soil structure for years after application, aiding in the chemical activities which eventually break down the spoil into fertile soils and through continued decomposition, the compost makes available to the plant a slow released constant level of proper nutrients for yearly reproduction which chemical fertilizers cannot replicate.

Few alternatives have presented themselves to the mining community with the capabilities of our product and only then by combining several

treatments, so cost prohibitive as to make it beyond practical consideration, usually requiring consecutive yearly topdressings to achieve relative success.

In addition to disturbances created by current mining operations, the Federal Office of Surface Mining estimates there to be approximately 1.1 million acres of Abandoned Mine Lands, which continue to pose serious threats to the degradation of our environment. In excess of two hundred million dollars has been collected to date for the reclamation of these devastated lands, in most cases lacking any topsoil or suitable cover necessary to revegetate and stabilize the area. Active mining companies continue to pay a severance tax of 35¢ per ton designated solely for the rehabilitation of these orphan mine sites.

In recent months Organic Bio-Conversions, Inc., the exclusive distributor of RealEarth Organic Compost, has been actively seeking to establish a market for the compost to be produced by the first commercial plant being constructed in Madisonville, Kentucky, which is to be in production by midspring (1982).

The following sites have been selected and are currently under consideration as primary projects, with favorable contract negotiations occurring at present with the various agencies and companies:

1) Four acres in Henderson County of abandon spoil which will be ready to seed this season. The project will be funded by the Rural Abandon Mine Project and the contract led by the Soil Conservation District, supervised by H. Smith Jenkins.

2) Two sites along Highway 41 in Webster County, both abandon mine sites - one is an old high wall of about 3 acres and the other a high-acid mine spoil with little or no topsoil, from 12 to 20 acres.

3) Decovan abandoned mine, about 200 acres, with only fine silt for cover material. Kentucky's Division of Abandon Mine Land has written a special Bid Option into the design plan specifications, allowing contractors a higher bid with our product because our results are guaranteed.

4) Fifty acres of prime farmland at River Queen Mine, owned by Peabody Coal Company, where quick productive yield at previous levels is needed. The Federal Office of Surface Mining is granting state special provisions for this pilot project. Peabody has also asked us to do about 15 acres of gob pile reclamation this spring.

These four projects will provide us with approximately 300 acres of high-visibility pilot sites to reclaim in our first season, and to provide a market for our first three months' production of compost.

After attending the coal-related sale shows, associate meetings, and technical sessions of industry seminars (many with national attendance) and explaining our product's capabilities, we are often asked how soon we expect to be in production in other states, how we expect to produce enough compost to meet market demands, and would we ship compost to mines in Texas, Colorado, Tennessee, and Virginia for testing, regardless of cost. Another question, always asked, is stock in this company available? One coal company in West Virginia offered to donate land for the construction of a plant to guarantee them availability of the compost. A professor delivering a paper at one of the technical sessions said coal companies should be willing to pay seventy dollars per ton for the compost, as it would equal that figure in replacement value of chemical fertilizers, without the expense of re-application.

Without a doubt, the market for RealEarth Organic Compost would seem assured, both with current surface mine operations - eager for some sure method by which to achieve their imposed end result, especially one that might lessen their term of maintenance to the land - as well as on those drastically disturbed abandoned mine lands, where RealEarth may offer one of the few viable solutions with success potential, and seems to have the full endorsement of both state and federal officials overseeing these projects.

STAFF REPORT

Agenda Item No. 3.1

Meeting Date March 14, 1985

CONSIDERATION OF RESOLUTION NO.85-553 FOR THE PURPOSE OF CONFIRMING THE APPOINTMENT OF VICKIE L. ROCKER TO THE POSITION OF PUBLIC AFFAIRS DIRECTOR

Date: February 27, 1985 Presented by: Rick Gustafson

FACTUAL BACKGROUND AND ANALYSIS

The Executive Officer has appointed Vickie L. Rocker to the position of Director of the Public Affairs Department commencing April 1, 1985. Metro Code Section 2.02.040 requires confirmation by a majority of the Council prior to the effective date of an appointment or promotion to this position.

Attached is a copy of the Executive Officer's letter dated February 26, 1985, to Ms. Rocker confirming his offer of employment at a starting salary of $35,422. This position is included in Metro's Pay and Classification Plan at salary range 14.5 ($35,422 to $44,491).

Vickie Rocker

Ms. Rocker is currently Public Affairs Manager for the Oregon Department of Transportation in the metropolitan area. She has been responsible for the public information program for the Banfield project and has established a good relationship with the media. Prior to this Vickie served as Community Relations Director for the city of Beaverton for two years. An outline of her background is attached.

She possesses the experience and abilities to manage the Public Affairs Department's internal and external communications, provide program assistance to the Council, Executive Officer and staff, and develop our government/community relations programs.

Selection Process

A Selection Committee consisting of Rick Gustafson, Councilor Corky Kirkpatrick and Don Barney, a consultant, recommended Vickie Rocker for the position following a screening of approximately 70 applicants, preliminary interviews by the Executive Officer, and two rounds of interviews with the Selection Committee.

EXECUTIVE OFFICER'S RECOMMENDATION

The Executive Officer is pleased to recommend confirmation of Vickie Rocker to the position of Public Affairs Director.

slr/3000C/405-2

METRO

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

527 S.W. Hall St.
Portland, Oregon
97201-5287
(503) 221-1646

Rick Gustafson
Executive Officer

Metro Council

Ernie Bonner
Presiding Officer
District 8

Richard Waker
Deputy Presiding Officer
District 2

Bob Oleson
District 1

Jim Gardner
District 3

Corky Kirkpatrick
District 4

Tom DeJardin
District 5

George Van Bergen
District 6

Sharron Kelley
District 7

Hardy Myers
District 9

Larry Cooper
District 10

Marge Kafoury
District 11

Gary Hansen
District 12

February 26, 1985

Ms. Vickie L. Rocker
7175 S. W. 140th Place
Beaverton, Or 97005

Dear Vickie:

This will confirm my offer of employment to you as Public Affairs Director. Your appointment becomes effective upon confirmation by a majority of the Council.

The Council is scheduled to confirm your appointment at its March 14 meeting and you will be sent a copy of that agenda as soon as it is prepared for mailing. You will need to be in attendance at that meeting.

Your starting salary will be $35,422 which is the beginning of our salary range 14.5, and your starting date will be April 1, 1985.

For your information, I enclose a summary of our benefits. If you have any questions after reviewing it, please contact me or Sonnie.

In the meantime, I look forward to seeing you on March 14.

Sincerely,

Rick

Rick Gustafson
Executive Officer

cc: Personnel Dept.

VICKIE L. ROCKER

7175 SW 140th Place Beaverton, OR 97005
HOME: 644-1513 WORK: 653-3217

OBJECTIVE **MANAGER, PUBLIC RELATIONS or COMMUNITY AFFAIRS**

Summary Comprehensive experience in public relations and community affairs. Capable organizer and implementer of varied programs. Excellent interpersonal skills. Practiced and effective administrator

PROFESSIONAL HISTORY

1980-Present OREGON DEPARTMENT OF TRANSPORTATION, Highway Division
Public Affairs Manager
Direct public information program for Banfield Transitway/Freeway project.

Develop and manage information/public relations strategy for all major highway projects in five county metropolitan area.

Maintain contact with broadcast and print media as spokesperson for Highway Division.
Establish liason with state legislators, county and city elected officials and staff on highway programs, projects and policies.

Provide information services to general public, neighborhood, business and service organizations, chamber of commerce, other agencies.

Design and coordinate special events, information displays, public hearings, workshops, major highway openings and ground breaking ceremonies.

Write news releases, brochures, newsletters and speeches.

Advise management staff on matters of public relations.

1979-1980 AMERICAN RED CROSS, Oregon Trail Chapter,
Orientation Leader

Developed and lead volunteer's training program.

1975-1979 CITY OF BEAVERTON,
Community Relations Director
Developed annual festival: GOOD NEIGHBOR DAYS.

Organized workshops and town hall meetings, tours and special levy campaigns.

Established monthly brown-bag Mayor's lunch.

Wrote monthly city-wide newsletter.

Established liaison with neighborhood groups, schools, business and service organizations.

Coordinated Comprehensive Employment Training Act (CETA) manpower requirements for city. Wrote and received $68,000 CETA grant to renovate city hall

Organized and operated the Community Garden program.

Served as spokesperson and information contact with news media.

1971-1973 SAN JOSE PUBLIC SCHOOLS,
Theatre Arts Teacher

1968-1969 AIR CALIFORNIA,
Ticket Agent

1964-1968 MICHIGAN PUBLIC SCHOOLS,
High School Teacher

Taught speech and English Literature

Directed school drama program.

EDUCATION CENTRAL MICHIGAN UNIVERSITY, Mt. Pleasant, Michigan
1963: BS in Education Speech Arts

CALIFORNIA STATE, San Jose, CA
Graduate work in Theatre.

BEFORE THE COUNCIL OF THE
METROPOLITAN SERVICE DISTRICT

FOR THE PURPOSE OF CONFIRMING THE APPOINTMENT OF VICKIE ROCKER TO THE POSITION OF PUBLIC AFFAIRS DIRECTOR	))))	RESOLUTION NO. 85-553 Introduced by the Executive Officer

WHEREAS, Metro Code Section 2.02.040 requires that the Council confirm the appointment of a candidate to the position of Public Affairs Director; and

WHEREAS, Vickie L. Rocker has been appointed Director of the Public Affairs Department; now, therefore,

BE IT RESOLVED,

That the appointment of Vickie L. Rocker to the position of Director of the Public Affairs Department is confirmed by the Metro Council.

ADOPTED by the Council of the Metropolitan Service District this _____ day of _____, 1985.

_____
Ernie Bonner, Presiding Officer

slr
3000C/405
2/27/85

Agenda Item No. 6

Meeting Date Mar. 14, 1985

MINUTES OF THE COUNCIL OF THE
METROPOLITAN SERVICE DISTRICT

February 14, 1985

Councilors Present:	Councilors Cooper, DeJardin, Gardner, Hansen, Kirkpatrick, Kafoury, Kelley, Myers, Van Bergen, Waker and Bonner
Councilors Absent:	Councilor Oleson
Also Present:	Executive Officer Gustafson
Staff Present:	Eleanore Baxendale, Steve Siegel, Jennifer Sims, Sonnie Russill, Gene Leo, Kay Rich, Sarah Holland, Phillip Fell, Ed Stuhr, Mary Jane Aman, Ray Barker

Presiding Officer Bonner called to order the regular meeting of the Council at 5:35 p.m.

1. INTRODUCTIONS

None.

2. COUNCILOR COMMUNICATIONS

None.

3. EXECUTIVE OFFICER COMMUNICATIONS

Solid Waste. Executive Officer Gustafson asked Eleanore Baxendale to report on the status of settlement of the Black & Veatch litigation matter. Ms. Baxendale said the litigation had been settled in the same manner endorsed by the Council on November 21, 1984. Approximately $15,000 had been given to Black & Veatch's attorney to cover the cost of all claims known to date. Ms. Baxendale said final court papers would be filed within the next few days to close the matter.

The Executive Officer reported the Willamette Week newspaper had produced an extensive and well written article on regional solid waste disposal problems. He said, however, he had been misquoted as saying he was pushing Multnomah County to reverse their decision on the Wildwood landfill site.

Public Affairs. Executive Officer Gustafson also reported Jane Hartline had been designated by Oregon Magazine as the best media relations person in the state in 1984 for her work at the Zoo.

Regarding recruitment for the new Public Affairs Director, the Executive Officer said five candidates had been interviewed and the selection committee would call back two or three of these candidates

for final consideration. The Council will be requested to confirm a candidate on March 14, he reported.

6. CONSENT AGENDA

Motion: Councilor Kelley moved the Consent Agenda be approved and Councilor Van Bergen seconded the motion.

Vote: A vote on the motion resulted in:

Ayes: Councilors Cooper, DeJardin, Gardner, Kelley, Van Bergen, Waker and Bonner

Absent: Councilors Hansen, Kirkpatrick, Kafoury, Myers and Oleson

The motion carried and the following items were approved:

6.1 Minutes of the Meetings of January 10 and 24, 1985;

6.2 Contract with Sketchley Services, Inc., to Provide the Zoo with Uniforms and Laundry Services.

7. ORDINANCES

7.1 Consideration of Ordinance No. 85-186, for the Purpose of Amending the FY 1984-85 Budget and Appropriations Schedule (Continued First Reading)

Jennifer Sims requested the Budget Committee not consider this item until March 14, 1985, because budget adjustments brought about by the Council approving the new building lease were not included in the budget figures presented at this meeting.

Councilor Waker asked if the recent admissions rate increase granted by the Council was considered in the Zoo's revised revenue budget. Ms. Sims said it was not.

Presiding Officer Bonner announced the Budget Committee hearing would be continued to March 14, 1985.

8. RESOLUTIONS

8.1 Consideration of Resolution No. 85-539, for the Purpose of Transmitting the FY 1984-85 Budget Amendments to the TSCC

The Presiding Officer said this Resolution was related to Ordinance No. 85-186 and, like the Ordinance, would not be considered until March 14, 1985.

8.2 Consideration of Resolution No. 85-540, for the Purpose of Endorsing a Metropolitan Legislative Agenda

Steve Siegel said he had presented detailed information about the Metropolitan Legislative Agenda at the informal meeting of the Council on February 7, 1985. He said he wou'd not present any further information at this time but would answer questions from Councilors.

Motion: Councilor Kirkpatrick moved to adopt Resolution No. 85-540 and Councilor Kafoury seconded the motion.

In response to Councilor Kelley's question, Mr. Siegel said he thought the Legislature would eliminate the local sales tax option but it was important the Council adopt this set of endorsements as a means of establishing a record of support.

Vote: A vote on the motion resulted in:

Ayes: Councilors Cooper, DeJardin, Gardner, Kirkpatrick, Kafoury, Kelley, Van Bergen, Waker and Bonner

Absent: Councilors Hansen, Myers and Oleson

The motion carried and the Resolution was adopted.

9. OTHER BUSINESS

9.1 Consideration of a 10-Year Lease with Amco-Portland, Inc., for Office Space

Jennifer Sims reviewed the materials contained in the meeting agenda packet. She explained staff was requesting approval of a 10-year, triple net lease of a 56,000 square foot office building. She defined "triple net" as meaning Metro would assume responsibility for paying a lease for the entire building, grounds and operations. In explaining the process for recommending this lease, Ms. Sims said staff decided to examine the office space market because of extremely favorable conditions. A professional real estate broker was contracted to represent Metro in this search and criteria for Metro's office space needs were established. Employee and Council committees were appointed to review different options, including staying in the Pactrust Building, and to consider the sites recommended by the broker, she said.

After reviewing the options, four sites were identified that would meet all or most of the criteria established: the 2000 S.W. 1st Avenue building (formerly occupied by IBM), the Pactrust Building

(Metro's current location), the Police Block, and the 10th Avenue and Burnside Building. Factors considered in reviewing these buildings included accessibility, identity, quality of the space, parking, locational amenities and cost. The 2000 S.W. 1st Avenue building rated most favorable in all areas. It was the consensus of the Council and the employee committee to commence lease negotiations for the 2000 S.W. 1st Avenue building with Amco-Portland, Inc, Ms. Sims reported.

Ms. Sims referred the Council to Attachment A of the staff report which provided detailed information about the costs of leasing each of the four final buildings considered. Also considered were the cost benefits of Metro leasing out additional space in the 2000 S.W. 1st Avenue building that would not be used by the Metro operation. She explain that even if Metro did not sublease any space in the proposed new building, the cost of the new lease would be about the same as the reduced lease rate proposed by Pactrust.

Ms. Sims then reviewed the amenities of the 2000 S.W. 1st Avenue building and adjacent grounds as outlined in Attachment C. She explained the current lease with Pactrust would expire June 30, 1986. The proposed new lease has been set up to start July 1, 1986, therefore, Metro would not incur any additional rental costs, she said.

In explaining some of the restrictions of the new lease, Ms. Sims said Metro would have to pay a penalty if it were decided to cancel the lease. Because Metro is a municipal corporation, the organization is not permitted to commit funds beyond the one year appropriations cycle, she explained. She said a $190,000 penalty schedule had been worked out to cover the first four years of the lease. This schedule would be reduced to $25,000 to cover subsequent years, she said.

Metro would also have the option to purchase the building should Amco-Portland, Inc. decide to sell it on the open market, Ms. Sims said. The Lessor is also responsible for delivering the building in good working order, including the heating and cooling system, all mechanical systems and roofing. Metro would assume responsibility for maintaining plumbing, walls and wiring. After careful inspection of the facility, needed repairs had been estimated to cost $34,000. The landlord had agreed to do the repair work up to a cost of $35,000, she said, and the landlord will also award an additional $35,000 for interior cleanup work. The landlord will allow Metro to sublease space with advance approval, she explained.

Councilor Kirkpatrick, member of the Council committee that reviewed leasing options, said this move was a very significant one and the

review process had been most fair and thorough. She was also pleased employees were involved in recommending a site because they would be spending a significant amount of time in the new building. Councilor Kirkpatrick said she was especially pleased Metro had been able to secure the building at considerable savings to the organization.

Motion: Councilor Kirkpatrick moved to approve the 10-year lease with Amco-Portland, Inc. for the 2000 S.W. 1st Avenue building. Councilor Kafoury seconded the motion.

Councilor Gardner asked if the $35,000 to be paid by the landlord for building corrective work would cover any remodeling costs. Ms. Sims replied remodeling costs would not be borne by the landlord and the $35,000 would be used to bring the building up to good working order.

Councilor Waker said he supported the choice of the 2000 S.W. 1st Avenue building because of its excellent access to the consumers of Metro's services. He also thought the financial terms of the lease were very advantageous should Metro decide to move out of the building at some future date. He was also encouraged Metro's real estate agent had been able to identify a list of potential sublease prospects.

Ms. Sims said she would be before the Council on February 28, 1985, for approval of a contract with a subleasing agent who would assist the organization in listing additional space.

Councilor Van Bergen asked if any consideration had been given to a state statute that would exempt Metro from ad valorem taxes. Eleanore Baxendale responded this statute had been considered in the lease. As with the current leasing arrangement with Pactrust, Metro was exempt from such taxes while those subleasing space paid the tax.

Councilor Cooper asked if the $190,000 penalty money had to be reserved in the budget. Ms. Sims said it would be reserved.

Vote: A vote on the motion resulted in:

Ayes: Councilors Cooper, DeJardin, Gardner, Kirkpatrick, Kafoury, Kelley, Myers, Van Bergen, Waker and Bonner

Absent: Councilors Hansen and Oleson

The motion carried and the lease was approved.

9.2 Consideration of Resolutions for the Purpose of Adopting Council Positions on Proposed Legislation

Phillip Fell explained that as a result of the informal Council meeting of February 7, 1985, regarding Metro's legislative program, staff had prepared five resolutions for Council consideration on February 28, 1985. He encouraged the Council to review the proposed language of each resolution, ask questions and come back on February 28 ready to consider the following resolutions:

1. Resolution No. 85-543, Adopting a Council Position on Proposed Legislation Extending Energy Tax Credits (H.B. 2033)

2. Resolution No. 85-544, Adopting a Council Position on Proposed Legislation Establishing a State Advisory Commission on Intergovernmental Affairs (H.B. 2038)

3. Resolution No. 85-545, Adopting a Council Position on Proposed Legislation Modifying State Landfill Siting Authority

4. Resolution No. 85-546, Adopting a Council Position on Proposed Legislation Allowing Metro to Create Citizen Commissions (H.B. 2558)

5. Resolution No. 85-547, Adopting a Council Position on Proposed Legislation to Protect Exotic Animals

Executive Officer Gustafson asked the Council to review Resolution No. 85-545, regarding modification of state landfill siting authority, and recommend any language changes staff should consider before February 28.

Presiding Officer Bonner asked why paragraph 4 of the resolution wasn't stated more directly such as, "Allows a landfill to be sited outside the Metropolitan Service District as long as it is within the Solid Waste Management Plan area." Executive Officer Gustafson suggested it be worded, "Allows a landfill to be sited anywhere in the tri-county area." He said this would satisfy legal requirements of siting landfills only within the boundaries of the requesting jurisdiction. The Presiding Officer then suggested the following language: "Allows the site to be outside the boundaries of the requesting jurisdiction as long as it is within the boundaries of the Solid Waste Management Plan." The Executive Officer pointed out that language would allow any local jurisdiction to site a landfill in another local jurisdiction. He said the real question to be answered was which boundary would the state honor the solid waste planning agengy designation or solid waste disposal agency designation in determining the boundary for the siting request.

In response to Councilor Gardner's question, Executive Officer Gustafson replied he would like Metro to have the authority to request initiation of the state landfill siting process (as outlined in paragraph 3 of the resolution) and that Metro would be making this request as a solid waste planning authority for the tri-county area (per paragraph 4).

Councilor Kelley said she had copies of ORS 459.047 which she would distribute to the Council and explained if the legislation addressed in Resolution No. 85-545 were viewed as emergency legislation, it would be desirable to have a safety net if Metro failed to site a landfill on the local level. She said the prob'em with this plan was if the state assumed responsibility for the siting process, the state would not be required to secure local land use permits and Metro could end up "shooting itself in the foot." Metro's primary responsibility is to provide solid waste services and a plan for the region, including a landfill site, and it would be important for Metro to respect local rules and regulations in meeting these responsibilities, she explained. Councilor Kelley said the process Metro used for siting a landfill must have integrity and must be unreproachable.

Councilor Waker said he did not agree with Councilor Kelley's statement, especially since he had not heard any critical comments about the selection of Wildwood as a landfill site from any of his constituents. He said he was willing to take the chance to follow through with the Wildwood site because the selection process was defendable. To not follow through would doom Metro to repeating the same lengthy process, he said.

Councilor Hansen said he agreed with Councilor Kelley because the basic flaw with the Executive Officer's plan was the local jurisdiction that would have the new landfill sited within its boundaries would have to trigger the emergency siting process. He said he would be happier with the language suggested by Presiding Officer Bonner.

Regarding paragraph 5, Executive Officer Gustafson said he had added a qualifier that the State Land Use Goals would only be applied if local governments failed to select a site after given an opportunity to do so. This, he explained, was consistent with State Representative Mike Burton's proposed landfill siting legislation and would give local governments the opportunity to responsively exercise their authority.

Councilor Hansen requested copies of Representative Burton's proposed legislation be included in the agenda packet for the February 28 Council meeting.

Mr. Fell explained two additional resolutions would be presented to the Council on February 28. One would address whether food for resale at the Zoo, Zoo admissions revenue and solid waste revenue would be subject to a sales tax. Metro's position would be forwarded to the State Legislature for further consideration, Executive Officer Gustafson said.

Mr. Fell said the second resolution would address restricting Tri-Met's bond covenants. The Executive Officer said he would recommend the Council support a set of state bills which would enable Tri-Met to save money when issuing bonds. Metro should also support an amendment which would limit Tri-Met's ability to place covenants on the bonds as they relate to Metro's ability to assume responsibility for operating Tri-Met, he said. He explained this amendment would be necessary because conditions of one of the applicable bond covenants required that if the appointment authority of the Tri-Met Board changed, the bonds would not be due and payable.

Regarding Resolution No. 85-546, adopting a Council position on proposed legislation to allow Metro to appoint citizen commissions, Executive Officer Gustafson said Metro could not delegate to any commission the power to budget, tax and adopt ordinances. Councilor Waker suggested the second "whereas" of the resolution would be inconsistent with that policy. Executive Officer Bonner requested staff provide new language to reflect Metro's intent.

10. COMMITTEE REPORTS

Councilor Kirkpatrick reported the Intergovernmental Resource Committee (IRC) had held its first meeting, attendance and enthusiasm were high and participants asked good questions. She said the Committee would be meeting the next two Fridays to discuss the IRC budget and the Council was invited to attend these meetings.

Councilor Kirkpatrick said she and Councilor Waker had attended the National Association of Regional Councils (NARC) federal briefing in Washington, D.C., with Executive Officer Gustafson. During the visit, the President's budget was released. She reported the budget recommended eliminating such programs as revenue-sharing (which could effect the level of dues Metro collects from cities and counties), the Small Business Administration, Economic Development Administration, transit operating funds and Section 3 relating to transit. Councilor Kirkpatrick reported there was a strong effort to initiate a freeze on this proposed budget and much more discussion would result before any budget were finally adopted.

Councilor Kirkpatrick also reported a metro caucus is being formed and Executive Officer Gustafson had been instrumental in pushing for

its formation. Councilor Kirkpatrick is a member of the metro caucus steering committee and the caucus will be making a presentation at the spring conference.

Councilor Waker added, regarding the President's proposed budget, that many previously budgeted railroad and highway funds have not been allocated in order to reserve money to offset the deficit. This could delay completion of the regional road system here, he said.

There being no further business, Presiding Officer Bonner adjourned the meeting at 6:55 p.m.

Respectfully submitted,

A. Marie Nelson

A. Marie Nelson
Clerk of the Council

amn
2962C/313-5
2/21/85

STAFF REPORT

Agenda Item No. 7.1, 8.1

Meeting Date March 14, 1985

CONSIDERATION OF AMENDMENTS TO PROPOSED ORDINANCE NO. 85-186 AMENDING THE FY 1984-85 BUDGET AND APPROPRIATIONS SCHEDULE

Date: March 4, 1985 Presented by: Jennifer Sims

FACTUAL BACKGROUND AND ANALYSIS

Ordinance No. 85-186 amending the FY 1984-85 Budget and Appropriations Schedule was introduced at the Council's January 24 meeting. At that time it was indicated that additional changes would be needed pending results of negotiations for the lease of office space. Those negotiations are complete and a lease has been approved by the Council. Metro's obligations under the lease and preparations for occupancy will cost an estimated $116,700 in the current fiscal year. The components of this cost are detailed in Attachment A. Funding for these costs will be covered in three ways. First, these costs will be included in an internal lease rate as a basis for charging the Zoo and Solid Waste funds for their proportionate shares. Increased transfers from these funds are proposed to be made on an as needed basis. Second, improvements for subleased space will be recovered in rents over a period of years. Third, the General Fund will pay for the proportionate share allocated to dues funded programs in the IRC, for grant programs which will be spent out, and disallowed costs.

The following assumptions have been made in preparing these figures:

1. The building is delivered to Metro on May 1. The Lessor may deliver sooner, but Metro can select any date no later than May 1. Responsibility for operating costs begins on delivery.

2. The building will not be occupied before July 1, 1985.

3. Operating costs will be at a minimum, primarily for construction work.

4. 5,000 square feet will be subleased and Metro will pay about $15,000 in broker commissions.

5. An inspection of the HVAC and mechanical systems, and the roof are performed at Metro's expense prior to acceptance of the building.

6. A total of $120,000 in improvements will be installed prior to occupancy. Two-thirds of those changes will be done in FY 1984-85.

7. Metro will provide a modest ($1.00/square foot) improvement package to prospective tenants which will be recovered in rents paid. $5,000 will be spent this fiscal year for the one anticipated sublease.

EXECUTIVE OFFICER'S RECOMMENDATION

The Executive Officer recommends that Ordinance No. 85-186 as introduced be revised to incorporate the changes set forth in Attachments B and C to budget for costs associated with relocating the Metro offices. In addition, the Executive Officer recommends that the Council adopt Resolution No. 85-539 forwarding the budget to the Tax Supervising and Conservation Commission (TSCC) for public hearing and review.

JS/srs
2907C/405-3
03/06/85

ATTACHMENT A

ACCOUNT DETAIL FOR PROPOSED BUDGET REVISIONS

Materials and Services

7200	Utilities - Electricity	$3,000
	Air conditioning, lights and construction needs for two floors.	
7210	Utilities - Water	$100
	Construction use & grounds care.	
7220	Utilities - Other	$1,500
	Gas heat for two floors day only.	
7310	Maintenance and Repairs - Building	$1,450
	Elevator Maintenance Contract	(950)
	HVAC Maintenance	(500)
7500	Contractual Services	$26,450 - $1,800 = $24,650
	Janitorial, Minimum	(500)
	Grounds Care	(200)
	Security	(250)
	Broker Commission	(15,000)
	Space Planner	(8,000)
	Inspection Fee	(2,500)
	Reduce previously proposed $2,500 for inspection to $700.	
7530	Insurance	$1,000

Capital Outlay

8600	Leasehold Improvements	$85,000
	Two-thirds of projected costs for:	
	Signs	(80,000)
	Interior Reconstruction (walls, wiring, plumbing, etc.)	
	Lighting	
	Secure Parking	
	Carpet	
	Wall Treatments/Interior Paint	
	Improvements for Lessee	(5,000)
	Remainder of costs will occur in FY 1985-86.	

2907C/405-3

ATTACHMENT B

PROPOSED REVISIONS TO EXHIBIT A,
ORDINANCE NO. 85-186
FY 1984-85 SUPPLEMENTAL BUDGET

Fund: General

Account Number	Description	Current Budget	With Revisions Proposed 01/24/85	With Additional Revisions Proposed 03/14/85
	Resources			
4300	Beginning Fund Balance	75,000	267,395	267,395
5600	Interest	75,000	125,000	125,000
5820	Transfer from Zoo	452,047	468,728	489,384
5830	Transfer from SW Operating	691,337	734,602	785,600
5850	Transfer from IRC	597,943	569,957	569,957
All Other	Accounts	634,258	634,258	634,258
		2,525,585	2,799,940	2,871,594

2907C/405-3

ATTACHMENT B (continued)

PROPOSED REVISIONS TO EXHIBIT A,
ORDINANCE NO. 85-186
FY 1984-85 SUPPLEMENTAL BUDGET

Fund: General
Department: Finance and Administration
Division: Budget and Administrative Services

	Current Budget	With Revisions Proposed 01/24/85	With Additional Revisions Proposed 03/14/85
Personal Services	245,151	245,151	245,151
Materials and Services			
7200 Utilities - Electricity	0	0	3,000
7210 Utilities - Water	0	0	100
7220 Utilities - Other	0	0	1,500
7310 Maintenance and Repairs - Building	0	0	1,450
7500 Contractual Services	5,600	8,100	32,750
7530 Insurance	16,500	16,500	17,500
7750 Lease Building	286,228	372,892	372,892
All Other Accounts	200,203	200,203	200,203
Total	508,531	597,695	629,395
Capital Outlay			
8600 Leasehold Improvements	0	0	85,000
All Other Accounts	8,500	8,500	8,500
Total	8,500	8,500	93,500

2907C/405-3

ATTACHMENT B (continued)

PROPOSED REVISIONS TO EXHIBIT A,
ORDINANCE NO. 85-186
FY 1984-85 SUPPLEMENTAL BUDGET

Fund: Solid Waste Operating
Department: Solid Waste

	Current Budget	With Revisions Proposed 01/24/85	With Additional Revisions Proposed 03/14/85
Requirements			
Personal Services	794,867	794,867	794,867
Materials and Services	6,017,483	6,418,483	6,418,483
Capital Outlay	39,400	49,400	49,400
Transfer to General Fund	691,337	734,602	785,600
Contingency	643,263	1,826,874	1,775,876
All Other Accounts	1,659,330	1,659,330	1,659,330
	9,845,680	11,483,556	11,483,556

2907C/405-3

ATTACHMENT B (continued)

PROPOSED REVISIONS TO EXHIBIT A,
ORDINANCE NO. 85-186
FY 1984-85 SUPPLEMENTAL BUDGET

Fund: Zoo Operating
Department: Zoo

	Current Budget	With Revisions Proposed 01/24/85	With Additional Revisions Proposed 03/14/85
Requirements			
Personal Services	2,878,483	2,949,903	2,949,903
Materials and Services	1,618,634	1,694,634	1,694,634
Capital Outlay	305,648	316,231	316,231
Transfer to General Fund	452,047	468,728	489,384
Contingency	239,335	64,651	43,995
All Other Accounts	2,965,000	2,965,000	2,965,000

2907C/405-2

ATTACHMENT B (continued)

PROPOSED REVISIONS TO EXHIBIT A,
ORDINANCE NO. 85-186
FY 1984-85 SUPPLEMENTAL BUDGET

Fund: General

		Current Budget	With Revisions Proposed 01/24/85	With Additional Revisions Proposed 03/14/85
	Transfers & Contingency			
9400	Transfer to IRC	587,219	595,625	595,625
9700	Contingency	69,896	238,884	193,838
		657,115	834,509	789,463
	Unappropriated Balance	23,038	23,038	23,038
	Total General Fund	2,525,585	2,799,940	2,871,594

2907C/405-3

ATTACHMENT C

PROPOSED REVISIONS TO
EXHIBIT B, ORDINANCE NO. 85-186

APPROPRIATIONS SCHEDULE
FY 1984-85

	Current Appropriations	With Amendments Proposed 01/24/85	With Additional Amendments Proposed 03/14/85
GENERAL FUND			
Finance & Administration			
Personal Services	548,224	550,968	550,968
Materials & Services	626,465	715,629	747,329
Capital Outlay	24,555	24,555	109,555
Subtotal	1,199,244	1,291,152	1,407,852
General Expense			
Contingency	69,896	238,884	193,838
Transfers	587,219	595,625	595,625
Subtotal	657,115	834,509	789,463
Unappropriated Balance	23,038	23,038	23,038
All Other Appropriations	646,188	651,241	651,241
Total General Fund	2,525,585	2,799,940	2,871,594
ZOO OPERATING FUND			
Personal Services	2,878,483	2,949,903	2,949,903
Materials & Services	1,618,634	1,694,634	1,694,634
Capital Outlay	305,648	316,231	316,231
Transfers	2,416,047	2,432,728	2,453,384
Contingency	239,335	64,651	43,995
Unappropriated Balance	1,001,000	1,001,000	1,001,000
Total Zoo Operating Fund	8,459,147	8,459,147	8,459,147
SOLID WASTE OPERATING FUND			
Personal Services	794,867	794,867	794,867
Materials & Services	6,017,483	6,418,483	6,418,483
Capital Outlay	39,400	49,400	49,400
Transfers	2,350,667	2,393,932	2,444,930
Contingency	643,263	1,826,874	1,775,876
Total Solid Waste Operating Fund	9,845,680	11,483,556	11,483,556

APPROPRIATIONS FOR ALL OTHER FUNDS ARE UNCHANGED

2907C/405-2

STAFF REPORT

CONSIDERATION OF ORDINANCE NO. 85-186 FOR THE PURPOSE OF AMENDING THE FY 1984-85 BUDGET AND APPROPRIATIONS SCHEDULE AND RESOLUTION NO. 85-539 TRANSMITTING THE AMENDMENTS TO THE TSCC

Date: January 14, 1985 Presented by: Jennifer Sims

FACTUAL BACKGROUND AND ANALYSIS

The attached ordinance and supporting detail comprise the proposed mid-year supplemental budget for FY 1984-85. Approval of the proposed ordinance would amend both the Budget and the Appropriations Schedule. This item is first scheduled for Council consideration on January 24, 1985. Pending results from current lease negotiations, additional changes may be presented in conjunction with a proposed lease on February 14, 1985. At that time the Council will be requested to approve the resolution forwarding the budget to the Tax Supervising and Conservation Commission (TSCC). The TSCC will then hold a public hearing on the budget. It will be returned with comments for Council adoption in March. A description, rationale and dollar impact for the proposed revisions for each fund follow.

Zoo Operating Fund

1.	Personal Services costs are increased to reflect the cost of living adjustment (COLA) awarded to both union and non-union employees retroactive to July 1, 1984.	$71,420
2.	Materials and Services costs are increased to pay for Voter Pamphlet information regarding the levy. There are some increased travel costs due to additional involvement in AAZPA, but these are partially funded by AAZPA. They result in no net increase due to under expenditures in other areas.	$1,500
	Increased utilities due to rate increases and new exhibits.	$42,000
	Unplanned vehicle, building and railroad repairs.	$17,500
	Additional supplies due to higher attendance and new employees.	$5,500

	Extra Contractual Services to support increased attendance.	$10,000
3.	Capital Outlay costs are increased to buy new furniture for the Director.	$2,347
	Purchase of an elephant ear cart was budgeted last fiscal year but not paid until this fiscal year.	$8,236
4.	Transfer to General Fund is increased to pay for the Zoo's proportionate share of the COLA for General Fund employees (+$2,454) and the increased rent costs. These charges have been allocated on the basis of the existing cost allocation plan.	$16,681
5.	The Contingency is reduced to cover the cost increases. The remaining Contingency represents slightly less than 1 percent of the appropriations and is adequate for the rest of the fiscal year.	($66,726)

Zoo Capital Fund

	Amend project amounts to reflect actual and projected progress. Alaskan Tundra expenses are up by $877,593 due to the default and the Bear Grotto will have less work than planned. Additional work is anticipated on the Elephant Museum this year.	0

Solid Waste

1.	Recognize additional beginning fund balance.	$787,876
	Recognize unanticipated disposal fees, user fees, transfer charges and convenience charges due to increased waste flow.	$900,000
2.	Contractual Services costs are expected to exceed the budget due to higher waste flow. Metro's costs are pegged to the waste flow.	$401,000
3.	Purchase of a microcomputer with accessories and software are requested. Details of the need, justification and interface with other organizational data processing needs will be presented to the Council Management Committee on February 21.	$10,000
4.	The transfer to the General Fund is increased to pay for Solid Waste's proportionate share of the COLA for General Fund employees (+$3,620) and	$43,265

increased rent costs. These changes have been allocated on the basis of the existing cost allocation plan.

5. The balance of funds have been placed in Contingency.

St. Johns Improvement Fund

The Appropriations Schedule is amended to reflect an Unappropriated Balance which was originally budgeted but not shown on this schedule. $545,300

Intergovernmental Resource Center

1. Resources are increased to recognize actual grant awards and match amounts. The additonal General Fund transfer is for required match for a computer purchase (+$3,000) plus match and direct costs for the COLA (+$3,448). $44,144

2. Personal Services costs have been adjusted to reflect a reorganization of tasks among divisions and two reclasses. Expenses for the Criminal Justice Director are transferred to Contractual Services in accordance with the work program. This results in a net decrease in Personal Services in this fund. ($7,770)

3. Purchase of a computer is planned this year for a total cost of $60,000. Except for $3,000 match, costs will be covered by grants and match contributed by Tri-Met. $60,000

4. The transfer to the General Fund is reduced for two reasons. First, monies which were to be transferred and reserved for a future purchase will instead be spent from the IRC fund. Second the net reduction in Personal Services also reduces overhead. Overhead calculations are based on the provisional rate set in July 1984. ($27,986)

General Fund

1. Resources are increased to recognize the beginning fund balance and additional projected interest income. Transfers from the Zoo and Solid Waste Operating Funds are increased to cover unanticipated COLA and rent costs. The transfers are based on the existing cost allocation plan. $274,355

2. Personal Services costs are increased for the 2 percent COLA awarded effective January 1, 1985. Also, a new position of Support Services Supervisor is proposed to handle the planned office relocation and new building management responsibilities. Costs for this can be covered with existing appropriations. This item is on the Council Management Committee agenda for January 17, 1985. $7,304

3. The proposed budget includes a 2 percent COLA effective January 1, 1985, for the Executive Officer. ORS 268.180(4) provides that the Executive Officer's compensation shall be set by the Council upon the recommendation of a salary commission to be appointed by the Council. It shall not be less than that of a District Court Judge. It is recommnended that the Council approve the increase without appointing a commission as the size and nature of the change do not warrant such an effort. $493

4. Two key changes in Materials and Services are proposed. First, the current office space lease provides for a rent increase based on the CPI over the last five years. This was not included in the Adopted Budget. When combined with higher operating costs which are passed through to Metro, we have a total increase of $86,664 this fiscal year. Second, as of this writing, negotiations are still in progress for a new office lease. The only known cost is for an inspection of which $2,500 is our share. $88,684

   A full schedule of relocation costs and action dates will be presented to the Council with a proposed lease. Except for the $2,500 inspection cost and Support Services Supervisor position, there are no other expenses associated with a move in this proposal. There are some other minor adjustments between line items in Materials and Services which have no net impact on the department or division budgets.

5. The transfer to IRC is increased for computer purchase match and COLA costs. $8,406

6. The Contingency is increased using the higher beginning fund balance. $169,448

All Other Funds

There are no changes in any other funds.

EXECUTIVE OFFICER'S RECOMMENDATION

The Executive Officer recommends that the Council consider the proposed budget and appropriation changes and put this on the February 14, 1985, Council agenda for further amendment, if necessary.

JS/srs
2719C/257-4
01/17/85

BEFORE THE COUNCIL OF THE
METROPOLITAN SERVICE DISTRICT

FOR THE PURPOSE OF AMENDING ORDINANCE NO. 84-172 AMENDING APPROPRIATIONS AND ADOPTING A SUPPLEMENTAL BUDGET	))))	ORDINANCE NO. 85-186 Introduced by the Executive Officer

WHEREAS, The need exists to appropriate funds not anticipated in the FY 1984-85 budget as adopted on June 28, 1984; and

WHEREAS, Conditions which were not ascertained at the time of the preparation of the current year budget require a change in financial planning; and

WHEREAS, Such action requires a supplemental budget, pursuant to Oregon law; now, therefore,

THE COUNCIL OF THE METROPOLITAN SERVICE DISTRICT HEREBY ORDAINS:

Section 1. That the Supplemental Budget to the Fiscal Year 1984-85 Budget, attached hereto as Exhibit A, is hereby adopted.

Section 2. That the Schedule of Appropriations attached hereto as Exhibit B is hereby adopted.

ADOPTED by the Council of the Metropolitan Service District this _____ day of _____, 1985.

_____
Presiding Officer

ATTEST:

_____
Clerk of the Council

JS/srs
2761C/257-3
01/17/85

EXHIBIT A
FY 1984-85 SUPPLEMENTAL BUDGET

Fund: Zoo
Department: Operating
Division/Program:

Account Number	Description	Current Budget	Supplemental Budget	Revised Budget
	Resources			
	All Accounts	8,459,147	0	8,459,147
	Total Resources	8,459,147	0	8,459,147

JS/srs
2691C/257-1
01/17/85

Fund: Zoo
Department: Operating
Division/Program: Administration

Account Number	Description	Current Budget	Supplemental Budget	Revised Budget
	Personal Services			
6010	Director	50,196	(16,157)	34,039
6020	Assistant Director	43,546	1,665	45,211
6040	Secretary	36,110	704	36,814
6050	Development Analyst	20,234	405	20,639
6300	Temporary	5,720	115	5,835
6700	Fringe	47,880	(6,079)	41,801
	All Other Accounts	1,603	0	1,603
	Total Personal Services	205,289	(19,347)	185,942
	Materials & Services			
7100	Travel	9,600	(3,000)	6,600
7140	Ads, Legal Notices	750	1,500	2,250
7410	Supplies	9,000	2,000	11,000
7530	Insurance	75,000	(3,500)	71,500
7900	Miscellaneous	3,200	3,000	6,200
	All Other Accounts	132,015	0	132,015
	Total Materials & Services	229,565	0	229,565
	Capital Outlay			
8750	Office Furniture/Equipment	4,871	2,347	7,218
	Total Capital Outlay	4,871	2,347	7,218
	Total Divison	439,725	(17,000)	422,725

JS/srs
2691C/257-2
01/17/85

Fund: Zoo
Department: Operating
Division/Program: Animal Management

Account Number	Description	Current Budget	Supplemental Budget	Revised Budget
	Personal Services			
6010	Animal Keeper	429,808	15,288	445,096
6020	Senior Animal Keeper	130,290	4,368	134,658
6030	Curator	36,712	734	37,446
6040	Secretary	18,034	361	18,395
6050	Animal Keeper Foreman	27,602	552	28,154
6060	Veterinarian	35,464	709	36,173
6070	Veterinary Technician	23,718	474	24,192
6080	Nutrition Technician	15,769	315	16,084
6090	Research Coordinator	24,502	490	24,992
6100	Program Assistant 2	7,935	159	8,094
6110	Hospital Attendant	4,628	93	4,721
6300	Temporary	5,136	190	5,326
6500	Overtime/Holiday Pay	22,500	833	23,333
6700	Fringes	236,125	8,439	244,564
	All Other Accounts	8,549	0	8,549
	Total Personal Services	1,026,772	33,005	1,059,777
	Materials & Services			
7100	Travel	2,530	5,000	7,530
7110	Meetings/Conferences	2,640	(1,500)	1,140
7120	Training & Tuition	800	(400)	400
7310	Maintenance & Repair	2,600	(1,000)	1,600
7450	Supplies - Other	38,500	(1,100)	37,400
7480	Animal Purchases	17,000	(1,000)	16,000
	All Other Accounts	146,600	0	146,600
	Total Materials & Services	210,670	0	210,670
	Capital Outlay			
	All Accounts	21,000	0	21,000
	Total Capital Outlay	21,000	0	21,000
	Total Divison	1,258,442	33,005	1,291,447

JS/srs
2691C/257-3
01/17/85

Fund: Zoo
Department: Operating
Division/Program: Buildings & Grounds

Account Number	Description	Current Budget	Supplemental Budget	Revised Budget
	Personal Services			
6010	Buildings & Grounds Manager	31,340	(895)	30,445
6020	Master Mechanic	25,626	(6,272)	19,354
6030	Maintenance Electrician	27,248	(3,272)	23,976
6040	Maintenance Mechanic	22,922	728	23,650
6050	Maintenance Worker 3	53,054	1,762	54,816
6060	Maintenance Worker 3 - Part-Time	5,481	7,682	13,163
6070	Maintenance Worker 2	83,032	2,912	85,944
6080	Maintenance Worker 1	98,639	3,895	102,534
6090	Maintenance Worker 1 - Part-Time	15,966	4,192	20,158
6100	Secretary	16,557	331	16,888
6110	Senior Gardener	23,608	728	24,336
6120	Gardener 2	20,758	(4,272)	16,486
6130	Gardener 1	74,712	2,912	77,624
6140	Laborer	11,633	5,575	17,208
6150	Maintenance Foreman	24,523	483	25,006
6500	Overtime	21,270	14,812	36,082
6560	Merit	1,185	0	1,185
6700	Fringe	159,847	5,394	165,241
	Total Personal Services	717,401	36,695	754,096
	Materials & Services			
7120	Training & Tuition	1,065	700	1,765
7200	Utilities - Electricity	75,000	35,000	110,000
7210	Utilities - Water	184,000	2,000	186,000
7220	Utilities - Other	110,000	5,000	115,000
7310	Maintenance & Repairs - Buildings	35,500	5,000	40,500
7320	Maintenance & Repairs - Vehicles	6,290	2,500	8,790
7340	Maintenance & Repairs - Railroads	0	10,000	10,000
7410	Supplies - Office	0	300	300
7430	Supplies - Custodial	12,374	5,000	17,374
7450	Supplies - Other	1,272	200	1,472
7500	Contractual Services	54,000	10,000	64,000
7510	Pay to Other Agencies	390	300	690
	All Other Accounts	69,974	0	69,974
	Total Materials & Services	549,865	76,000	625,865
	Capital Outlay			
8510	Buildings	172,229	(22,000)	150,229
8530	Improvements	0	2,000	2,000
8550	Vehicles & Equipment	75,600	20,000	95,600
8570	Office Furniture & Equipment	4,000	0	4,000
	Total Capital Outlay	251,829	0	251,829
	Total Division	1,519,095	112,695	1,631,790

JS/srs
2691C/257-4
01/17/85

Fund: Zoo
Department: Operating
Division/Program: Education

Account Number	Description	Current Budget	Supplemental Budget	Revised Budget
	Personal Services			
6010	Education Services Manager	31,366	627	31,993
6020	Education Services Specialist	49,130	983	50,113
6030	Graphics Coordinator	24,565	491	25,056
6040	Graphics Designer	33,548	671	34,219
6050	Secretary	17,742	355	18,097
6060	Program Assistant 2	16,411	328	16,739
6070	Animal Keeper	20,467	728	21,195
6080	Animal Keeper - Part-Time	10,234	364	10,598
6300	Temporary	1,682	70	1,752
6500	Overtime	500	18	518
6700	Fringe	65,592	1,312	66,904
	All Other Accounts	47,687	0	47,687
	Total Personal Services	318,924	5,947	324,871
	Materials & Services			
7100	Travel	1,430	(200)	1,230
7150	Printing	5,500	2,000	7,500
7160	Typesetting & Reproduction	5,500	4,100	9,600
7330	Maintenance & Repairs	925	200	1,125
7360	Equipment Rental	300	(100)	200
7440	Supplies - Graphics	14,000	(4,000)	10,000
7500	Contractual Services	24,648	(2,000)	22,648
	All Other Accounts	12,165	0	12,165
	Total Materials & Services	64,468	0	64,468
	Capital Outlay			
8570	Office Furniture & Equipment	2,100	0	2,100
	Total Capital Outlay	2,100	0	2,100
	Total Division	385,492	5,947	391,439

JS/srs
2691C/257-5
01/17/85

Fund: Zoo
Department: Operating
Division/Program: Public Relations

Account Number	Description	Current Budget	Supplemental Budget	Revised Budget
	Personal Services			
6010	Public Information Manager	28,995	580	29,575
6020	Program Assistant 2	18,948	379	19,327
6040	Public Information Specialist	16,699	334	17,033
6030	Educational Services Specialist	1,104	22	1,126
6560	Merit	1,793	0	1,793
6700	Fringe	19,242	385	19,627
	Total Personal Services	86,781	1,700	88,481
	Materials & Services			
7410	Office Supplies	3,900	(850)	3,050
7110	Meetings	100	100	200
7330	Maintenance & Repairs	180	150	330
7450	Other Supplies	6,180	4,100	10,280
7150	Printing	36,875	(3,500)	33,375
	All Other Accounts	65,781	0	65,781
	Total Materials & Services	113,016	0	113,016
	Capital Outlay			
8570	Office Furniture & Equipment	2,110	0	2,110
	Total Capital Outlay	2,110	0	2,110
	Total Division	201,907	1,700	203,607

JS/srs
2691C/257-6
01/17/85

Fund: Zoo
Department: Operating
Division/Program: Visitor Services

Account Number	Description	Current Budget	Supplemental Budget	Revised Budget
	Personal Services			
6010	Visitor Services Manager	32,258	645	32,903
6020	Food Service Manager	24,089	482	24,571
6030	Retail Manager	19,634	393	20,027
6040	Secretary	17,790	356	18,146
6050	Storekeeper	14,317	286	14,603
6060	Assistant Food Service Manager	25,262	505	25,767
6070	Clerk (Cashroom)	27,822	1,456	29,278
6080	Typist/Receptionist	42,360	2,548	43,908
6090	Stationmaster	25,992	1,165	27,157
6100	Visitor Services Workers - Food	150,738	1,511	152,249
6110	Visitor Services Workers - Retail	27,581	259	27,840
6120	Safety Coordinator	17,638	353	17,991
6300	Temporary	3,276	1,880	5,156
6500	Overtime	4,600	278	4,878
6560	Merit	4,884	98	4,982
6700	Fringe	86,075	1,205	87,280
	Total Personal Services	523,316	13,420	536,736
	Materials & Services			
7110	Meetings	0	225	225
7120	Training & Tuition	500	(225)	275
7390	Merchandise for Resale - Food	212,000	(6,000)	206,000
7400	Merchandise for Resale - Gifts	135,000	(2,300)	132,700
7500	Contractual Services	36,400	5,300	41,700
7900	Miscellaneous Expenses	0	3,000	3,000
	All Other Accounts	67,150	0	67,150
	Total Materials & Services	451,050	0	451,050
	Capital Outlay			
8550	Equipment & Vehicles	0	4,118	4,118
8570	Office Furniture/Equipment	23,738	4,118	27,856
	Total Capital Outlay	23,738	8,236	31,974
	Total Division	998,104	21,656	1,019,760

JS/srs
2691C/257-7
01/17/85

Fund: Zoo
Department: Operating
Division/Program:

Account Number	Description	Current Budget	Supplemental Budget	Revised Budget
	Requirements			
9100	Transfer to General Fund	452,047	16,681	468,728
9200	Transfer to Capital Fund	1,964,000	0	1,964,000
9700	Contingency	239,335		172,609
9800	Unappropriated Balance	1,001,000	0	1,001,000
	Total Requirements	3,656,382	269,880	3,926,262
	Total Department	8,459,147	0	8,459,147

JS/srs
2691C/257-8
01/17/85

Fund: Zoo
Department: Capital
Division/Program:

Account Number	Description	Current Budget	Supplemental Budget	Revised Budget
	Resources			
	All Accounts	6,923,483	0	6,923,483
	Total Resources	6,923,483	0	6,923,483
	Requirements			
7750	Alaskan Tundra	263,483	877,593	1,141,076
8880	West Bear Grotto	2,077,300	(977,593)	1,099,707
8770	Elephant Museum	94,000	100,000	194,000
	All Other Accounts	4,488,700	0	4,488,700
	Total Requirements	6,923,483	0	6,923,483

JS/srs
2691C/257-9
01/17/85

Fund: Solid Waste
Department: Operating
Division/Program: Resources

Account Number	Description	Current Budget	Supplemental Budget	Revised Budget
	Resources			
4300	Fund Balance	683,000	737,876	1,420,876
5500	Disposal Fees - Commercial	4,674,600	677,000	5,351,600
5520	User Fees - Commercial	1,201,400	40,000	1,241,400
5540	Regional Transfer Charge - Commercial	1,430,200	48,000	1,478,200
5560	Convenience Charge - Commercial	433,200	135,000	568,200
	All Other Accounts	1,423,280	0	1,423,280
	Total Resources	9,845,680	1,637,873	11,483,556

JS/srs
2691C/257-10
01/17/85

Fund: Solid Waste
Department: Operating

Account Number	Description	Current Budget	Supplemental Budget	Revised Budget
	Personal Services			
6020	Operations Manager	40,648	1,600	42,248
6030	Manager/Engineer	35,669	360	36,029
6560	Merit	23,516	(1,960)	21,556
	All Other Accounts	695,034	0	695,034
	Total Personal Services	794,867	0	794,867
	Materials & Services			
7500	Contractual Services	5,406,733	401,000	5,807,733
	All Other Accounts	610,750	0	610,750
	Total Materials & Services	6,017,483	401,000	6,418,483
	Capital Outlay			
8570	Office Furniture & Equipment	20,400	10,000	30,400
	All Other Accounts	19,000	0	19,000
	Total Capital Outlay	39,400	10,000	49,400
	Transfers & Contingency			
9100	Transfer to General Fund	691,337	43,265	734,602
9700	Contingency	643,263	1,183,611	1,826,874
	All Other Accounts	1,659,330	0	1,659,330
	Total Transfers & Contingencies	2,993,930	1,226,876	4,220,806
	Total Department	9,845,680	1,637,873	11,483,556

JS/srs
2691C/257-11
01/17/85

Fund: Intergovernmental Resource Center
Department: Intergovernmental Resource Center
Division/Program:

Account Number	Description	Current Budget	Supplemental Budget	Revised Budget
	Resources			
5100	UMTA Section 9	0	24,000	24,000
5100	83 Section 8	0	2,076	2,076
5100	EPA 105	7,500	2,925	10,425
5120	Tri-Met Match	0	3,000	3,000
5110	FY 84 PL/ODOT	0	5,232	5,232
5110	Rideshare	0	4,661	4,661
5810	Transfer from General Fund	587,219	8,406	595,625
5100	UMTA Discretionary Funds	45,000	(6,156)	38,844
	All Other Accounts	1,081,346	0	1,081,346
	Total Resources	1,721,065	44,144	1,765,209

JS/srs
2691C/257-12
01/17/85

Fund: Intergovernmental Resource Center
Department: Intergovernmental Resource Center
Division/Program:

Account Number	Description	Current Budget	Supplemental Budget	Revised Budget
	Personal Services			
6010	Administrator	41,808	418	42,226
6020	Transportation Director	41,753	410	42,163
6030	Data Services Director	28,887	(828)	28,059
6040	Administrative Assistant	21,423	278	21,701
6050	System Analyst	14,258	(309)	13,949
6060	Secretary	32,533	(1,379)	31,154
6070	Senior Analyst	94,322	31,123	125,445
6080	Analyst 3	181,680	(26,558)	155,122
6090	Analyst 2	66,103	20,919	87,022
6100	Analyst 1	53,492	(17,820)	35,672
6110	Engineer 3	27,538	275	27,813
6140	Criminal Justice Director	14,310	(11,901)	2,409
6300	Temporary	27,300	1,964	29,264
6560	Merit	24,684	(2,530)	22,154
6700	Fringe	195,567	(1,832)	193,735
	Total Personal Services	865,658	(7,770)	857,888
	Materials & Services			
7500	Contractual Services	202,289	19,900	222,189
	All Other Accounts	54,175	0	54,175
	Total Materials & Services	256,464	19,900	276,364
	Capital Outlay			
8570	Office Furniture & Equipment	1,000	60,000	61,000
	Total Capital Outlay	1,000	60,000	61,000
	Transfers			
9100	Transfer to General Fund	597,943	(27,986)	569,957
	Total Transfers	597,943	(27,986)	569,957
	Total Fund	1,721,065	44,144	1,765,209

JS/srs
2691C/257-13
01/17/85

Fund: Intergovernmental Resource Center
Department: Intergovernmental Resource Center
Division/Program: Administration

Account Number	Description	Current Budget	Supplemental Budget	Revised Budget
	Personal Services			
6010	Administrator	25,085	251	25,336
6060	Secretary	7,597	(1,629)	5,968
6070	Senior Analyst	3,001	(24)	2,977
6090	Analyst 2	0	4,920	4,920
6080	Analyst 3	19,531	(19,531)	0
6300	Temporary	0	1,688	1,688
6560	Merit	2,209	(515)	1,694
6700	Fringe	17,227	(4,210)	13,017
	Total Personal Services	74,650	(19,050)	55,600
	Materials & Services			
7150	Printing	5,500	(2,000)	3,500
7500	Contractual	18,000	(8,000)	10,000
	All Other Accounts	20,900	0	20,900
	Total Materials & Services	44,400	(10,000)	34,400
	Capital Outlay			
8570	Office Furniture	1,000	0	1,000
	Total Capital Outlay	1,000	0	1,000
	Transfers			
9100	Transfers to General Fund	164,026	(9,552)	154,474
	Total Division	284,076	(38,602)	245,474

JS/srs
2691C/257-14
01/17/85

Fund: Intergovernmental Resource Center
Department: Intergovernmental Resource Center
Division/Program: Data Services

Account Number	Description	Current Budget	Supplemental Budget	Revised Budget
	Personal Services			
6030	Data Services Director	16,507	(473)	16,034
6070	Senior Analyst	39,684	740	40,424
6080	Analyst 3	25,022	250	25,272
6050	Systems Analyst	5,678	(99)	5,579
6090	Analyst 2	8,178	7,859	16,037
6100	Analyst 1	7,272	(7,272)	0
6300	Temporary	16,380	164	16,544
6060	Secretary	3,468	35	3,503
6560	Merit	4,232	57	4,289
6700	Fringe	34,650	347	34,997
	Total Personal Services	161,071	1,608	162,679
	Materials & Services			
	All Materials & Services	14,500	0	14,500
	Transfers			
	Transfer to General Fund	91,305	0	91,305
	Total Transfers	91,305	0	91,305
	Total Division	266,876	1,601	268,484

JS/srs
2691C/257-15
01/17/85

Fund: Intergovernmental Resource Center
Department: Intergovernmental Resource Center
Division/Program: Transportation

Account Number	Description	Current Budget	Supplemental Budget	Revised Budget
	Personal Services			
6010	Administrator	10,452	105	10,557
6020	Transportation Director	41,753	410	42,163
6040	Administrative Assistant	21,423	278	21,701
6030	Data Services Director	12,380	(355)	12,025
6050	Secretary	16,018	160	16,178
6070	Senior Analyst	51,637	30,407	82,044
6080	Analyst 3	83,443	(27,540)	55,903
6090	Analyst 2	57,925	8,140	66,065
6100	Analyst 1	46,220	(10,548)	35,672
6050	Systems Analyst	7,160	(185)	6,975
6300	Temporary	5,460	55	5,515
6110	Engineer 3	27,538	275	27,813
6560	Merit	14,998	(2,356)	12,642
6700	Fringe	117,830	(357)	117,473
	Total Personal Services	514,237	(1,511)	512,726
	Materials & Services			
7110	Meetings & Conferences	0	100	100
	All Other Accounts	184,789	0	184,789
	Total Materials & Services	184,789	100	184,889
	Capital Outlay			
8570	Office Equipment	0	60,000	60,000
	Total Capital Outlay	0	60,000	60,000
	Transfers			
9100	To General Fund	284,364	(23,319)	

Fund: Intergovernmental Resource Center
Department: Intergovernmental Resource Center
Division/Program: Development Services

Account Number	Description	Current Budget	Supplemental Budget	Revised Budget
	Personal Services			
6010	Administrator	6,271	62	6,333
6050	Systems Analyst	1,420	(25)	1,395
6060	Secretary	5,450	55	5,505
6080	Analyst 3	53,684	20,263	73,947
6300	Temporary	5,460	55	5,515
6560	Merit	2,673	854	3,527
6700	Fringe	21,395	6,134	27,529
	Total Personal Accounts	96,353	27,398	123,751
	Materials & Services			
7150	Printing	0	2,000	2,000
7500	Contractual Services	12,000	8,000	20,000
	Total Materials & Services	12,000	10,000	22,000
	Transfers			
	To General Fund	48,842	12,764	61,606
	Total Transfers	48,842	12,764	61,606
	Total Division	157,195	50,162	207,357

JS/srs
2691C/257-17
01/17/85

Fund: Intergovernmental Resource Center
Department: Intergovernmental Resource Center
Division/Program: Criminal Justice

Account Number	Description	Current Budget	Supplemental Budget	Revised Budget
	Personal Services			
	Criminal Justice Director	14,310	(11,901)	2,409
6560	Merit	572	(572)	0
6700	Fringe	4,465	(3,742)	723
	Total Personal Services	19,347	(16,215)	3,132
	Materials & Services			
7500	Contractual Services	0	19,900	19,900
	All Other Accounts	675	0	675
	Total Materials & Services	675	19,900	20,575
	Transfers			
	To General Fund	9,406	(7,879)	1,527
	Total Transfers	9,406	(7,879)	1,527
	Total Division	29,428	(4,194)	25,234

JS/srs
2691C/257-18
01/17/85

Fund: General
Department:
Division/Program:

Account Number	Description	Current Budget	Supplemental Budget	Revised Budget
	Resources			
4300	Beginning Fund Balance	75,000	192,395	267,395
5600	Interest	75,000	50,000	125,000
5820	Transfer from Zoo Operating	452,047	16,681	468,728
5830	Transfer from Solid Waste Operation	691,337	43,265	734,602
5850	Transfer from IRC	597,943	(27,986)	569,957
	All Other Accounts	634,258	0	634,258
	Total Resources	2,525,585	274,355	2,799,940

JS/srs
2691C/257-19
01/17/85

Fund: General
Department: Council

Account Number	Description	Current Budget	Supplemental Budget	Revised Budget
	Personal Services			
6010	Council Secretary	16,099	486	16,585
6020	Council Assistant	32,490	1,056	33,546
6560	Merit	1,944	(1,056)	888
6700	Fringe	15,160	152	15,312
	Total Personal Services	65,693	638	66,331
	Materials & Services			
	Total Materials & Services	58,120	0	58,120
	Total Department	123,813	638	124,451

JS/srs
2691C/257-20
01/17/85

Fund: General
Department: Executive Management

Account Number	Description	Current Budget	Supplemental Budget	Revised Budget
	Personal Services			
6010	Executive Officer	49,327	493	49,820
6020	Deputy Executive Officer	22,277	223	22,500
6030	Administrative Assistant	22,090	221	22,311
6040	Executive Management Aide	16,008	160	16,168
6050	General Counsel	40,000	400	40,400
6060	Clerk of the Council	19,510	195	19,705
6500	Overtime	700	0	700
6560	Merit	6,757	68	6,825
6700	Fringe	52,711	527	53,238
	Total Personal Services	229,380	2,287	231,667
	Materials & Services			
	Total Materials & Services	28,845	0	28,845
	Total Department	258,225	2,287	260,512

JS/srs
2691C/257-21
01/17/85

Fund: General
Department: Finance and Administration
Division/Program: Budget and Administrative Services

Account Number	Description	Current Budget	Supplemental Budget	Revised Budget
	Personal Services			
6020	Deputy Executive Officer	7,570	76	7,646
6030	Director, Budget & Admin. Services	37,918	1,492	39,410
	Management Analyst	30,954	(30,954)	0
6040	Analyst 3	0	23,954	23,954
6050	Personnel Analyst	20,092	1,210	21,302
6060	Print Operator	17,826	300	18,126
6070	Secretary	6,916	70	6,986
6080	Lead Word Processing Operator	17,888	515	18,403
6090	Word Processing Operator	15,103	611	15,714
6100	Maintenance Aide	6,432	0	6,432
6110	Administrative Assistant	18,585	1,330	19,915
6120	Support Services Supervisor	0	7,945	7,945
	Overtime	0	200	200
6300	Temporary	2,633	0	2,633
6500	Merit	7,095	(6,983)	112
6700	Fringe	56,139	234	56,373
	Total Personal Services	245,151	0	245,151
	Materials & Services			
7500	Contractual Services	5,600	2,500	8,100
7750	Lease - Building	286,228	86,664	372,892
	All Other Accounts	216,703	0	216,703
	Total Materials & Services	508,531	89,164	597,695
	Capital Outlay			
8570	Office Furniture & Equipment	8,500	0	8,500
	Total Capital Outlay	8,500	0	8,800
	Total Division	762,182	89,164	851,346

JS/srs
2691C/257-22
01/17/85

Fund: General
Department: Finance & Administration
Division/Program: Accounting

Account Number	Description	Current Budget	Supplemental Budget	Revised Budget
	Personal Services			
6020	Deputy Executive Officer	7,571	76	7,647
6030	Accounting Manager	36,629	2,216	38,845
6040	Senior Accountant	51,584	2,033	53,617
6050	Accounting Clerk 2	43,369	1,884	45,253
6060	Accounting Clerk 1	13,166	132	13,298
6070	Secretary	3,458	35	3,493
6300	Temporary	3,292	0	3,292
6560	Merit	6,363	(4,769)	1,594
6700	Fringe	48,932	147	49,079
	Total Personal Services	214,364	1,754	216,118
	Materials & Services			
	Total Materials & Services	37,488	0	37,488
	Total Division	251,852	1,754	253,606

JS/srs
2691C/257-23
01/17/85

Fund: General
Department: Finance and Administration
Division/Program: Data Processing

Account Number	Description	Current Budget	Supplemental Budget	Revised Budget
	Personal Services			
6020	Deputy Executive Officer	7,125	72	7,197
6030	Director of Data Services	12,380	124	12,504
6040	Operations Analyst	28,455	285	28,740
6050	Systems Analyst	14,196	142	14,338
6070	Secretary	3,458	35	3,493
6560	Merit	2,625	127	2,752
6700	Fringe	20,470	205	20,675
	Total Personal Services	88,709	990	89,699
	Materials & Services			
7330	Maintenance & Repairs	26,836	1,500	28,336
7410	Supplies	6,000	2,500	8,500
7130	Dues & Subscriptions	300	100	400
7500	Contractual Services	4,000	(4,000)	0
7900	Miscellaneous	2,000	(100)	1,900
	All Other Accounts	41,310	0	41,310
	Total Materials & Services	80,446	0	80,446
	Capital Outlay			
	Total Capital Outlay	16,055	0	16,055
	Total Division	185,210	990	186,200
	Total Finance and Administration	1,199,244	91,908	1,291,152

JS/srs
2691C/257-24
01/17/85

Fund: General
Department: Public Affairs

Account Number	Description	Current Budget	Supplemental Budget	Revised Budget
	Personal Services			
6010	Public Affairs Director	39,823	(5,890)	33,933
6020	Analyst 3	27,920	221	28,141
6040	Graphics Coordinator	24,356	572	24,928
6050	Secretary	13,769	(1,637)	12,132
6060	Graphics Designer	17,142	389	17,531
6070	Public Information Specialist	10,237	1,748	11,985
6080	Receptionist	12,560	125	12,685
6090	Analyst 1	15,808	724	16,532
6300	Temporary	2,486	7,014	9,500
6500	Overtime	0	200	200
6560	Merit	2,781	(1,833)	948
6700	Fringe	49,568	495	50,063
	Total Personal Services	216,450	2,128	218,578
	Materials & Services			
7150	Printing	18,350	(3,000)	15,350
7410	Supplies - Office	350	500	850
7440	Supplies - Graphics	3,750	2,500	6,250
	All Other Accounts	18,500	0	18,500
	Total Materials & Services	40,950	0	40,950
	Capital Outlay			
	Total Capital Outlay	1,750	0	1,750
	Total Department	259,150	2,128	261,278

JS/srs
2691C/257-25
01/17/85

Fund: General
Department: Transfers

Account Number	Description	Current Budget	Supplemental Budget	Revised Budget
	Transfers and Contingency			
9400	Transfer to IRC	587,219	8,406	595,625
9700	Contingency	69,896	168,998	238,884
	Total Transfers and Contingency	657,115	177,394	834,509
	Unappropriated Balance	23,038	0	23,038
	Total General Fund	2,525,585	274,335	2,799,940

JS/srs
2691C/257-26
01/17/85

Exhibit B

APPROPRIATIONS SCHEDULE

FY 1984-85

	Current Appropriation	Amendment	Revised Appropriation
GENERAL FUND			
Council			
Personal Services	65,693	638	66,331
Materials & Services	58,120	0	58,120
Capital Outlay	0	0	0
Subtotal	123,813	638	124,451
Executive Management			
Personal Services	229,380	2,287	231,667
Materials & Services	33,845	0	33,845
Capital Outlay	0	0	0
Subtotal	263,225	2,287	265,512
Public Affairs			
Personal Services	216,450	2,128	218,578
Materials & Services	40,950	0	40,950
Capital Outlay	1,750	0	1,750
Subtotal	259,150	2,128	261,278
Finance & Administration			
Personal Services	548,224	2,744	550,968
Materials & Services	626,465	89,164	715,629
Capital Outlay	24,555	0	24,555
Subtotal	1,199,244	91,908	1,291,152
General Expense			
Contingency	69,896	168,998	238,884
Transfers	587,219	8,406	595,625
Subtotal	657,115	177,394	834,509
Unappropriated Balance	23,038	0	23,038
Total General Fund Requirements	2,525,585	274,335	2,799,940
INTERGOVERNMENTAL RESOURCE CENTER			
Personal Services	865,658	(7,700)	857,888
Materials & Services	256,464	19,900	276,364
Capital Outlay	1,000	60,000	61,000
Transfers	597,943	(27,986)	569,957
Total IRC Fund Requirements	1,721,065	44,144	1,765,209

	Current Appropriation	Amendment	Revised Appropriation
TRANSPORTATION TECHNICAL ASSISTANCE FUND			
Materials & Services	130,000	0	130,000
Total Transportation Technical Assistance Fund Requirements	130,000	0	130,000
CRIMINAL JUSTICE ASSISTANCE FUND			
Materials & Services	23,000	0	23,000
Total Criminal Justice Assistance Fund Requirements	23,000	0	23,000
SEWER ASSISTANCE FUND			
Materials & Services	2,800,000	0	2,800,000
Total Sewer Assistance Fund Requirements	2,800,000	0	2,800,000
ZOO OPERATING FUND			
Personal Services	2,878,483	71,420	2,949,903
Materials & Services	1,618,634	76,000	1,694,634
Capital Outlay	305,648	10,583	316,231
Transfers	2,416,047	16,681	2,432,728
Contingency	239,335	(174,684)	64,681
Unappropriated Balance	1,001,000	0	1,001,000
Total Zoo Operating Fund Requirements	8,459,147	0	8,459,147
ZOO CAPITAL FUND			
Capital Projects	3,695,783	0	3,695,783
Unappropriated Balance	3,227,700	0	3,227,700
Total Zoo Capital Fund Requirements	6,923,483	0	6,923,483
SOLID WASTE OPERATING FUND			
Personal Services	794,867	0	794,867
Materials & Services	6,017,483	401,000	6,418,483
Capital Outlay	39,400	10,000	49,400
Transfers	2,350,667	43,265	2,393,932
Contingency	643,263	1,183,611	1,826,874
Total Solid Waste Operating Fund Requirements	9,845,680	1,637,873	11,483,556

	Current Appropriation	Amendment	Revised Appropriation
SOLID WASTE CAPITAL FUND			
Capital Projects	9,235,000	0	9,235,000
Transfers	1,111,000	0	1,111,000
Total Solid Waste Capital Fund	10,346,000	0	10,346,000
SOLID WASTE DEBT SERVICE FUND			
Materials & Services	887,531	0	887,531
Total Solid Waste Debt Service Fund Requirements	887,531	0	887,531
ST. JOHNS RESERVE FUND			
Unappropriated Balance	563,700	0	563,700
Total St. Johns Reserve Fund	563,700	0	563,700
ST. JOHNS FINAL IMPROVEMENTS FUND			
Capital Projects	1,119,700	0	1,119,700
Unappropriated Balance	0	545,300	545,300
Total St. Johns Final Improvements Fund Requirements	1,119,700	545,300	1,665,000

JS/srs
2724C/257
01/17/85

BEFORE THE COUNCIL OF THE
METROPOLITAN SERVICE DISTRICT

FOR THE PURPOSE OF APPROVING THE TRANSMITTAL OF A SUPPLEMENTAL BUDGET TO THE TAX SUPERVISING AND CONSERVATION COMMISSION	))))	RESOLUTION NO. 85-539 Introduced by the Executive Officer

WHEREAS, A Proposed FY 1984-85 Supplemental Budget was presented to the Council on January 24, 1985; and

WHEREAS, The Council convened as Budget Committee has reviewed the Proposed Supplemental Budget; and

WHEREAS, Pursuant to Oregon Budget Law, the Council convened as Budget Committee must approve transmittal of the Supplemental Budget to the Tax Supervising and Conservation Commission (TSCC) for public hearing and review; now, therefore,

BE IT RESOLVED,

1. That transmittal of the Proposed FY 1984-85 Supplemental Budget as amended by the Council, which is on file at the Metro offices, is hereby approved.

2. That the Executive Officer is hereby directed to submit the FY 1984-85 Supplemental Budget to the TSCC for public hearing and review.

ADOPTED by the Council of the Metropolitan Service District this _____ day of _____, 1985.

_____
Presiding Officer

JS/srs
2761C/257-2
01/17/85

Agenda Item No. 8.2

Meeting Date March 14, 1985

Memo

METROPOLITAN SERVICE DISTRICT 527 S.W. HALL ST., PORTLAND, OREGON 97201 503 221-1646
Providing Zoo, Transportation, Solid Waste and other Regional Services

Date: March 5, 1985

To: Metro Councilors

From: Phillip Fell

Regarding: Resolution No. 85-545, State Landfill Siting Authority

On the agenda included in your packets, you will note that you will again be considering a Council legislative position on state landfill siting authority. You will also note that no resolution or staff analysis is included.

We have checked with the Senate Committee staff to determine if the proposed legislation has been printed. To this date, it has not.

At your last meeting, you directed staff to return with a copy of the bill, so that your deliberations could have a more specific focus. I will have a copy of either the bill or the legislative counsel draft, accompanied by a staff analysis, to you by the end of this week.

I regret the delay.

GRANT/CONTRACT SUMMARY

METRO METROPOLITAN SERVICE DISTRICT

GRANT/CONTRACT NO. _____ BUDGET CODE NO. 34 -05 -00 - 8630 - 00000

FUND: Capital DEPARTMENT: Solid Waste (IF MORE THAN ONE) _____

SOURCE CODE (IF REVENUE) _____

INSTRUCTIONS

1. OBTAIN GRANT/CONTRACT NUMBER FROM CONTRACTS MANAGER. CONTRACT NUMBER SHOULD APPEAR ON THE SUMMARY FORM AND ALL COPIES OF THE CONTRACT.
2. COMPLETE SUMMARY FORM.
3. IF CONTRACT IS —
   A. SOLE SOURCE, ATTACH MEMO DETAILING JUSTIFICATION.
   B. UNDER $2,500, ATTACH MEMO DETAILING NEED FOR CONTRACT AND CONTRACTOR'S CAPABILITIES, BIDS, ETC.
   C. OVER $2,500, ATTACH QUOTES, EVAL. FORM, NOTIFICATION OF REJECTION, ETC.
   D. OVER $50,000, ATTACH AGENDA MANAGEMENT SUMMARY FROM COUNCIL PACKET, BIDS, RFP, ETC.
4. PROVIDE PACKET TO CONTRACTS MANAGER FOR PROCESSING

---

1. PURPOSE OF GRANT/CONTRACT Consulting services for the architectural and engineering design of Washington Transfer and Recycling Center

2. TYPE OF EXPENSE ☒ PERSONAL SERVICES ☐ LABOR AND MATERIALS ☐ PROCUREMENT
   ☐ PASS THROUGH AGREEMENT ☐ INTER-GOVERNMENTAL AGREEMENT ☐ CONSTRUCTION
   ☐ OTHER

   OR

   TYPE OF REVENUE ☐ GRANT ☒ CONTRACT ☐ OTHER

3. TYPE OF ACTION ☐ CHANGE IN COST ☐ CHANGE IN WORK SCOPE
   ☐ CHANGE IN TIMING ☒ NEW CONTRACT

4. PARTIES Metropolitan Service District, Swan Wooster Engineering, Inc.

5. EFFECTIVE DATE March 14, 1985 TERMINATION DATE June 30, 1986
   (THIS IS A CHANGE FROM _____)

6. EXTENT OF TOTAL COMMITTMENT:

ORIGINAL/NEW	$	308,500 (not to exceed)
PREV. AMEND		
THIS AMEND		See attachment for cost breakdown
TOTAL	$	308,500

7. BUDGET INFORMATION

   A. AMOUNT OF GRANT/CONTRACT TO BE SPENT IN FISCAL YEAR 198 4 -8 5 $ 100,000

   B. BUDGET LINE ITEM NAME Engineering Serv. AMOUNT APPROPRIATED FOR CONTRACT $ 265,000

   C. ESTIMATED TOTAL LINE ITEM APPROPRIATION REMAINING AS OF Jan. 31 ,19 85 $ 265,000

8. SUMMARY OF BIDS OR QUOTES (PLEASE INDICATE IF A MINORITY BUSINESS ENTERPRISE)

See attachment 2 (SUBMITTED BY)	$ _____ (AMOUNT)	☐ MBE
_____ (SUBMITTED BY)	$ _____ (AMOUNT)	☐ MBE
_____ (SUBMITTED BY)	$ _____ (AMOUNT)	☐ MBE

9. NUMBER AND LOCATION OF ORIGINALS _____

10. A. APPROVED BY STATE/FEDERAL AGENCIES? ☐ YES ☐ NO ☒ NOT APPLICABLE
B. IS THIS A DOT/UMTA/FHWA ASSISTED CONTRACT ☐ YES ☒ NO

11. IS CONTRACT OR SUBCONTRACT WITH A MINORITY BUSINESS? ☐ YES ☒ NO
IF YES, WHICH JURISDICTION HAS AWARDED CERTIFICATION _____

12. WILL INSURANCE CERTIFICATE BE REQUIRED? ☒ YES ☐ NO

13. WERE BID AND PERFORMANCE BONDS SUBMITTED? ☐ YES ☒ NOT APPLICABLE

TYPE OF BOND _____ AMOUNT $ _____

TYPE OF BOND _____ AMOUNT $ _____

14. LIST OF KNOWN SUBCONTRACTORS (IF APPLICABLE)

NAME Wilsey & Ham, Inc. SERVICE Civil and Transportation Engineer. ☐ MBE

NAME Sax Assoc. AIA SERVICE Architects ☐ MBE

NAME Shannon & Wilson, Inc. SERVICE Geotechnical Engineering ☐ MBE

NAME Richard F. Corlett, P.E. SERVICE Solid Waste Engineering ☐ MBE

15. IF THE CONTRACT IS OVER $10,000
A. IS THE CONTRACTOR DOMICILED IN OR REGISTERED TO DO BUSINESS IN THE STATE OF OREGON?
☒ YES ☐ NO

B. IF NO, HAS AN APPLICATION FOR FINAL PAYMENT RELEASE BEEN FORWARDED TO THE CONTRACTOR?
☐ YES DATE _____ INITIAL _____

16. COMMENTS:

GRANT/CONTRACT APPROVAL

INTERNAL REVIEW

_____ DEPARTMENT HEAD

_____ FISCAL REVIEW

_____ BUDGET REVIEW

CONTRACT REVIEW BOARD (IF REQUIRED) DATE _____

1. _____ COUNCILOR

2. _____ COUNCILOR

3. _____ COUNCILOR

COUNCIL REVIEW (IF REQUIRED)

_____ DATE

LEGAL COUNSEL REVIEW AS NEEDED:

A. DEVIATION TO CONTRACT FORM _____

B. CONTRACTS OVER $10,000 _____

C. CONTRACTS BETWEEN GOVERNMENT AGENCIES _____

AGREEMENT TO FURNISH CONSULTING SERVICES
TO THE
METROPOLITAN SERVICE DISTRICT
FOR
DESIGN OF THE WASHINGTON TRANSFER & RECYCLING CENTER

This Agreement is executed this ____ day of _____, 1985, by and between the METROPOLITAN SERVICE DISTRICT, a municipal corporation, hereinafter referred to as "METRO," whose address is 527 S.W. Hall Street, Portland, Oregon 97201, and Swan Wooster Engineering, Inc., hereinafter referred to as "ENGINEER," whose address is Suite 950, Lloyd Five Hundred Building, Portland, OR 97232.

THE PARTIES AGREE AS FOLLOWS:

ARTICLE I

SCOPE OF WORK

A. This Agreement is exclusively for personal services to METRO for the architectural and engineering design of the Washington Transfer & Recycling Center. ENGINEER shall perform the services and deliver to METRO the material described in the Scope of Work attached hereto as Attachment A and in accordance with the Project Proposal submitted by Swan Wooster Engineering, Inc. dated Feb. 12, 1985; provided, however, that METRO reserves the right to eliminate Task 5 in its sole discretion. Upon receipt of a separate written notification from METRO to proceed, ENGINEER shall perform as an independent contractor the services and deliver to METRO the material described in the Scope of Work attached hereto as Attachment A. All services and materials shall be provided in a competent and professional manner in accordance with the Scope of Work.

Throughout the performance of this Agreement, ENGINEER agrees to assign key personnel as shown in the Project Proposal unless METRO first agrees to changes in personnel (1) due to changes in the Scope of Work, or (2) due to reassignment of personnel by ENGINEER which is appropriate and will not result in a reduction of personnel expertise.

ARTICLE II

COMMENCEMENT & COMPLETION OF AGREEMENT

ENGINEER shall complete all professional services for Tasks 2-3 described in Attachment A in the sequence listed and according to the project schedule, Attachment C, all within one hundred sixty-five (165) calendar days from the notice to proceed under this Agreement. METRO reserves the right to require ENGINEER to initiate any task at any time prior to the dates identified in the Project Schedule, Attachment C. ENGINEER shall not be liable for delays due to factors beyond the ENGINEER's control including but not limited to strike, riot and acts of God.

ENGINEER shall make every reasonable effort to complete the professional services under this Agreement sooner than the one hundred sixty-five (165) calendar days prescribed.

ENGINEER will proceed with the work as described within the Scope of Work, Attachment A. Completion of specific tasks shall be in general accordance with the project schedule, Attachment C. Completion of Task 4 and 5 (if exercised) shall correspond with the duration and time frame required to complete construction.

ARTICLE III

AGREEMENT SUM

METRO shall compensate the ENGINEER for services performed and materials delivered as described in Attachment B. The maximum sum of THREE HUNDRED EIGHT THOUSAND FIVE HUNDRED AND 00/100---------- ($ 308,500.00------) DOLLARS, will be paid in the manner and at the time designated in Article IV for the services performed and materials delivered as described in Attachment B, but METRO reserves the right to eliminate Task 5. The maximum amount of this Agreement includes reimbursable expenses as defined in Article V.

ARTICLE IV

TERMS OF PAYMENT

As consideration for providing professional services enumerated in Article I, METRO shall pay the ENGINEER:

A. For the services described in Scope of Work, Task 1, Attachment A, the amount of the ENGINEER's labor costs, subconsultant costs, reimbursable expenses and indirect costs expended for the services at the rates shown in the Budget/Cost Proposal, Attachment B. Maximum compensation for services to be provided under Task A is TEN THOUSAND AND NO/100THS ($10,000) DOLLARS.

B. For the personal services described in Scope of Work, Tasks 2-4, the lump sum amount for each task shown in Attachment B. For the personal services described in Scope of Work Task 5 (if exercised) on an hours worked basis at the rates shown in Attachment D in an amount not to exceed $102,900 over a 10-month period, prorated for extensions or reductions in time.

C. For the reimbursable expenses as incurred, by either

the ENGINEER or its subconsultants, in performing the services described in Scope of Work, Tasks 2-4 and 5 (if exercised). Reimbursable expenses for Tasks 1-5 are identified in Article V. ENGINEER shall be compensated for reimbursable expenses on a task by task basis up to a maximum amount as shown in Attachment B.

D. For additional services authorized by METRO but not specifically provided for hereunder, METRO shall pay the ENGINEER the amount of ENGINEER's costs, on the same basis stated in ARTICLE IV, A.

E. METRO reserves the right to change, add or delete items as presented in the Scope of Work as necessary by METRO or its representatives and such items will be addressed by the ENGINEER, unless ENGINEER objects in writing within ten (10) days after receipt of such changes, deletions or additions that they materially change the Scope of Work. METRO and ENGINEER shall negotiate an equitable adjustment in the contract sum for such changes. If METRO and ENGINEER cannot agree on an equitable adjustment of the contract sum, at METRO'S written direction, ENGINEER shall continue to perform its duties under this Agreement, including the change, addition or deletion at issue, and the dispute shall be resolved as soon as possible.

F. On or after the 30th day of each month, ENGINEER may invoice METRO for the time and materials expended for Tasks 1 and 5 (if exercised) and for that portion of the work completed in Tasks 2 through 4, respectively, plus reimbursable expenses, during the previous month. Each invoice shall be supported by a general description of the work completed on a task by task basis. The

invoice shall identify prior billings and total to date for each of the cost categories shown in Attachment B. Each invoice must be approved in writing by METRO prior to payment in accordance with Section G of this Article.

G. METRO shall pay ENGINEER for the amount of approved invoices within thirty (30) days after receipt of invoices, except that METRO may retain five (5) percent of compensation of personal services for each invoice except the final invoice. Retainage for each task shall be paid at the ENGINEER'S written request upon satisfactory completion of the task. Such payment shall not release ENGINEER from its responsibility to take corrective measures to achieve satisfactory performance of that task at METRO'S subsequent request, nor bar METRO from withholding payment from subsequent tasks pending satisfactory correction of a task for which retainage has been paid.

H. ENGINEER shall notify METRO in writing when all services are completed and all terms of this Agreement are satisfied by ENGINEER. If METRO agrees, it shall acknowledge in writing within twenty (20) working days that the services are accepted. If METRO disagrees, it shall so notify ENGINEER in writing within twenty (20) working days and advise of deficiencies. Thereupon, ENGINEER shall take or cause its subconsultant to take corrective measures, upon the conclusion of which METRO shall then issue its acceptance of the services.

I. Upon receipt of METRO's acceptance of services, ENGINEER may submit its final invoice for all retainage and for any other amounts which may then be due and payable.

The total payment to the ENGINEER shall not exceed the total described in Article III, without prior written approval pursuant to the Metro Code for such additional sums.

ARTICLE V

EXPENSES

METRO shall reimburse ENGINEER at cost for all "out of pocket" expenses incurred in the completion of Tasks 1-4 and directly chargable to the work at the then current rates for the following services:

- Expense of transportation in connection with the Project; living expenses in connection with out-of-town travel; long distance communications; and fees paid for securing approvals (not construction related) of authorities having jurisdiction over the Project.
- Expense of reproductions, postage and handling of Drawings, Specifications and other documents, excluding reproductions for the office use of the ENGINEER and the ENGINEER's subconsultants.
- Expense of data processing and photographic production techniques when used in connection with the project.
- If authorized in advance by METRO to accelerate the schedule at METRO's request, expense of overtime work requiring higher than regular rates.
- Expense of renderings, models and mock-ups requested by METRO.

These expenses are included in the maximum sum in ARTICLE III for the attached Scope of Work. Reimbursable expenses for

Task 5 will be as described for Tasks 1-4 with the exception that no living expenses for the on-site agent shall be considered to be reimbursable.

ARTICLE VI

METRO'S RESPONSIBILITIES

A. METRO shall provide information regarding the requirements for the Scope of Work.

B. METRO designates Buff Winn, Engineer, Solid Waste Department, as its representative authorized to act in its behalf. The representative shall examine submissions made by the ENGINEER and shall render decisions pertaining thereto promptly to avoid unreasonable delay in the progress of the ENGINEER's work.

C. METRO shall furnish information requested by ENGINEER when mutually agreed on as expeditiously as necessary for the orderly progress of the work, and the ENGINEER shall be entitled to rely upon the accuracy and completeness thereof.

ARTICLE VII

CONSULTANT'S ACCOUNTING RECORDS

Records of the ENGINEER's services performed and the record of direct cost expenditures pertaining to the Scope of Work shall be kept in accordance with the work schedule and fee schedule attached hereto in a generally recognized accounting basis and shall be available to METRO or its authorized representative for a period of three (3) years. The general format of ENGINEER's monthly invoices to METRO will be subject to the review and approval of METRO prior to commencement of work on the project.

ARTICLE VIII

LIABILITY & INDEMNITY

A. ENGINEER is an independent contractor and assumes sole responsibility for the contents of its work and performance of its services.

B. ENGINEER acknowledges responsibility for liability arising out of performance of this Agreement, and ENGINEER shall defend indemnify and hold METRO, its agents and employees, harmless from any and all claims, demands, damages, actions, losses, and expenses, including attorney's fees, arising out of or in any way connected with any act, error or omission in performance of this Agreement for which ENGINEER would be liable to claimant, with any patent infringement arising out of the use of ENGINEER's designs not associated with unauthorized reuse or with any claims or disputes involving ENGINEER's subconsultants.

C. ENGINEER shall be liable, including attorney's fees, for any and all damages to the site that may result from the services performed by Engineer under this Agreement.

D. This Agreement includes ENGINEER'S review of construction contractor's submittals, shop drawings, and other documents; however, ENGINEER is not responsible for the construction contractor's method of performing work or for construction contractor's safety procedures on the job.

ARTICLE IX

INFORMATION, REPORTS AND DATA

All information, reports, plans, specifications and data collected or prepared by ENGINEER or its subconsultants hereunder

shall become the property of METRO and may be used by METRO for any purposes whatsoever. ENGINEER shall have the right to use copies of all such documents prepared by it hereunder in the conduct of its business without accounting to METRO unless otherwise specified by METRO.

ARTICLE X

TERMINATION

METRO may terminate this Agreement in its sole discretion upon giving ENGINEER seven (7) days written notice. In the event of termination, ENGINEER shall be entitled to payment for labor actually performed at the rates in Attachment B and reimbursable expenses incurred to the date of termination. Termination by METRO will not waive any claims or remedies it may have against ENGINEER.

ARTICLE XI

PUBLIC CONTRACTS

ENGINEER shall comply with all applicable provisions of ORS Chapters 187 and 279 and all other conditions and terms necessary to be inserted into public contracts in the State of Oregon, as if such provisions were a part of this Agreement. ENGINEER acknowledges receipt of copies of ORS 187.010 - .020 and 279.310 - .430.

ARTICLE XII

SUCCESSORS & ASSIGNS

METRO and the ENGINEER each binds itself, its partners, successors, assigns and legal representatives to the other party to this Agreement and to the partners, successors, assigns and legal representatives of such other party with respect to all covenents of this Agreement. This Agreement may not under any condition be assigned or transferred by either party.

ARTICLE XIII

SUBCONTRACTS

All subconsultants must be approved by METRO. ENGINEER is solely responsible for the payment of subconsultants retained by ENGINEER, none of whom are or will be third parties to this Agreement.

ARTICLE XIV

In the event suit or action is instituted to enforce any right granted herein, the prevailing party shall be entitled to in addition to the statutory costs and disbursements, a reasonable attorney's fee to be fixed by the trial court; and on appeal, if any, similar fees in the appellate court to be fixed by the appellate court.

ARTICLE XV

EXTENT OF AGREEMENT

This Agreement represents the entire and integrated Agreement between the parties and supersedes all prior negotiations, representations or agreements, either written or oral. This Agreement may be amended only by written instrument signed by both parties.

_____	METROPOLITAN SERVICE DISTRICT
By:_____	By:_____
Date:_____	Date:_____

EB/gl
2833C/350-5
03/05/85

ATTACHMENT A

Project Work Scope

IV. Scope of Work

Metro foresees the work included under this RFP as occurring in four parts. The first part (Task 1) includes providing technical assistance for completion of the site evaluation process. The second part (Task 2) of the work includes preparation of preliminary design documents for review by Metro and local regulatory agencies. The third part (Task 3) of the work includes preparation of detailed drawings and specifications. The fourth part (Task 4) of the work includes services during facility construction. A fifth part (Task 5) is identified as on-site Construction Management services and may be exercised at Metro's option upon completion of the initial four tasks outlined below.

This RFP requires that the following specific tasks be performed:

Task 1 - Site Selection Process

If required, this portion of the work will be to provide assistance in determining the suitability of multiple sites for development of a transfer and recycling center. Task 1 will be compensated on a Time and Materials basis because the level of effort required by the consultant and the number of sites to be examined will be unknown at the time of the proposal. Metro has budgeted $10,000 to complete this portion of the work but hopes to limit consultant participation to a minimum. Specific tasks which may be required under this section include, but are not limited to the following:

A. Assessment of physical characteristics of sites and their effect on potential building configurations.

B. Assessment of potential on- and off-site traffic flow problems.

C. Assessment of soil suitability, potential floodplain encroachment and groundwater problems based on existing data.

D. Authorized field testing.

E. Estimation of differential construction costs relative to specific sites.

F. Participation in at least two (2) advisory group meetings.

G. Participation in at least three (3) presentations of final sites to appropriate agencies.

Task 2 - Preliminary Design and Permit Process

The purpose of this portion of the work will be to develop a preliminary design, for review by Metro and regulatory agencies, which illustrates how the proposed facility meets the construction and operational criteria cited in Section V of this RFP. Included in this phase of the project will be the preparation and submittal of development and facility review applications for the designated local jurisdiction. Specific tasks required under this section will include, but not be limited to, the following:

A. Participation in at least four (4) meetings with various groups to aid in developing a preliminary design.

B. Complete a detailed soils investigation sufficient in scope to provide all required considerations for adequate design and construction of foundations, embankments, subsurface drainage, grading and similar geotechnical related improvements.

C. Attend a pre-application conference with officials from either Washington County or the city of Beaverton, depending on where the final site is located, to determine site development requirements and necessary information to complete development application.

D. Prepare all appropriate design, review and development applications and permits for the local jurisdiction and special districts (i.e., fire and sewer). Samples of Washington County and city of Beaverton permit applications are attached as Appendix B.

E. A detailed Traffic Impact Evaluation (TIE) may be required by the local regulatory agency. Such a study must be performed by a Traffic Engineer registered in the state of Oregon (see Appendix C for TIE details). As the requirement for a TIE will be unknown until final site acquisition is complete, proposers should include an optional price for completion of the study.

F. Complete all required surveys to determine the location of property boundaries, utility connections, road geometrics and other terrestrial parameters which may affect the design of the facility.

G. Complete preliminary design drawings for review by Metro staff, Metro Council, transfer station advisory group and local jurisdiction. Oral presentation of design concepts may be required for some or all of these groups.

H. Prepare a preliminary estimate of construction cost.

Task 3 - Final Design

The purpose of this portion of the work will be to complete detailed drawings and specifications for construction of the facility. Specific tasks required under this section will include, but not be limited to, the following:

A. Complete all architectural, landscape, civil, structural, mechanical and electrical design drawings and specifications for review by concerned groups.

Apply for all necessary permits. Any permits fees will be paid by Metro.

B. Prepare a detailed estimate of construction cost.

C. Prepare a detailed schedule for construction of the facility.

D. Prepare bid documents including advertisements, bid sheets, technical specifications, and include general conditions supplied by Metro.

E. Participate in a pre-bid conference to familiarize bidders with the project.

F. Evaluate bids for completeness and participate in selection of Contractor.

Task 4 - Services During Construction

This portion of the work includes participation in the review of shop drawings and submittals by the Contractor, as well as intermittant site inspections. The procedures for these tasks will be provided in the contract. Tasks required under this section will include, but not be limited to, the following:

A. The consultant shall review all Contractor submittals such as shop drawings, design calculations and materials samples to ensure they are consistent with the intent of the design.

B. Prepare design clarifications, and modifications, as required for non-Owner or Contractor initiated changes.

C. The consultant shall make a minimim of six progress visits to the site during the construction of the facility. Such visits shall be coordinated with Metro so as to coincide with appropriate stages of construction. Following each progress visit, a brief written report shall be submitted to Metro detailing the progress of the construction, general quality of work, and conformance of the work to design documents.

D. In addition to the progress visits identified above, the consultant shall conduct inspections to determine dates of Substantial and Final Completion. A written report citing inadequacies in the construction shall follow each inspection.

E. Metro will provide consultant with a clean, legible set of market-up blueline drawings reflecting changes and modification to the design during construction.

Consultant shall revise design drawings to reflect as-built conditions and provide Metro with a clean,

legible and complete set of reproducible mylar drawings of the as-built facility.

Task 5 - Construction Management Services

Metro may wish to acquire, at its option, construction management services during construction of the WTRC.

The intent of this portion of the work will be for the consultant to act as Metro's on-site agent during the course of construction activities. Metro will decide, upon completion of Task 4, whether it wishes to retain the consultant (at the proposed price) for construction management services, or alternatively re-advertise for construction management services prior to beginning construction.

The specific duties and procedures will be set out in the contract. Tasks required under this section will include, but not be limited to, the following:

A. Assistance to the Contractor in the interpretation of the Contract Documents.

B. Assurance that construction methods, techniques, materials and product conform to Contract Documents.

C. Conduct progress meetings, schedule and participate in conferences, and coordinate other project-related meetings.

D. Monitor construction progress to ensure that work is being completed on schedule. Advise Metro as to corrective measures that may be initiated to compensate for delays, or potential delays in construction progress.

E. Report to Metro on inadequacies in construction quality, conformity to plans and specifications, adherence to schedule and any failure to meet inspections by a local jurisdictions. Advise Metro as to corrective measures that may be initiated to compensate for noted inadequacies.

F. Conduct materials testing procedures as required by the Contract Documents, i.e., concrete cylinder tests, soil compaction tests, weld tests, etc.

G. Maintain an orderly job site office with complete files including plans, specifications, change orders, field orders, permits, etc.

H. Maintain a daily log of construction activities including: weather conditions, visiting officials, observations on the general and specific progress of

construction, materials deliveries, test procedures, etc.

I. Review Contractor progress payments to ensure stated valuation of completed work coincides with actual level of completion.

J. Assemble Maintenance and Operation Manuals for equipment including materials quality certificates.

K. Consultant is to verify that Contractor is maintaining a complete, clean set of marked-up blueline drawings, reflecting significant changes to the design during construction of the facility.

Mark-up drawings are to be collected by the consultant, from the Contractor, and delivered to Metro upon completion of construction activities.

L. Accompany Metro representatives and representatives of project architect on progress, Substantial Completion and Final Completion site inspections.

M. Verify that all corrective actions, recommended as a result of the above inspections, have been completed prior to recommendations to Metro concerning validity of progress payments or acceptance of the facility.

ATTACHMENT B

Cost/Budget Proposal

5.0 BUDGET/COST PROPOSAL

5.1 TASK 1 - SITE SELECTION PROCESS

Schedules of current hourly costs and multipliers for Swan Wooster and the subconsultants most likely to participate in Task 1 services are provided below. Note that salary cost is defined to include direct hourly base salary, fringe benefits, and salary taxes. The multiplier given for each firm includes indirect expenses of general and administrative expenses and profit.

Swan Wooster — Multiplier = 2.0

Classification	Average Hourly Salary Cost
Senior Supervisor	$34.50
Supervisor & Sr. Specialist	29.00
Senior Design Engineer	24.50
Design Engineer	21.00
Int. Engineer & Sr. Technician	19.00
Junior Engineer	14.00
Sr. Draftsman & Technician	15.00
Int. Draftsman	12.00
Jr. Draftsman	9.75
Stenographer/Clerk	9.25

Wilsey & Ham — Multiplier = 2.1

Classification	Average Hourly Salary Cost
Project Engineer	$34.00
Civil Engineer	21.00
Traffic Engineer	23.00
Landscape Architect	26.50
Surveyor	24.00
2-Man Survey Crew	29.00
Design Technician	16.00
Draftsman	13.50
Clerical	11.50

Shannon & Wilson	Multiplier = 2.42
Classification	Average Hourly Salary Cost
Principal	$39.25
Associate	28.93
Engineer	14.88
Drafter	12.40
Clerical	10.33

5.2 TASKS 2 THROUGH 5

Table 5.1 presents a breakdown of our estimate for providing our services for Tasks 2 through 5.

For Tasks 2 through 4, we estimate that our total fee would not exceed $298,500.

Assuming construction takes place over a 10 month period, we estimate that our total fee for Task 5 would be approximatey $116,600.

	Swan Wooster		Wilsey & Ham		Sax Assoc.		R.F.Corlett		Shannon & Wilson		TOTAL	
	(hrs)	fee	(hrs)	fee	(hrs)	fee	(hrs)	fee	(hrs)	fee	(hrs)	fee
Task 2 - Preliminary Design												
Personnel Services	1,000	$47,000	390	$18,200	300	$12,100	100	$ 6,200	64	$ 3,200	1854	$86,700
Direct Expenses		2,400		2,500		2,900		400		1,000		9,200
Transportation Study	-	-	60	2,900	-	-	-	-	-	-	60	2,900
Task 3 - Final Design												
Personnel Services	2,200	$96,800	350	$14,300	680	$26,600	-	-	-	-	3230	$137,700
Direct Expenses		6,000		1,000		-		-		-		7,000
Task 4 - Services During Construction												
Personnel Services	800	$36,000	180	$ 7,800	250	$ 9,700	-	-	-	-	1230	$53,500
Direct Expenses		1,100		400		-		-		-		1,500
Task 5 - Construction Management												
Personnel Services	2,200	$99,000	70	$ 3,900	-	-	-	-	-	-	2270	$102,900
Direct Expenses		10,000		700	-		-			3,000		13,700
TOTAL NOT TO EXCEED (Tasks 2 to 4)		$189,300		$47,100		$51,300		$ 6,600		$ 4,200		$298,500

BUDGET ESTIMATE TASKS 2 to 5

TABLE 5.1

ATTACHMENT C

Project Schedule

A detailed project schedule is to be incorporated as part and parcel of the signed Agreement. While such a schedule is not yet available in final form, it is anticipated that a schedule will be produced in conjunction with the Consultant prior to award of the Contract by the Metro Council.

In the interim, the following milestones can provide a general idea of the key items to be identified in the schedule.

ITEM AND DESCRIPTION	FORECAST COMPLETION DATE
Task I -Comparative analysis of potential sites for suitability of site from technical and cost perspective	April 25, 1985
Task II -Preliminary Design including soils, survey, civil inventory and development documents for regulating authorities	August 1, 1985
Task III-Final design including detailed plans and specifications	October 10, 1985
Advertise Construction Bid	October 15, 1985
Bids Due	November 15, 1985
Award Contract	December 12, 1985
Begin Construction	January 1, 1986
Facility Operational	August 1, 1986

ATTACHMENT D

Hourly Costs For Construction Management Personnel

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Costs to be included by March 14,1985