METROPOLITAN SERVICE DISTRICT
1220 S.W. MORRISON, ROOM 300, PORTLAND, OREGON 97205 222-3671

METROPOLITAN SERVICE DISTRICT
BOARD OF DIRECTORS

PORTLAND WATER BUREAU
1800 SW 6TH AVE.
AUDITORIUM

SEPTEMBER 24, 1976
2:00 P.M.

A G E N D A

76-663	MINUTES
76-664	PUBLIC COMMUNICATIONS

ADMINISTRATION

76-665	CASH DISBURSEMENTS
76-666	ORDINANCE NO. 43 - SECOND PUBLIC HEARING AN ORDINANCE AMENDING ORDINANCE NO. 40 ESTABLISHING AN ADMINISTRATIVE DIVISION WITHIN THE GENERAL FUND; AND ESTABLISHING A GRANTS DIVISION WITH THE ZOO FUND

SOLID WASTE PROGRAM

76-667	PUBLIC HEARING - DODSON RECYCLING CENTER SCRAP TIRE PROCESSING APPLICATION
76-668	JOINT MEETING MSD BOARD/SOLID WASTE COMMITTEE - PRESENTATION BY WILLIAMS BROS., URBAN ORE

ZOO PROGRAM

76-669	CONTRACT 76-024 - SECURITY GUARDS BID
76-670	CONTRACT 76-026 - PHILLIP THOMPSON & ASSOCIATES - ARCHITECT
76-671	SEAL POOL CONSTRUCTION BID APPROVAL

MSD METROPOLITAN SERVICE DISTRICT
1220 S.W. MORRISON, ROOM 300, PORTLAND, OREGON 97205 222-3671

MSD BOARD OF DIRECTORS

PORTLAND WATER BUREAU
1800 SW 6TH AVE.
AUDITORIUM

SEPTEMBER 24, 1976
2:00 P.M.

A C T I O N A G E N D A

PAGE	ACTION RECORD No.	
1	76-663	MINUTES Action - Approve the minutes of September 10, 1976
7	76-664	PUBLIC COMMUNICATIONS Action - Receive comments from the public on matters not listed on the meeting agenda
8	76-665	CASH DISBURSEMENTS Action - Approve Checks No. through for payment in the total amount of $
9	76-666	ORDINANCE NO. 43 - SECOND PUBLIC HEARING AN ORDINANCE AMENDING ORDINANCE No. 40 Action - Conduct public hearing and adopt Ordinance No. 43

PAGE	ACTION RECORD No.	
11	76-667	PUBLIC HEARING - DODSON RECYCLING CENTER SCRAP TIRE PROCESSING APPLICATION Action - Set hearing date over to October 22, 1976
12	76-668	JOINT MEETING MSD BOARD/SOLID WASTE COMMITTEE Action - Meet with committee and receive a presentation by Williams Bros., Urban Ore
13	76-669	CONTRACT 76-024 - SECURITY GUARDS BID Action - Approve staff recommendation
14	76-670	CONTRACT 76-026 - PHILLIP THOMPSON & ASSOCIATES - ARCHITECT Action - Approve staff recommendation
15	76-671	SEAL POOL CONSTRUCTION BID APPROVAL Action - Authorize staff to submit construction of the Zoo Seal Pool for public bid

76-663 MINUTES

THE FOLLOWING PAGES CONTAIN THE MINUTES OF THE SEPTEMBER 10, 1976, BOARD MEETING.

THE STAFF RECOMMENDS APPROVAL OF THE MINUTES.

76-664 PUBLIC COMMUNICATIONS

THIS AGENDA ITEM ALLOWS THE BOARD TO RECEIVE COMMENTS FROM THE PUBLIC ON MATTERS NOT LISTED ON THE MEETING AGENDA.

METROPOLITAN SERVICE DISTRICT
BOARD APPROVAL
NO. 76-665 DATE 9-24-76

	YES	NO	ABST
BECKER			
DURIS			
GORDON	—		
McCREADY	—		
ROBNETT			
SCHUMACHER			
MILLER, CHAIRMAN			

Clerk of the Board

76-665 CASH DISBURSEMENTS

CHECKS DISBURSED BETWEEN REPORTS:

CHECKS No. 1614 THROUGH 1627 $14,233.58

INCLUDES: PAYROLL WITHHOLDING OF UNION DUES, RETIREMENT, CREDIT UNION, FIXED CHARGES OF RETIREMENT AND HEALTH INSURANCE

CHECKS TO BE RELEASED SEPTEMBER 24, 1976:

CHECKS No. 1628 THROUGH 1703	$37,268.74
TOTAL	$51,502.32

THE STAFF RECOMMENDS THAT A TOTAL OF $51,502.32 FOR CHECKS No. 1614 THROUGH 1703 BE APPROVED FOR PAYMENT.

MAJOR EXPENDITURES CONTAINED IN THIS REQUEST INCLUDE:

ALLIED SECURITY (GUARD SERVICE)	$ 1,984.00
HARDY BUTTLER McEWEN (JULY & AUGUST)	8,547.95
PORTLAND GENERAL ELECTRIC (ZOO)	1,422.51
PACIFIC NORTHWEST BELL (ZOO: $1,624.61 MSD: $211.87)	1,836.48
PACKER SCOTT (CUSTODIAL SUPPLIES)	2,272.84
PHILLIP THOMPSON (ARCHITECT)	1,639.66
THOMPSON CONSTRUCTION (PENGUINAIRIUM)	1,300.00
ZOOPLAN (CONTRACT 76-020)	3,642.00
FRED S. JAMES (INSURANCE)	1,622.00

ALL EXPENDITURES LISTED FOR CHECKS No. 1614 THROUGH 1703 ARE IN ACCORDANCE WITH THE ADOPTED MSD BUDGET FOR FY 76-77.

76-666 ORDINANCE NO. 43 - SECOND PUBLIC HEARING

AN ORDINANCE AMENDING ORDINANCE NO. 40 ESTABLISHING AN ADMINISTRATIVE DIVISION WITHIN THE GENERAL FUND; AND ESTABLISHING A GRANTS DIVISION WITHIN THE ZOO FUND.

SALARY INCREASES IN THE FY 76-77 BUDGET WERE NOT SHOWN IN THE PERSONAL SERVICES SECTION OF THE VARIOUS DEPARTMENTS BUT WERE CALCULATED AND THE FUNDS PLACED IN THE CONTINGENCY LINE ITEM. THIS WAS DONE BECAUSE OF PENDING UNION NEGOTIATIONS. TO PROVIDE FOR SALARY ADJUSTMENTS BASED ON THE AGREEMENTS ENTERED INTO WITH THE UNION AND THE ADOPTION OF THE SALARY SCHEDULE FOR NON-UNION EMPLOYEES, A TRANSFER FROM CONTINGENCY TO PERSONAL SERVICES IS REQUIRED.

THE REORGANIZATION OF MSD APPROVED BY THE MSD BOARD ON JULY 23, 1976, ESTABLISHED AN ADMINISTRATIVE DIVISION WITHIN THE GENERAL FUND. THE COST OF THE ADMINISTRATIVE DIVISION WILL BE SHARED BY BOTH SOLID WASTE DIVISION OF THE GENERAL FUND AND THE ADMINISTRATIVE AND VISITOR SERVICES DIVISION OF THE ZOO FUND. THIS COST SHARING WILL NECESSITATE A TRANSFER OF FUNDS.

THE DEPARTMENT OF HEALTH, EDUCATION AND WELFARE HAS PROVIDED TWO GRANTS TO THE MSD, ZOO FUND. THE FIRST GRANT WILL BE FOR "HANDLING AND USE OF NON-PARENTAL SPACE BY INFANTS." THIS GRANT IS FOR A TOTAL OF $5,000 PLUS $1,371 FOR INDIRECT COSTS. THE OTHER GRANT WILL BE FOR "VOLUNTEER RESEARCH ASSISTANTSHIPS: LEARNING SCIENCES BY DIRECT PARTICIPATION IN ORIGINAL RESEARCH." THE AMOUNT OF THIS GRANT IS $61,570 PLUS $14,038 FOR INDIRECT COSTS. ORS 294.326 (2) ALLOWS LOCAL JURISDICTIONS TO RECEIVE AND EXPEND FUNDS FOR SPECIFIC PURPOSES NOT ORIGINALLY BUDGETED WITHOUT ADOPTING A SUPPLEMENTAL BUDGET. A NEW DIVISION WITHIN THE ZOO FUND IS RECOMMENDED TO BE ESTABLISHED FOR THE PURPOSE OF APPROPRIATING GRANT FUNDS.

ORDINANCE No. 43 ADOPTS A REVISED SCHEDULE OF APPROPRIATIONS TO REFLECT THE SALARY ADJUSTMENTS, THE ESTABLISHMENT OF THE ADMINISTRATIVE DIVISION WITHIN THE GENERAL FUND AND THE ESTABLISHMENT OF THE GRANTS DIVISION WITHIN THE ZOO FUND.

THE STAFF RECOMMENDS THE BOARD CONDUCT THE SECOND PUBLIC HEARING AND ADOPT ORDINANCE No. 43.

METROPOLITAN SERVICE DISTRICT
BOARD
NO 76-666 DT 9-24-76

	YES	NO	ADST
BECKER			
DURIS			
GORDON			
McCREADY			
ROBERTS			
SCHMIDT			
MILLER, CHAIRMAN			

Clerk of the Board

76-667 PUBLIC HEARING - DODSON RECYCLING CENTER SCRAP TIRE PROCESSING APPLICATION

After review of the Dodson Recycling Center Scrap Tire Processing Application by the MSD staff and Solid Waste Committee, it was determined that sufficient information had not been made available for proper evaluation.

The staff and MSD Solid Waste Committee recommends that the public hearing be set over to October 22, 1976.

76-668 JOINT MEETING MSD BOARD/SOLID WASTE COMMITTEE

WITHIN THE PAST FEW MONTHS INDIVIDUAL MEMBERS OF THE BOARD AND SOLID WASTE ADVISORY COMMITTEE HAVE REQUESTED THAT A JOINT MEETING BE HELD. THE PURPOSE OF THIS JOINT MEETING IS TO PROVIDE AN OPPORTUNITY FOR PROMOTING A BETTER UNDERSTANDING OF HOW THE BOARD AND COMMITTEE FORMULATE THEIR DECISIONS, AND HOW THE BOARD UTILIZES THE ADVISORY COMMITTEE'S RECOMMENDATIONS.

THE STAFF RECOMMENDS THE BOARD ENTERTAIN COMMENTS FROM THE SOLID WASTE ADVISORY COMMITTEE AND ENCOURAGE DISCUSSION BETWEEN BOARD AND COMMITTEE MEMBERS.

SUBSEQUENT TO THE SCHEDULING OF THE JOINT MEETING OF THE SOLID WASTE COMMITTEE, WILLIAMS BROTHERS URBAN ORE OF TULSA, OKLAHOMA, HAS ASKED TO PRESENT A PROPOSAL FOR PROJECT MANAGEMENT OF THE MSD SOLID WASTE PROGRAM. SINCE FORTUNATELY, MEMBERS OF THE SOLID WASTE COMMITTEE ARE PRESENT, THE BOARD HAS THE OPPORTUNITY TO REQUEST A RECOMMENDATION ON THE PROPOSAL FROM NOT ONLY THE STAFF, BUT ALSO THE SOLID WASTE COMMITTEE.

THE STAFF RECOMMENDS THAT THE BOARD HEAR THE WILLIAMS BROS., PRESENTATION AND DIRECT STAFF AND THE SOLID WASTE COMMITTEE TO RETURN OCTOBER 8, 1976, WITH A RECOMMENDATION ON THE PROPOSAL.

76-669 CONTRACT 76-024 - SECURITY GUARDS BID

IN ACCORDANCE WITH THE OREGON CONTRACT AND PURCHASING REQUIREMENTS, THE MSD HAS DEVELOPED SPECIFICATIONS AND REQUESTED BIDS FOR FURNISHING SECURITY GUARDS AT THE MSD ZOO FOR A PERIOD OF NINE MONTHS. THERE WERE SEVEN RESPONDING BIDS SUBMITTED, OF WHICH THE THREE LOWEST BIDS ARE LISTED BELOW.

	PER MONTH PRICE	TOTAL PRICE
BURNS INTERNATIONAL SECURITY SERVICES, INC.	$2,033.35	$18,300.16
ALLIED SECURITY AGENCY	1,946.66	17,519.94
PORTLAND SECURITY, INC.	1,888.00	16,992.00

BASED UPON THE LOWEST TOTAL PRICE BID, PORTLAND SECURITY IS THE SUCCESSFUL BIDDER. ALL REFERENCES FURNISHED BY THE BIDDERS HAVE NOT BEEN VERIFIED; HOWEVER, STAFF WILL PROVIDE A VERBAL REPORT TO THE BOARD REGARDING THE REFERENCES.

THE STAFF RECOMMENDS THAT, PENDING VERIFICATION OF REFERENCES, THE CONTRACT FOR PROVIDING SECURITY GUARDS AT THE ZOO BE AWARDED TO PORTLAND SECURITY, INC.

METROPOLITAN SERVICE DISTRICT
BOARD APPROVAL
NO. 76-669 DATE 9-24-76

	YES	NO	ABS
BECKER			
DURIS	/		
GORDON	/		
McCREADY	/		
ROBNETT			
SCHUMACHER			
MILLER, CHAIRMAN			

Clerk of the Board

76-670 CONTRACT 76-026 - PHILLIP THOMPSON & ASSOCIATES

PHILLIP THOMPSON & ASSOCIATES HAS BEEN AN ARCHITECTURAL FIRM THAT THE ZOOLOGICAL SOCIETY EMPLOYED TO HELP PLAN VARIOUS ZOO PROJECTS. AS OF JUNE 30, 1976, THIS FIRM HAS BEEN WORKING UNDER A VERBAL AGREEMENT ON AN HOURLY BASIS PLUS OUT-OF-POCKET EXPENSES AND CURRENTLY IS DEVELOPING A DESIGN TO COVER THE SEAL POOL (SEE AGENDA ITEM 76-671). THE DESIGN WORK IS NOW BEING COMPLETED UNDER THE SAME AGREEMENT THAT WAS IN EFFECT JUNE 30, 1976. IN KEEPING WITH THE MSD BOARD'S DIRECTION OF ENTERING INTO WRITTEN AGREEMENTS FOR VARIOUS PERSONNEL SERVICES, WE ARE NOW NEGOTIATING A WRITTEN CONTRACT WITH MR. THOMPSON FOR ANY ADDITIONAL WORK TO BE PERFORMED. DESIGN COSTS SINCE JUNE 30, 1976, HAVE BEEN APPROXIMATELY $2,000.

THE STAFF RECOMMENDS THAT THE BOARD AUTHORIZE PAYMENT TO PHILLIP THOMPSON & ASSOCIATES FOR THE SERVICES RENDERED THROUGH SEPTEMBER 24, 1976, IN THE AMOUNT NOT TO EXCEED ~~$2,100.~~ $2,500.

METROPOLITAN SERVICE DISTRICT
BOARD APPROVAL
NO. 76-670 DATE 9-24-76

	YES	NO	ABS
BECKER			
DURIS			
GORDON	—		
McCREADY	—		
ROBNETT	—		
SCHUMACHER			
MILLER, CHAIRMAN	—		

Clerk of the Board

76-671 SEAL POOL CONSTRUCTION BID APPROVAL

THE CURRENT HOME FOR THE SEALS AT THE ZOO ALLOWS THE PUBLIC TO THROW VARIOUS OBJECTS INTO THE SEAL POOL. SEALS IN CAPTIVITY LEARN TO TRUST MAN AND DEPEND UPON HIM FOR HIS FOOD SOURCE. THE SEALS WILL OFTEN INGEST FOREIGN ITEMS THAT ARE HARMFUL AND SOMETIMES FATAL TO THEM. OUR ZOO HAS HAD SEAL FATALITIES DUE TO THIS CAUSE.

TO PROTECT THE SEALS AND PREVENT FOREIGN OBJECTS FROM ENTERING THE POOL, THE PORTLAND ZOOLOGICAL SOCIETY IN APPROXIMATELY APRIL OF 1976, AUTHORIZED THE DESIGN AND CONSTRUCTION OF A COVER OVER THE SEAL POOL. AN ACCEPTABLE DESIGN HAS BEEN DEVELOPED BY PHILLIP THOMPSON, ARCHITECT. THE ESTIMATED COST OF THIS FACILITY IS APPROXIMATELY $12,000, TO BE CHARGED TO THE ZOO FUND, GENERAL CAPITAL IMPROVEMENTS DIVISION.

THE STAFF RECOMMENDS THAT THE MSD BOARD APPROVE REQUESTING BIDS FOR CONSTRUCTION OF THE SEAL POOL PROJECT.

METROPOLITAN SERVICE DISTRICT
BOARD APPROVAL

NO. 76-671 DATE 9-24-76

	YES	NO	ABST
BECKER			
DURIS			
GORDON			
McCREADY			
ROBNETT			
SCHUMACHER			
MILLER, CHAIRMAN			

Clerk of the Board

WILLIAMS BROTHERS URBAN ORE, INC.
A Resource Sciences Company

RESOURCE SCIENCES CENTER | 6600 S. YALE AVE. | TULSA, OKLAHOMA 74136
PHONE (918) 496-5000 | TELEX 49-2491 RSC-TUL

September 20, 1976

Mr. Ray Miller
Chairman of the Board
Metropolitan Service District
527 S.W. Hall
Portland, Oregon 97201

Dear Mr. Miller:

During our recent visit to Ames with several of your board members, we sensed a feeling of dedication in moving the MSD project forward. We share the mutual enthusiasm for this program and can foresee no insurmountable obstacles to its successful completion.

Responding to your invitation, we plan to make an oral presentation to the full MSD Board on September 24, 1976. We plan to start at 3 p.m. in the Portland Water Bureau Auditorium. Our slide presentation will cover the background highlights of our proposal to MSD. Briefly, this will include: an outline of the scope of work, the program schedule, the understandings necessary regarding the program manager approach, and the qualifications of WBUO and its associates. Following the presentation, we will be available to answer questions.

Enclosed are four copies of our draft proposal, including proposed Memorandum of Understanding, which we want to discuss with you during our September 24 meeting. We will appreciate your dissemination to other concerned members of your Board and/or staff. We trust you and those receiving copies each will have an opportunity to analyze this draft and will phone any questions, comments, or suggested revisions to me as soon as possible so they may be incorporated into the proposal to be presented on September 24.

Respectfully submitted,

D. L. Mihelich
Marketing Manager

DLM:ag

Enclosures

cc w/encl.: Connie McCready (MSD) 1 copy
Chuck Kemper (MSD) 4 copies
Ernie Schmidt (DEQ) 1 copy
Roy Ruel (PPC) 2 copies
Bob Aldrich (WWC) 1 copy
Ralph Holt (SI) 2 copies
Loren Kramer (DEQ) 1 copy

DRAFT

PROPOSAL

WBUO 1628

COMPLETION OF IMPLEMENTATION PLAN FOR PORTLAND ENERGY AND MATERIALS RECOVERY SYSTEM

Prepared for
METROPOLITAN SERVICE DISTRICT
PORTLAND, OREGON

September 24, 1976

WILLIAMS BROTHERS URBAN ORE, INC.

TABLE OF CONTENTS

SECTION I
TECHNICAL PROPOSAL

A. Introduction

Williams Brothers Urban Ore, Inc. (WBUO) in conjunction with the selected bond underwriter (SBU) proposes to complete the open Phase I tasks for Portland, Oregon's Metropolitan Service District's (MSD) Energy and Materials Recovery System. Completion of the open tasks will confirm the conceptual design of the transfer station and refuse derived fuel processing plant (RDFP). It will also determine the economic feasibility of including a steam plant to furnish steam to the Publishers Paper Company (PPC). The conclusion of Phase I will result in an implementation plan to complete the MSD system.

Engineering data and parameters used as a basis for the work in Phase I are found in:

1. Parker Northwest "Agreement for Design Construction Management and Operation of the MSD Solid Waste Management Program", dated December 29, 1975.

2. Metropolitan Service District First Obligation Grant/Loan Application, Volume I, Legislative Summary and Volume II, Application and Support Data, dated March 19, 1976.

3. Verbal discussions with Publishers Paper Company confirmed in letters from WBUO to PPC dated September 2, 1976, and from PPC to WBUO dated September 13, 1976.

B. Description of the System

The system as now envisioned will include:

1. A 570 ton-per-day (TPD) Transfer Station located near Merlo Road to receive municipal solid waste (MSW) from collection trucks. The MSW will be discharged on a flat concrete floor (tipping floor) inside an enclosed building for loading into transfer trailers. A front-end loader will push the MSW into two stationery compactors which will load the transfer trailers. The transfer trailers will transport the MSW to the RDFP plant.

2. The RDFP plant will consist of dual 60 ton-per-hour (TPH) processing lines for shredding, air classifying and magnetically separating processable MSW and will be located near Rossman's landfill. Inside an enclosed building a large tipping floor will receive MSW from collection trucks and transfer trailers. Two front-end loaders will be used to sort and mix the MSW to evenly feed the two shredders. Two air classifiers will separate the combustible Refuse Derived Fuel (RDF). Two magnetic separators will remove the ferrous metals from the remaining tailings. The RDF will then be conveyed to a large storage building which will provide approximately two days storage capacity for RDF. A front-end loader will load two stationery compactors which, in turn, will load transfer trailers for hauling RDF to the steam plant.

3. A solid fuel fired steam generator producing 250,000 lbs/hour of saturated steam at 250 psig will be located at the Publishers Paper Company plant in Oregon City, Oregon. Ancillary equipment will include an RDF transfer trailer unloading station, a conveying system, an interim RDF storage and feeding system, a boiler feedwater system, a deaerating heater and storage tank, a water treatment and chemical system, an electrostatic precipitator, a stack, an ash removal and storage system, and a fuel oil/gas standby system.

C. Scope of Work

The following tasks and action items will be performed by Williams Brothers Urban Ore, Inc. (WBUO), Metropolitan Service District (MSD), and the selected bond underwriter (SBU).

Task 10 Establish Market for the Products (WBUO):
This task will develop and confirm markets and prices for the steam and ferrous metals. Commitments to purchase at some specified quantity and quality levels, as well as a basis of price, will be sought from potential buyers.

Action Items:

10.1 Negotiate with Publishers Paper Company (PPC) and/or other buyers to obtain multi-year, take-or-pay preliminary purchase agreements for steam and/or RDF.

10.2 Confirm prices and terms with buyers for the ferrous metals.

10.3 Prepare marketing plan stating terms and conditions for the sale and delivery of steam and/or RDF and ferrous metals.

Task 20 Confirm the Quantity of Raw Refuse (WBUO):

This task will confirm the amount of raw refuse that might realistically be available for the project through the year 1995. This information will be used to define the final sizing of the plant and equipment, as well as for program economics.

Action Items:

20.1 Review current estimates, projections and methods used in the development of the system.

20.2 As required, spot check several landfill areas and confirm calculations of quantity and density of solid waste material. Several trucks may be weighed, and their volume estimated, to confirm the density of the solid waste collected.

20.3 Compare project data to national averages and projections for future consumption.

20.4 Estimate quantity of acceptable, or processable, MSW delivered to the RDFP plant.

20.5 Define baseline size of the RDFP plant and prepare task report.

Task 30 Confirm Quality of Raw Refuse (WBUO & MSD):

This task will confirm the composition of raw refuse collected in the survey area and determine the percentage of fuel, ferrous and non ferrous metals, glass, and tailings. The heating value and moisture content of the fuel and specifications for recoverable products will also be confirmed.

Action Items:

30.1 Review current sample data and methods used in preparation of the data.

30.2 Compare project data to national averages for heating values and composition.

30.3 If necessary, ship a sample to U.S. Bureau of Mines in Washington, D.C. for analysis. Prepare a draft of a request to test a random sample. Submit to MSD for retype and mail to U.S. Bureau of Mines. Action items 30.3.1 through 30.3.4 listed below will be done at MSD's expense, if required, and will be approved by MSD prior to beginning work on the items.

30.3.1 Prepare procedures to collect a fresh random three-ton sample.

30.3.2 Collect sample and ship. Photograph sample for records.

30.3.3 Witness testing of sample.

30.3.4 Arrange to have RDF samples transported to another testing facility, such as Ralston Purina's Research 900 Laboratory in St. Louis, Missouri to confirm heating value and moisture content and product specifications.

30.4 Prepare task report.

Task 40 Verify Conceptual Facility Design and Cost Estimates (WBUO):

This task will verify the conceptual design and preliminary cost estimates. Included will be the conceptual process flow diagrams and material balances, preliminary equipment lists and layouts and preliminary plot plans. Capital and operating cost estimates will be prepared for all the facilities in the system. Methods to reduce costs or improve efficiency in the preliminary design phase will be suggested, as applicable.

Action Items:

40.1 Prepare conceptual process flow diagrams and material balances for the transfer station, RDFP plant and steam plant facilities.

40.2 Review preliminary equipment and systems design criteria.

40.3 Confirm availability of sites and review preliminary equipment layouts for the transfer station and RDFP plant and steam plant.

40.4 Prepare conceptual design of boiler and fuel storage and handling facilities.

40.5 Review design criteria for building construction materials, architectural requirements, heating ventilating and air conditioning, fire protection and utilities. Suggest methods to reduce costs or improve plant efficiency.

40.6 Review transportation fleet requirements and operating costs.

40.7 Review environmental considerations.

40.8 Prepare and/or update preliminary capital and operating costs estimates.

40.9 Prepare task report.

Task 50 Prepare Capital Financing Plan (SBU):

The objective of this task is to develop the best possible financing mechanism for the project. This could include 100% from proceeds of tax-free revenue bonds, tax-free revenue bonds for portion above $8MM or variations thereof, or $3MM subordinated interest-free loan as opposed to grant, various combinations thereof, or other arrangements.

Action Items:

50.1 Develop and quantify recommended solutions for risks associated with plant construction and performance standards, including proposals for risk sharing between public and private sectors which would be acceptable to money lenders.

50.2 Tentatively determine availability of funds from the issuance of tax-free revenue bonds or other appropriate sources and the conditions associated with such funding. Identify legal issues, if any, for MSD's consideration.

50.3 Develop money lender's requirements concerning system reliability, including redundancy, if any.

50.4 Review operating plan and comment on its impact on financing.

50.5 Prepare preferred project financing plan with a discussion of alternatives in line with WBUO recommendations on decision points and logic sequence.

Task 60 Prepare Preliminary Operating Plan (WBUO):

The objective of this task is to prepare the preliminary operating plan for operation of the MSD Energy and Materials Recovery System. It will also suggest arrangements to dispose of tailings and ash, and to ensure that adequate alternate disposal site(s) are available to allow proper disposal of the raw refuse during plant shutdowns and emergencies.

Action Items:

60.1 Prepare the preliminary operating plan, including a budget.

60.2 Review the remaining life of existing landfills and establish criteria for disposal of tailings and ash and disposal of raw refuse under emergency conditions.

60.3 Prepare plans for disposal of tailings and contingency disposal of MSW.

60.4 Prepare task report.

Task 70 Resolve Legal Issues (MSD):

The objective of this task is to successfully resolve open legal issues to the satisfaction of money lenders and other essential parties involved, and to develop and implement the agreed plan to ensure that a sufficient supply of MSW will be delivered to the transfer station and RDFP plant.

Action Items:

70.1 Obtain necessary legal approval for MSD to borrow state funds and establish MSW flow control and tipping fees.

70.2 Develop land use and permit requirements for RDFP plant and transfer station.

Task 80 Develop Implementation Plan (WBUO, MSD & SBU):

The objective of this task is to present the findings of the prior tasks and to develop an integrated implementation plan to successfully design, construct, and place the facilities into operation.

Action Items:

80.1 Prepare task summaries. (WBUO, SBU & MSD)

80.2 Review and update annual cost and revenue summary. (WBUO)

80.3 Review and update implementation schedule. (WBUO)

80.4 Prepare implementation plan. (WBUO & SBU)

D. Continuity of the Program

Following the completion of the open Phase I tasks, assuming that feasibility is demonstrated, the WBUO "phased approach" should be continued in a reasonably prompt time frame for efficient utilization of all parties involved and to improve the prospect of cost estimates remaining reliable.

The phases to WBUO's approach are enumerated here for reference so that the entire scope of the program may be fully understood, since this proposal (for completion of the open Phase I tasks) does not include these later phases.

Phase II - Preliminary Engineering and Definitive Cost Estimate

The objective of Phase II is to do sufficient preliminary engineering and secure bids on all equipment and buildings and site options. This will lead to the preparation of definitive cost estimates. Operating forecasts will then be made and financing commitments will be obtained. This phase will provide sufficient detail in engineering, material and cost areas to justify the initiation of Phase III of the program.

Phase III - Procurement, Detail Design and Construction

After completion of Phase II, and the long-term financing has been arranged, WBUO will prepare final engineering design for the system, procure all of the major equipment, manage the construction, and checkout the facilities.

Specific tasks will include the preparation of detail plant layouts, final construction drawings, construction bid packages, the evaluation of bids and award of construction contracts, the purchasing and expediting of materials and equipment, the field engineering and construction management, inspection and checkout of the system on completion of construction.

Phase IV - Startup and Operation

WBUO will manage the startup of all systems, contract for operation of the facilities, train the operators, and provide administration and marketing services, product specifications, quality control, maintenance programs, housekeeping and visitor control. WBUO will also be in the position to make any changes required to recover other resources as cost-effective technology is developed to further increase revenues and reduce costs.

E. Program Schedule

All of the above events are summarized and presented graphically on attached preliminary project schedule. As is the case in any scheduling activity, some events can be controlled as to time span which will allow us to adjust the overall project duration to meet the desired completion date. As the project matures and more controlling parameters become known, the schedule will be refined and presented. A CPM network will be developed. Estimates of the actual construction times will be made and the required time spans will be incorporated into the performance specification for each major item.

ACTIVITIES	1976				1977												1978												1979 — 1993							
	SEP.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.
SUBMIT W.B.U.O. PROPOSAL	////																																		
PHASE - I COMPLETE OPEN TASKS	////	////	////	////	////																														
PHASE - II PRELIMINARY ENGINEERING & DEFINITIVE ESTIMATE					////	////	////	////	////	////	////	////	////	////	////	////																				
PHASE - III PROCUREMENT, DETAIL ENGINEERING & CONSTR.													RDFP PLANT & TRANSFER STATION ////																STEAM PLANT							
PHASE - IV START - UP																													////	////	////	////				
OPERATIONS																																	////	////	////	////

I-11

WILLIAMS BROTHERS DRAWORE, INC.

PORTLAND RESOURCE RECOVERY FACILITY

MASTER PROJECT SCHEDULE

1628-D-250

SECTION II
PROGRAM MANAGEMENT

A. Introduction

The scope of the Phase I study is defined in Section I of this proposal. This study will demonstrate the feasibility of the Energy and Materials Recovery System and will prepare an implementation plan for the entire project. The project consists of four distinct phases, each of which are additive, and must be accomplished in a logical order with continuity to ensure a successful total project. WBUO proposes, at no cost to MSD, to embark on this project for MSD with the understanding that at the completion of Phase I, and with the confirmed viability of the project, WBUO will be appointed as program manager for the entire project.

The role of program manager on a project such as this is a diverse undertaking since each phase of the project requires a different approach, by various people and groups with different talents and contribution. It is the intent of this section to define some of the fully identified parameters of the project as each relates to a project phase. Since some facets of the project will not become known until well into the individual tasks (as defined in the Scope of Work of Section I), there necessarily will be changes, and the preliminary plan as outlined here may require revision and coordination. Since not all of the originally conceived ideas may be implemented due to outside forces or situations beyond the direct control of MSD or WBUO, adaptation of the basic plan to suit the evolving situation--moving it from concept to completion--is the role of the program manager. This is the role that WBUO proposes in the project.

In summary, the four phases of the project are:

Phase I — Prepare a Conceptual Design and Financial & Operating Plans for the MSD Energy and Materials Recovery System after verifying pertinent assumptions, including financing prospects, resulting in an implementation plan.

Phase II — Prepare the preliminary design and flow sheets, solicit bids and select equipment and structures to arrive at definitive cost estimates and operating results, and obtain commitments for financing of the project.

Phase III — Perform the detail engineering and design, procure material and equipment, award contracts for construction, manage the construction and inspect and check out the facilities.

Phase IV — Start up the completed facilities and manage the system operation.

WBUO has identified a number of tasks that need to be accomplished to complete Phase I, and has agreed to complete the Phase I study to demonstrate the feasibility of the project by presenting an implementation plan to MSD at no charge, contingent upon being named program manager for the other three phases of the project. The management plan for the total project is shown in Figure 1. Identified are some of the broad categories of work necessary for the total project.

PROPOSED MANAGEMENT PLAN

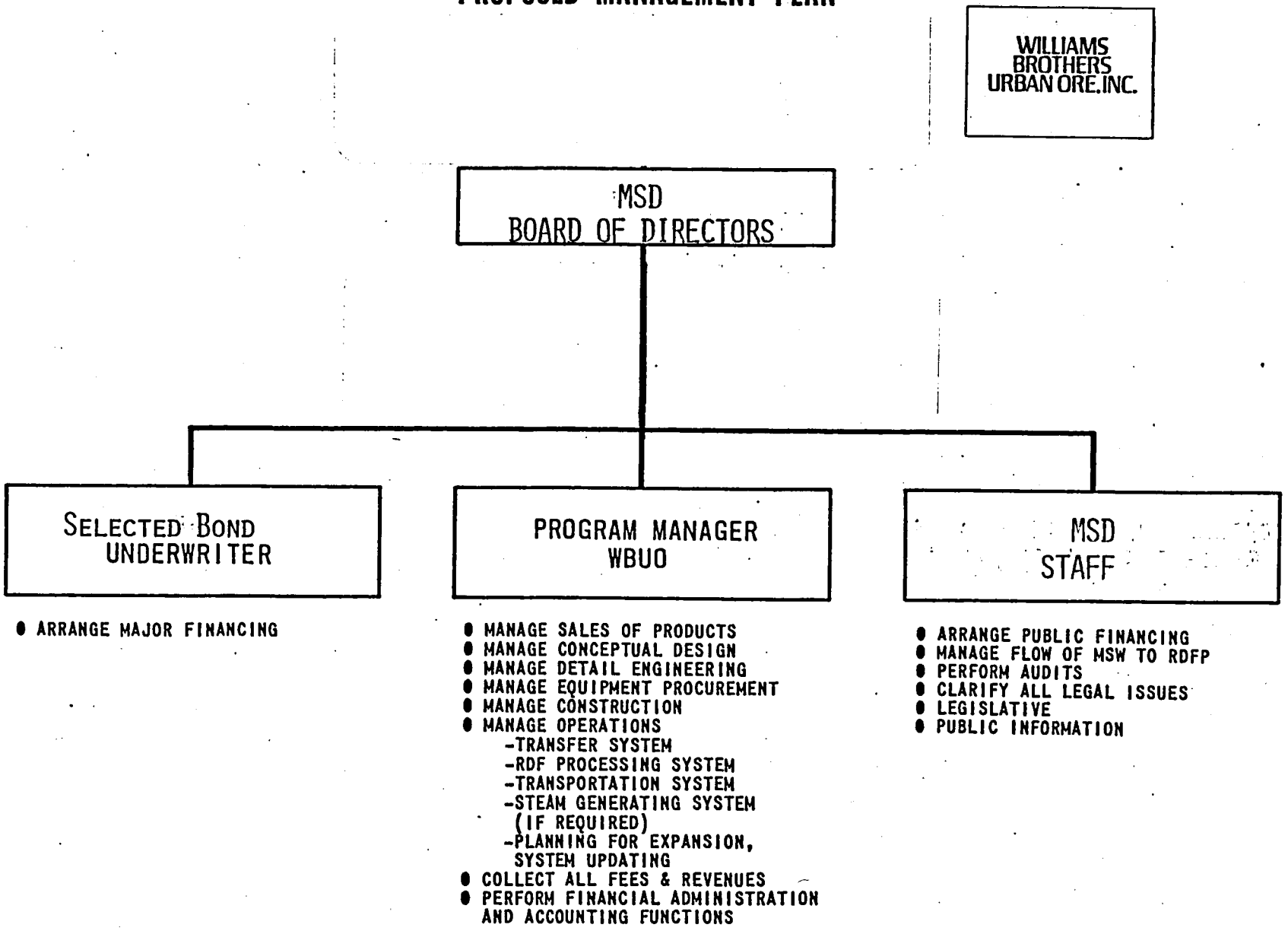

FIGURE 1

B. The Program Management Concept

Program Management is a professional engineering consulting service provided by WBUO to assist clients in conceiving, defining, implementing, and completing projects. In this case, WBUO is in a position to extend the normal concept of program management to include all phases of the project, including operation of the completed facility. Backed by years of experience in the field and a staff of specialists, WBUO's concept-to-completion approach to the design, construction, and management of a total Energy and Materials Recovery System provides the operational flexibility required for such a project. Our program management organization will perform the following functions, beginning with Phase II, to support the total project:

PHASE II

A. Prepare the Preliminary Design

When the viability of the project has been demonstrated, it will be possible to start the preliminary design of the several separate facilities required by the plan. Phase I will have established some of the basic criteria for the systems. The preliminary design will expand on those criteria, identify and quantify the technical aspects of the project and select equipment to satisfy the criteria. The following events are typically accomplished during the preliminary design:

- Prepare project procedures book.
- Review studies and plant requirements with Zoning Board and local regulatory agencies.
- Obtain plant site location data.
- Obtain a contour map of the plant sites.

- Obtain soils report and foundation design criteria.
- Determine applicable design codes.
- Establish process design.
- Develop specific flow scheme and material balance.
- Prepare Process and Instrumentation Diagrams.
- Prepare Plot Plans.
- Prepare General Arrangement Drawings.
- Establish utility requirements.
- Prepare preliminary equipment list and specifications.
- Prepare list of recommended bidders.
- Issue inquiry and receive bids on all major equipment in accordance with procurement policies.
- Develop preliminary drawings and specifications for all structures.
- Prepare bid tabulations, evaluate bids, and recommend vendors.
- Prepare preliminary project schedule.
- Establish the battery limits for each facility or project.
- Coordinate on-site versus off-site facilities.
- Assist in securing commitments for financing.

B. Prepare Definitive Cost Estimates

When the preliminary design is complete and bids secured, the estimated cost of the project will be prepared. The project cost determined by this phase will become the basis of the financial plan and all subsequent cost control systems operated by the program manager. The definitive estimate prepared will be based on quoted and estimated data. It will reflect contingency factors, escalation projections, and estimated construction and operating costs, and will be sufficiently detailed so that each distinct item, operation,

subcontract or major piece of equipment can be identified. To accomplish this task, WBUO will gather data from numerous sources and will present it with sufficient substantiation so that the financial plan can be quantified. Some of the items to be accomplished will be:

- Establish guidelines for the preparation of the various types of estimates required.
- Establish and maintain a planning and budget control system that ensures the constant flow of information and data to enable the preparation of an estimate within the time frame and accuracy required.
- Establish and maintain historical data files in a format suitable for later estimates and studies.
- Establish and maintain a central cost group through which all estimating information on the project can be coordinated.
- Establish the Detail Project Program and Schedule.
- Prepare a definitive Cost Estimate.

Commercial Aspects of Phase II

To accomplish this entire phase of the project, agreements and funding will be required. As program manager, WBUO will accomplish the work, utilizing qualified experts and professionals. WBUO will establish the scope of each item and negotiate an acceptable agreement that will be agreeable

to MSD, the selected firm proposing the work, and to WBUO. The cost of the services provided will be verified against known costs and compared with the established scope. For this service, WBUO will be paid a fee. The costs and the fees thereof for this phase will be established by negotiation in good faith between MSD and WBUO.

PHASE III

A. Procurement of Major Equipment

After confirming feasibility of program in Phase II, the procurement of the major equipment and materials necessary for the construction will be accomplished. This is a very comprehensive program and requires strict policies and procedures. WBUO may procure all or part of the equipment and materials, or may elect to make material procurement a function of the constructor. These judgements will be based upon economic and competitive evaluation and may be influenced by delivery requirements. In so doing, WBUO will consider the prime parameters of procurement:

1. Maximum involvement of local citizens to provide labor, goods, and services.

2. Quality facilities at lowest cost to MSD through competitive bidding.

3. Completion of facilities and start-up of system within the agreed time frame.

Regardless of the mode of procurement, WBUO as program manager, will ensure that the following functions are performed:

- Determine availability of critical materials and equipment.
- Initiate bulk material purchase.
- Prepare bid tabulations including commercial evaluations.
- Negotiate purchase agreements.
- Obtain project and legal approval of purchase orders and subcontracts.
- Issue notices of award.
- Process change orders.
- Handle communications with vendors.
- Institute expediting program.
- Maintain procurement schedule.
- Provide vendor inspection services.
- Provide traffic control.
- Issue shipping instructions.
- Verify vendor payments.
- Determine completion of contract requirements by vendor.
- Approve final payments to vendors.
- Dispose of construction equipment and excess inventory.

B. Detail Engineering and Design

Based upon the preliminary design, preparation of the project for construction will be managed by WBUO so that all necessary functions are accomplished. By the time Phase III is begun, the project will be divided into a number of distinct pieces, such as the boiler facility, the transfer station, and

the RDF processing facility. Each may have a different schedule and each may be conducted as a separate object, but regardless of the breakdown, the following functions will be accomplished during detailed design:

- Finalize process and instrumentation diagrams.
- Finalize the equipment list.
- Prepare detail design and construction schedule.
- Review and approve vendor drawings and technical data.
- Produce detailed design in accordance with approved general arrangements and certified vendor prints.
- Prepare construction bid package specifications.
- Provide technical evaluation of quotations.
- Recommend purchase of items requiring engineering review.
- Institute a vendor drawing control system.
- Provide reports on progress of design effort.
- Coordinate design with construction needs.
- Issue construction drawings to the field.
- Ensure an effective flow of information between the project office, the field office, departments providing technical services and vendors.
- Prepare startup and operating manuals.
- Assist in startup of the facilities.
- Compile final vendor data.
- Prepare as-built drawings.
- Complete final engineering report.

C. Manage Construction

In general terms, construction management services comprise managing, administering and coordinating the construction contracts to assure proper construction methods;

reviewing and coordinating the construction schedules, manning schedules, forward planning and forecasts; maintaining proper standards of safety and housekeeping; enforcing adherence to drawings and specifications; and approving and accepting contractors' work. More specifically, WBUO envisions the following functions:

- Arrange utility connections.
- Obtain permits and satisfy other local government requirements.
- Regularly review the various contractors' programs to accomplish the work including the construction schedule, manpower and equipment usage.
- Coordinate the construction schedule with those of other contractors.
- Advise and assist contractors in work methods.
- Assure adherence to established construction schedules.
- Inspect contractors' work to ensure good workmanship and adherence to sound construction practices.
- Coordinate the activities of the various contractors to avoid conflicts in scheduling, unnecessary peaking of manpower at the sites and interferences between activities.
- Establish minimum standards of housekeeping and assure contractors' compliance.
- Administer construction subcontracts.
- Provide on-site inspection and quality control.
- Perform field industrial relations function.
- Perform field cost engineering function.
- Issue Field Activity Reports Weekly.
- Issue Field Progress Reports.
- Issue Field Cost Reports.
- Perform construction scheduling and maintain overall project schedule.

Commercial Aspects of Phase III

Engineering and construction is the specialty of WBUO, and in-house capabilty for both exists. It is often advantageous, however, to subcontract portions of both of these items. WBUO, as program manager, will evaluate the economic advantages and guide the project to ensure that the interests of MSD, and of Portland in general, are assessed and protected, not only as to project concept, facility design, but also utilization of local construction forces. For performing this service, WBUO will receive a fee based upon the value of the services provided. As agreed, that fee will be established by negotiation in good faith between WBUO and MSD.

PHASE IV

A. Startup Facilities

Concurrent with the final phases of construction, WBUO as program manager will prepare the facility for startup. As a function of the program, WBUO will define the operating requirements and select and train qualified plant operators. When ready, the equipment will be run and tested to verify that the intent of the contract has been satisfied. The following functions will be performed:

- Develop outline of turn-over procedure.
- Confirm readiness of plant for startup.
- Assist in startup.
- Coordinate correction of deficiencies.
- Transfer care, custody and control to operator.
- Determine compliance with all contract requirements.

- Assist in the prepartion of startup procedures including initial testing of individual equipment and final testing of plant units.
- Request and direct services of equipment suppliers and contractors in respect to startup and initial operating assistance.
- Schedule and witness all tests.
- Check out operating personnel with the equipment as required.
- Prepare final report.

B. Operation of the Facility

Following the successful startup of the facilities, WBUO through selected and qualified subcontractors, will operate the facilities for MSD. In so doing, the goal of the MSD will be considered paramount in disposing of the municipal refuse of the City of Portland and surrounding area as efficiently as possible. That portion of the refuse that can be used as a light fraction fuel will be converted to steam and sold commercially. The ferrous fraction of the refuse will be separated and sold commercially. Other feasible fractions will be recovered and sold as practical. The remaining material will be disposed of at landfill sites that are acceptable to the overall program of MSD.

To manage these activities and to perform these functions, WBUO will establish an office in Portland and staff it with permanent employees. It will be the responsibility of WBUO to operate and/or manage all aspects of the operation of the total system, to collect all fees and revenues resulting from the operation and to disburse all funds for the operation of the system. Some of the operating needs of the facility

cannot be determined until the study and the design are complete. Present thinking envisions the following functions divided appropriately between WBUO and operators:

- Staff and operate each facility.
- Staff and operate an office.
- Staff and operate a maintenance facility.
- Supervise and manage the tipping floor.
- Collect all tipping revenues.
- Process the municipal refuse.
- Separate the useable fractions and dispose of the tailings.
- Load and ship the useable fractions.
- Operate and manage the RDF transfer system.
- Process the RDF and prepare it for shipment.
- Offload and store the RDF.
- Staff and operate a boiler facility generating steam from RDF.
- Separate, collect and sell all other useable fractions of the refuse.
- Properly dispose of all unuseable material.

Commercial Aspects of Phase IV

Since this phase of the project continues over an extended period of time, a complicated coordination effort merging together a number of separate operations will be required. It is premature to state exactly how each part of this multi-faceted operation will be accomplished, and exactly who will do each piece. WBUO will manage the program and will perform the operations, or will contract with reliable local firms to do certain portions, always ensuring that the operation is properly performed. For this service, WBUO will receive an equitable fee. WBUO will continuously

monitor developments in the field of waste recovery to assure any possible future improvements or additions to the initial recovery program are evaluated and presented to MSD for consideration.

SECTION III

MEMORANDUM OF UNDERSTANDING

MEMORANDUM OF UNDERSTANDING: Between Metropolitan Service District (MSD) Portland, Oregon

and

Williams Brothers Urban Ore, Inc. (WBUO) Tulsa, Oklahoma

Based on discussions, MSD and WBUO agree that:

1) It now appears the MSD Energy and Materials Recovery System can be demonstrated to be feasible provided certain critical factors are satisfied:

   (1) A contract for sale of energy (steam) to Publishers Paper Co. (PPC), the form of which would be similar to the February 9, 1976, draft agreement between MSD and PPC, updated to reflect sale of steam to and operation of the boiler by PPC; (2) Commitment of long-term supply of municipal solid waste (MSW) to the facility; and, (3) Acceptance of risks by public and/or private parties sufficient to satisfy money lenders.

2) WBUO's performance of Phase I will be in accordance with proposal attached which is made a part of this understanding.

3) Upon satisfactory completion of Phase I Open Tasks and submission of an acceptable implementation plan, a contract will be negotiated between WBUO and MSD appointing WBUO program manager.

4) As subcontractor to WBUO, Sandwell International (SI) will perform those Phase I Open Tasks connected with the boiler facility and PPC site.

5) Phase I services, equivalent to $_____total value at current professional rates, are to be contributed, with certain exceptions specified in the attached proposal, at no cost to MSD by WBUO and SI, in their respective proportions, to complete an acceptable implementation plan.

Upon completion and submission of an acceptable implementation plan, MSD agrees to negotiate a contract in good faith with WBUO for its services as overall program manager at rates competitive with standard industry practice, to accomplish the following:

Phase II - Prepare flow sheets and preliminary design; solicit bids and select equipment and buildings; prepare definitive cost estimates and operating statements; and, provide assistance in obtaining permanent financing.

Phase III - Prepare final engineering design; award contracts; provide construction management; and, check-out the system.

Phase IV - Startup and manage the system to assure its successful operation.

Upon completion and submission of an acceptable implementation plan, if MSD should fail to appoint WBUO as overall Program Manager, then and in that event, WBUO shall be entitled to reimbursement of costs expended in completion of the Phase I open tasks on a quantum meruit basis.

WBUO will make the greatest possible use of local subcontractors consistent with standard bid procedures, with a three-fold objective:

1. Maximum involvement of local citizens to provide labor, goods, and services during both construction and operation phases.
2. Assure installation of quality facilities at the lowest possible cost to MSD through competitive bidding.
3. Provide professional management to assure continued performance of the facilities in accordance with plans and specifications.

In the operations phase, WBUO will continue its role as program manager at an appropriate negotiated fee. Services performed, in summary, will be the coordination of subcontract operation of the various units in the overall system. These subcontracts will have a dual objective:

1. Optimum operation and maintenance of the facility so that equipment life is maximized, MSW is handled efficiently, and stability, reliability, and continuity of product output is assured.
2. Minimize cost so that energy can be sold competitively, concurrent with holding tipping fees to an acceptable level.

The understanding herein is entered into by both parties in a spirit of mutual cooperation so that delays in moving the program forward are minimized. Both parties agree to furnish all necessary documentation and assistance, and to advise immediately as to any changes or potential delays.

Close collaboration will be necessary, and is pledged herein, in structuring methods for handling subcontractor bidding, performance and acceptance procedures, accounting procedures, financial administration, and coordination of legal, legislative, or public aspects of the program. Negotiation in good faith constitutes the basis for future relationships between the parties, who hereby agree to this general memorandum of understanding.

Date:_____ Date:_____

METROPOLITAN SERVICE DISTRICT WILLIAMS BROTHERS URBAN ORE, INC.

_____ _____

Chairman of the Board President

SECTION IV
QUALIFICATIONS AND EXPERIENCE

THIS SECTION WILL BE INCLUDED IN THE FIRM PROPOSAL.

- QUESTIONS ON WILLIAM BROS. PROPOSAL -

1. ~~Are~~ Do the Phase I tasks and implementation plan William's Bros. proposes to develop assure that the project can be done? Couldn't there still be cost overruns, wrong estimates - Couldn't Publisher's still "back out"? Wouldn't Williams Brothers role be more like a design consultant than an actual contractor or operator?

2. What kinds of risks are involved in this proposal for MSD? Williams Brothers?

3. In the outlined Phase I, who prepares for and pays for the services of the financial consultant (SBU)?

4. Why would MSD want to use Williams Brothers to "manage" the project rather than existing staff? Does williams Brothers have any commitment that things will turn out as projected in their Phase I feasability analysis?

5. What other kinds of projects has this proposed "project management approach" been applied on?

6. If tax free revenue bonds are used to finance the total project (including steamplant), who ownes the steamplant? Who owns the processing "front end" system equipment? Who has to make the debt service payments? (Who is responsible?) Who is responsible for raising additional capital if costs are underestimated?

7. If MSD agreed to do what Williams Brothers wants, how could this be justified to the Contract Review Board? Wouldn't this effectively "lock out" other <u>interested parties</u>?

MSD METROPOLITAN SERVICE DISTRICT

527 S.W. HALL, PORTLAND, OREGON 97201 222-3671

MSD Board

9-24-76

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David Phillips	Clackamas County (Advisory Committee
Harold LaVelle	Landfill operators
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Carl R Miller	MSD Advisory Co. and Industry Rep
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