BEFORE THE COUNCIL OF THE
METROPOLITAN SERVICE DISTRICT

FOR THE PURPOSE OF AUTHORIZING A SOLE SOURCE SOLICITATION PROCESS AS SET OUT IN METRO CODE SECTION 2.04.060 FOR CONSTRUCTION OF A COMPACTION SYSTEM AT THE METRO SOUTH STATION	)))))	RESOLUTION NO. 88-1027 Introduced by Rena Cusma, Executive Officer

WHEREAS, The Metropolitan Service District is considering construction of a compaction system at the Metro South Station; and

WHEREAS, ORS 279.015 authorizes the exemption of certain contracts from the competitive bidding requirement; and

WHEREAS, ORS 279.017 authorizes an exemption from the restriction that specifications for public contracts not include brand name products, or the product of a particular manufacturer or seller; and

WHEREAS, Metro Code Section 2.04.040 requires that all public contracts be awarded to the lowest responsive, responsible bidder unless exempt from competitive bidding; and

WHEREAS, Metro Code Section 2.04.060 states that it is not necessary to solicit and document proposals if there is only one qualified provider of the service required; and

WHEREAS, Metro Code Section 2.04.041(c) authorizes, where appropriate, the use of alternative contracting and purchasing practices that take account of market realities and modern innovative contracting and purchasing methods, which are consistent with the public policy of encouraging competition; and

WHEREAS, The solicitation process described in the Staff Report is in accordance with Metro Code 2.04.041(c) and Oregon Administrative Rules 125-310-120 and 124-340-030 such that the compaction system will be selected on the basis of the most

competitive offer considering quality and cost where the term "cost" refers to costs related to quality as well as the product price; and

WHEREAS, The solicitation process set out in the Staff Report will result in the best quality and cost due to selection of compaction equipment with an adequate processing rate and a good record of reliability, leading to long-term cost-effectiveness; now, therefore,

BE IT RESOLVED,

1. That, based on the information provided in the Staff Report, the Council of the Metropolitan Service District finds that:

   a) It is unlikely that exempting the solicitation of a compacting system for the Metro South Station will encourage favoritism in the awarding of public contracts or substantially diminish competition for public contracts; and

   b) The contract, if awarded pursuant to the exemption, will result in substantial cost savings to the Metropolitan Service district, as the term "cost" is defined in ORS 279.015(2b) and OAR 125-340-340(1a).

2. That the Council of the Metropolitan Service District finds there is only one manufacturer of the product of the quality required.

3. That based on these findings, the Council of the Metropolitan Service District directs that the contract for the construction of the compaction system at the Metro South Station be exempted from the competitive bid process and that staff is authorized to pursue a sole source solicitation.

ADOPTED by the Council of the Metropolitan Service District this ____ day of _____ , 1988.

NOT ADOPTED

Mike Ragsdale, Presiding Officer

STAFF REPORT

Agenda Item No. NOT CONSIDERED

Meeting Date NOT ADOPTED

CONSIDERATION OF RESOLUTION NO. 88-1027 RELATING TO AUTHORIZING A SOLE SOURCE SOLICITATION PROCESS AS SET OUT IN METRO CODE SECTION 2.04.060 FOR CONSTRUCTION OF A COMPACTION SYSTEM AT METRO SOUTH STATION

Date: December 20, 1988 Presented by: Bob Martin

FACTUAL BACKGROUND AND ANALYSIS

For the reasons summarized below, the Solid Waste Department wishes to use a sole source solicitation process to convert the Metro South Station to a compaction system. This is in accordance with Oregon State Statutes 279.015 and 279.017; Oregon Administrative Rules 125-310-120, 125-340-030, and 125-340-060; and the Metro Code Sections 2.04.040, 2.04.041(c), and 2.04.060.

Background On January 1, 1990, Metro will begin transporting waste from the Metro South Station to the Gilliam County Sanitary Landfill, approximately 150 miles away. To achieve maximum payloads and be more cost-effective, waste to be landfilled will first be compacted at the Metro South Station, then loaded into containers and transported to Gilliam County.

Scope of Project Converting from the present top-loading of loose trash to a compaction system is estimated to be a $500,000 project. The project includes the following components: procuring a compactor, the design/construction of push walls and hopper to integrate with the new equipment, preparing the transfer station for installation of the compactor, installing and start-up of the compactor, training the operators, installing a ventilation system in the tunnel and guard rails at the tunnel entrance, and a service agreement for repair and semi-annual and annual maintenance.

Equipment Reliability Once converted, Metro South Station's operation will be dependant on a single piece of equipment, the compactor. The compactor will be located in the tunnel, eliminating the ability to top-load which is currently occurring there. Thus, initially there will be no redundancy. Because equipment failure may shut down operations entirely, reliability becomes a most significant factor in the compactor procurement.

Staff Research The solid waste staff has extensively studied the compaction equipment available to process the Metro South Station waste. Attachments 1 and 2 describe and compare this different equipment.

After contacting all known vendors, the staff found the AMFAB Transpak 500 to be the only compaction equipment currently available that offers the required quality at the Metro South Station. The required quality is determined by good reliability, an adequate processing rate, a proven operating history, best cost, and good interfacing with the proposed transfer and transportation systems. An added advantage is that AMFAB is based in the Portland Metropolitan area, providing immediate maintenance ability. A detailed discussion of these issues follows in Attachment 1.

EXECUTIVE OFFICER'S RECOMMENDATION

The Executive Officer recommends adoption of Resolution 88-1027 which authorizes the sole source solicitation of a compaction system at the Metro South Station.

ATTACHMENT 1. COMPACTOR COMPARISON

INVENTORY OF EQUIPMENT ON THE MARKET

The compactors researched in this study were limited by their capability to process the Metro South Station's throughput, approximately 100 tons/hour (1200 tons/day over a 12-hour operating day). The following is an inventory of all such compactors on the market that staff could find, their processing rate, and their approximate cost.

Manufacturer	Processing Rate (Manufacturer claims)	Est. Cost
AMFAB Transpak Model 500	100-150 TPH	$365,000
MARATHON M-1500	75-80 TPH	$160,000
LINDEMANN Pre-Compression Trailer Loader	100 TPH	$330,000
KEITH MANUFACTURING	Unknown	Unknown

GENERAL BACKGROUND OF EQUIPMENT

The AMFAB Transpak Model 500 has been in use throughout the U.S. for about 2 years, with approximately 16 of them currently operating. The first Marathon's M-1500 is just appearing on the market, although a smaller model (M-1000) has previously been available. The Lindemann technology is not in the U.S. And another company, Keith Manufacturing, is currently in the design stage of developing a pre-vault compaction system; no specifications are currently available about their equipment, and they will not be considered further.

The technologies of each compactor are different. They are described in Attachment 2. Staff had the opportunity to visit two AMFAB Transpak 500's and one Marathon M-1000.

EVALUATION CRITERIA

Reliability is a major concern, because the Metro South Station will initially have no redundancy. The compactor will be located in the tunnel, displacing the top-loading operation which is there currently. Thus, any compactor downtime due to equipment failure will shut down operations. Reports from other communities who have installed the AMFAB Transpak 500 regarding reliability have been very good. For the other comparable machines on the market, however, there is either no operating history at all (Marathon M-1500) or none in this country (Lindemann Pre-Compression Trailer Loader) to gauge its reliability. Staff assessment is that the smaller Marathon M-1000 (with the same technology as the Marathon M-1500) has a greater tendency towards jamming than the AMFAB Transpak 500, leading to more operational downtime and additional costs. Given that some unplanned downtime may occur with any machine, AMFAB's local proximity may offer an advantage of providing immediate maintenance/repair.

Proven technology is similar to reliability in that it is a function of the operating history. It is reiterated that the AMFAB Transpak 500 is the only compactor on the market that meets our requirements with an operational history (2 years) in the U.S.

Processing rate must be adequate to handle the waste as it is received, approximately 1200 tons/day at Metro South Station's maximum throughput. Average hourly waste flows are highest during the mid-day, projected at maximum throughput to exceed 100 tons/hr for approximately 6 operating hours with a noon hour peak of 200 tons/hr. Based on an estimated surge capacity at the Metro South Station, a 100 ton/hour compactor processing rate is required to keep up with the waste flow and maintain a reasonable margin of safety. The Marathon M-1500 is not able to meet this 100 ton/hour criterium. Although the Lindemann salespeople claim their machine can be adapted for this rate, the standard sizes of the Lindemann Pre-compression Trailer Loaders have loading capacity of approximately 50 TPH. The AMFAB Transpak 500 is rated at 100 TPH, and operators' reports indicate the rate is being met.

Best cost of the different compaction systems includes not only the product price but also other items of expense such as costs related to quality or conversion (Oregon Administrative Rules 125-340-030.1a). Although the price of the Marathon M-1500 compactor appears to be substantially less than the Lindemann or AMFAB Transpak 500, the costs related to quality (such as maintenance/repair and operational downtime) may be substantially greater. Reliability is a crucial issue because of the lack of redundancy, and the AMFAB Transpak 500 seems to offer the most competitive long-term cost when taking this into account.

Interfacing with the proposed transport and transfer systems requires that road legal loads be provided for the transporter. The Marathon M-1500, not having load cells, cannot pre-determine if the load is road legal. If the transport container is overloaded, the transfer station operators must reduce the size of the load, which takes additional time. Both the Lindemann pre-compression trailer loaders and the AMFAB Transpak 500 have load cells and scale readouts in order to continually produce road legal payloads. The AMFAB Transpak 500 discharges a compacted bale which normally maintains its integrity such that it does not pressure the trailer side walls. The Lindemann compactor, however, produces a series of 15-18" wafers rather than a single slug. This may more readily lead to shifting of the load, thus changing the axle weight distribution such that the load is no longer road legal. Because it does not hold its shape, it may also scrape and damage the transport container sides. Staff believes the Lindemann compaction system to be incompatible with the transport specifications. The AMFAB Transpak 500 appears to interface well with our proposed transportation system.

ATTACHMENT 2. COMPACTOR TECHNOLOGIES

All of the compactors described are loaded by pushing waste from the pit floor into a hopper.

AMFAB Transpak 500

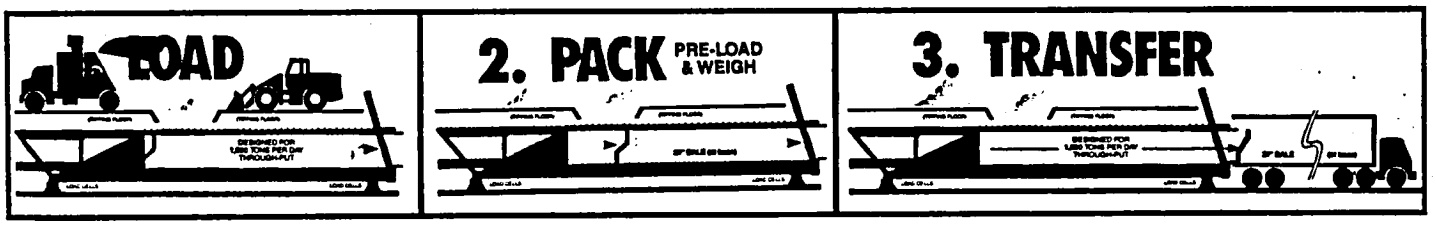
SUMMARY: The refuse, compacted in the compaction chamber, is ejected as a single slug which is pre-weighed and approximately the length of the transport container.

DESCRIPTION: When the hopper is full, a ram (platen) pushes the waste out of the load chute area and then retracts. This clear stroke is repeated a few times, followed by a compaction stroke. During the compaction stroke the ram extends into the chamber, and pushes against the refuse with a pre-set pressure (1500 psi). At the pre-set pressure, the cycle reverses and the ram retracts.

This loading procedure is continued until a predetermined weight is reached, as indicated by an electronic scale readout. All these functions can be operated by radio control from the loader operator cab, and at any time during extension of the platen it can be reversed by the operator.

Upon reaching the predetermined weight (and length), the loader operator can signal the operator's console indicating that a bale is complete and ready to be ejected into the trailer. After the radio control is deactivated the bale can be ejected by the packing ram into a transportation container. A jog button adding 500 psi to the normal operating pressure may be depressed if, when ejecting the bale into the trailer, the platen stalls and will not advance.

The power and control system of the Transpak 500 compactor is a combination of hydraulic power and electronic programmable control circuitry. On the average it takes 10-12 strokes (compacting every third stroke) to build a load. The compactor is designed to accept approximately 15 cubic yards of waste per packing stroke, build a load in 10 minutes, and complete the transfer in 2 minutes. It is approximately 80' long, depending on the placement of the power unit and guillotine gate. The compacted bale normally keeps its original width during transfer, such that it does not pressure the trailer side walls.



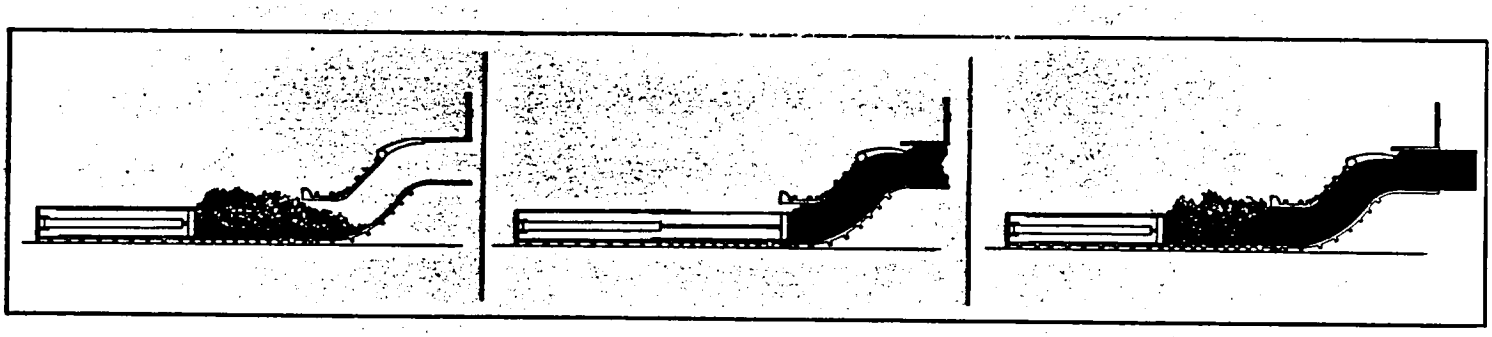
MARATHON M-1500

SUMMARY: The refuse, compacted by the S-shape of the compactor, is extruded in a continuous log which can be cut to any desired length.

DESCRIPTION: When the hopper is full, a ram forces the waste from the load chamber into the S-shaped extrusion tube. Compaction is created by a restrictor located in the S-shaped extrusion tube. The restrictor instantly increases or decreases friction to produce the programmed log density by automatically adjusting the programmable controller that senses changes in packing pressures

A boost or overpower is available that will up the power and force the machine clear in the case of a jam. As an extreme measure if all else fails, the choker can be lifted up and taken off and the jam can be dug out.

Every stroke causes both compaction and extrusion. The bale can be cut to any length, at the discretion of the operator. There are no load cells to monitor the weight as the bale is constructed. Extrusion is constant, such that there is always waste in the machine. The length of the compactor is relatively short (approximately 60') compared to the AMFAB Transpak 500, as it does not require the space to build/ compact/store a full-sized bale before extrusion. Typical log densities run 1,000 to 1,200 lb/cubic yard. The log is 5½' high by nearly 7' wide. Total time to load a 40' trailer is about 20 minutes. All compaction takes place in the Marathon's S-tube rather than in the transport container, thus avoiding impact on the trailer side walls.



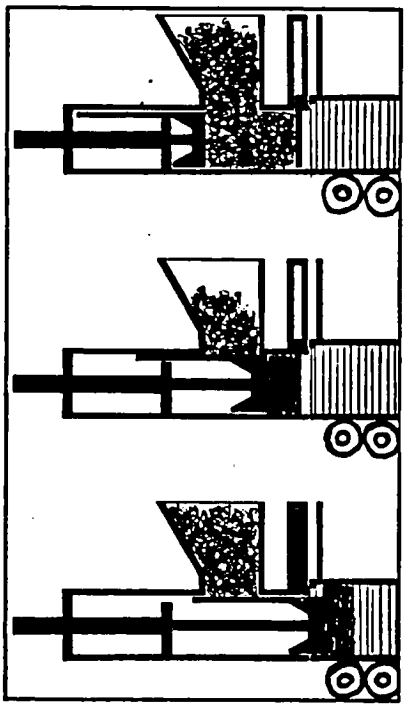
LINDEMANN Pre-Compression Trailer Loader.

SUMMARY: The refuse, compacted in the pre-baling chamber, is extruded in a number of 15"-18" thick wafers of compacted waste.

DESCRIPTION: After filling the hopper, waste is compacted by a hydraulically operated pressure platen. When the maximum permissible pushing force is exceeded, the advance movement of the pressure platen is automatically stopped, followed by a short retraction. Next, the guillotine-style door of the pre-baling chamber is raised such that the baled wafer can be discharged from the chamber into the transport vehicle. Each compaction produces a 15"-18" wafer. The wafer production process is repeated until the truck is full.

Most of the compaction takes place in the press. The operating pressure of the pressure platen advance is reduced automatically as soon as the baled wafer enters the container. Thus, an inadmissible high pressure admittance of the container is prevented.

The wafers are 7'x5' cross-sectional area, with refuse densities up to 900 lb/cubic yard. It is approximated that it would take 10-12 minutes to load a transport container. Overall compactor length is only 33'.



ATTACHMENT 2. COMPACTOR TECHNOLOGIES (cont.)

SPECIFICATIONS	AMFAB Transpak Model 500	LINDEMAN	MARATHON M-1500
Chamber capacity:	67 CY 37x7x7' 20-30 T	17.5 CY 13x7x5'	9.1 CY 6x7x6'
Bale dimensions:	37x7x7'	7x5'	6.8x5.8'
Chamber loading time:	8-10 m	--	--
Transfer time into TT:	2 m	--	--
Total cycle time:	10-12 min	10-12 min	20-23 min
Weight throughput/hr:	100 TPH	100 TPH	70-85 TPH
Electronic load cells:	remote readout	remote readout	--
Chamber opening:	10x6x7'	8x7x5'	10.5x6.4'
Volume/stroke:	15 CY	12.5 CY	--
Compaction chamber mat:	T1 alloy steel	Alloy steel	A-36 & A-514
Closure gate type & power:	guillotn hydraulic	guillotn hydraulic	4 steel rods
Control system:	programbl	programbl	progrmbl
Control from tip floor:	wireless remote	remote	No
Motors	2 100 HP	90 HP	150 HP
Electrical power reqrd:	480 V 3-Phase	480 V 3-Phase	460 3-Phase
Hydraulic power unit:	prewired, plumbed, & tested	electric dual pump	prewired, steel skid
Trailer hitch:	hydraulc	hydraulc	none
Overall dimensions w/o guillotine):	80x10x10'	33x9x12'	60x8x11'
Guillotine heighth:	20.1'	20.4'	18'
Shipping weight:	62.5 T	27 T	35 T