

Board of Directors
Monterey Regional Waste Management District

RESOLUTION NO. 2007-08

**A RESOLUTION AUTHORIZING PURCHASE OF
CATERPILLAR 836H LANDFILL COMPACTOR FROM QUINN CATERPILLAR**

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WHEREAS, the Monterey Regional Waste Management District operates the Monterey Peninsula Landfill (MPL), a municipal solid waste landfill serving western Monterey County, and

WHEREAS, the MPL accepts 1,000 tons per day, or 230,000 tons per year of solid waste for disposal, and

WHEREAS, the landfill compactor is a primary piece of equipment, with an anticipated life of 7-10 years used to efficiently, effectively and safely compact solid waste into the landfill, and

WHEREAS, on July 20, 2007, the Monterey Regional Waste Management District Board of Directors authorized the issuance of a Request for Proposals (RFP) for the purchase of a new landfill compactor; and

WHEREAS, on August 2, 2007, said proposals were publicly opened, reviewed, and analyzed by District staff; and

WHEREAS, the Board has received and reviewed a memorandum from staff, attached hereto as Exhibit "A", which concludes the proposal that best meets the needs of the District and which is most responsive to the RFP, issued by District.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Monterey Regional Waste Management District, as follows:

That the Board accepts the proposal from the lowest responsible, responsive proposer meeting the requirements of the RFP, and of the specifications, Quinn Caterpillar of Salinas, CA and authorizes the purchase of a Caterpillar 836H Landfill Compactor for the price of \$1,104,675 as specified in said proposal, dated August 1, 2007, which is part of Exhibit "A".

PASSED AND ADOPTED at a regular meeting by the Board of Directors of the Monterey Regional Waste Management District duly held on August 17, 2007, by the following votes:

AYES:

NOES:

ABSENT:

Sue McCloud
Vice Chair of the Board

ATTEST:

William M. Merry
General Manager



Memorandum

MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT

Reviewed by [Signature]
General Manager

Date 8/8/07

DATE: August 8, 2007
 TO: General Manager
 FROM: Assistant General Manager and Equipment Maintenance Manager
 SUBJECT: Authorize the Purchase of a New CAT 836H Landfill Compactor from Quinn Company

RECOMMENDATION: That the Board of Directors adopt Resolution 2007-08 authorizing the purchase of a new Caterpillar 836H compactor from Quinn Company of Salinas, CA for a total purchase price of \$1,104,675, including delivery, freight, sales tax, and warranty, as outlined in their proposal dated August 1, 2007. Funds for this purchase are included in the Long Term Debt portion of the FY 2007/08 budget.

BACKGROUND

A landfill compactor is the main piece of equipment utilized by the District's landfill operations. The compactor is designed to provide compaction and placement of refuse in the landfill. The compactor is one of the most heavily utilized pieces of equipment – it operates continuously for up to 11 or 12 hours a day or over 2,000 hours annually. As such it is one of the most carefully considered purchases the District makes. A landfill compactor is a large, heavy (over 120,000 lbs) piece of equipment that has specially designed wheels with “spikes” designed to break up the refuse and maximize compaction.

The District's existing frontline compactor is a Caterpillar 836G. It was purchased and delivered in 2001. The existing frontline 836G machine is six years old, has 15,700 hours of operation and is becoming less reliable. This machine's current hours are excessive and will require it to be moved in the near future into a backup role. The use of the larger 836G compactor allows us to push, spread, and compact with just one machine. By not having to allocate the full time use of bulldozer at the face, we realize substantial operational cost savings by not having to double up on equipment through the use of a dedicated compactor at the face.

The District currently utilizes two compactors, a Caterpillar 836C (purchased in 1995), which has 18,600 hours of use and a Caterpillar 836G (purchased in 2001), which has 15,300 hours of usage. The existing frontline 836G compactor will be kept on site for use in a backup role when the new frontline 836H compactor is down for repairs or servicing. When the compactor is down for repairs and a bulldozer is used instead to place and compact garbage, staff estimates it cost the District \$7,000 per day in lost capacity. That is, the compactor is 25% more efficient than a bulldozer in breaking up the material, spreading it, and then, compacting it down. Since the District is in the business of selling long term storage, the 25% lost storage space and associated lost revenue, based on 750 tons per day going to the landfill, is nearly \$7,000 per day. Therefore, it is important to have an efficient reliable primary compactor, along with a backup machine.

The expected useful life for a compactor runs around 17,000 -19,000 hours. In five years, we plan to replace the new frontline 836H compactor with a new machine. The 836H will then go to backup role and the 836G (which will then be over 11 years old with reasonable hours) will be sold. The new compactor is scheduled for delivery in February 2008.

DISCUSSION

Staff submitted specifications in the form of a Request for Proposal (RFP) to four compactor manufacturers. Staff developed an extensive list of machine design specifications that have delivered reliable and effective results in the District's refuse compaction practices for the past 12 years. Two equipment manufacturers responded - Caterpillar and Terex. A point value system was applied based on submitting Proposer's ability to comply with criteria contained in the RFP documents. The point system utilized and the breakdown for the two proposers of equipment are as follows:

	Points System	Terex	CAT
Price	40 pts	40 pts	35 pts
Maintenance & Service	30 pts	10 pts	30 pts
Guaranteed Purchase Buy-back	15 pts	3 pts	15 pts
Reliability Review	15 pts	N/A*	13.5 pts
Total	100 pts	53 pts	93.5 pts
<i>*(only 2 machines identified as operational in U.S.)</i>			

Based on the review of the proposal by both companies and the assignment of points according to the prescribed point system established in the RFP, the CAT 836H was evaluated higher with a rating of 93.5. The Terex, due in large part to numerous exceptions to the specifications outlined in the RFP, was rated at a point value of 53. Attached is the non-compliance specification analysis and cost analysis performed by Ron Mooneyham, District Equipment Maintenance Manager. Staff is recommending purchase of the CAT 836H landfill compactor for the following reasons:

Price: The Terex proposal had a total life cycle cost of \$816,028.75. The CAT 836H has a total life cycle cost of \$850,175. The Terex compactor however, is not capable of utilizing the specified Caron wheels and blade (which the District has considerable operating experience with and is generally regarded as superior options on any landfill compactor). CAT's proposed price, not including Caron wheels and blade, including a life cycle cost analysis and its guaranteed purchase buy-back, was actually \$703,175, - \$112,853.75 less than the Terex. As specified, with the Caron wheels and blade, the CAT 836H was only 5% higher than the total life-cycle cost analysis for the Terex. Terex was accordingly given all 40 points for price and CAT received the next highest point total as identified in the RFP at 35 points.

Maintenance & Service: CAT took no exceptions to the maintenance and service criteria outlined in the RFP. Terex took a number of exceptions (over 37 in all), and several in key areas of performance, service life intervals, fuel consumption, component part utilization, and labor costs associated with maintaining the Terex versus the CAT. CAT has a local (Salinas) based supplier and has a number of compactors operating in California and the western United States. CAT equipment has an extensive dealer network and a sophisticated logistics and parts supply chain that the District has depended on for many pieces of equipment over the past 20 years. While Terex is represented locally by Papé Equipment, (a John Deere distributor), and while our experience with Papé has also been positive, the closest Terex compactor presently operating is in the state of Texas. The risk associated with supporting a new compactor without a fully established network of dealers caused the evaluation team to rate Terex at 30% of the point assignment given to the CAT 836H.

Guaranteed Purchase Buy-Back: The world wide market for CAT heavy equipment is unparalleled in the world. Quinn CAT was able to guarantee a buy-back price of \$250,000 after six years, 15,000 hours; or about 26% of its proposed original price not including Caron wheels and blade. Terex was able to offer a purchase buy-back price of \$50,000 after 15,000 hours, which represents approximately 6.8% of its original purchase. Accordingly the District rated the value of the CAT 836H purchase at the full 15 points available and the Terex received a proportional valuation credit of 3 points out of the total 15 points available.

Reliability Review: CAT compactors have long been the standard at a number of public and privately owned and operated landfills across the United States. The two CAT compactors presently in operation at the District's Monterey Peninsula landfill have a combined 33,900 hours of operation. The CAT dealer support network and the number of CAT compactors currently in operation in the United States and Canada quantifies that the CAT line of compactors are both dependable and reliable in a number of large, medium, and small operations. Accordingly, the CAT 836H was credited with the full 15 point value under service reliability and peer review. The Terex, while the company itself has a history of dependable equipment that serves the construction industry, does not yet have an established track record in the landfill compactor equipment field. As such, staff concluded that from a service reliability and peer utilization standpoint, it was reasonable to judge the Terex as "Not Applicable" as no real service reliability and service history is yet available.

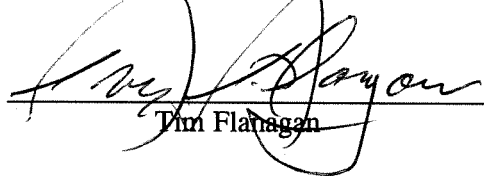
FINANCING

Quinn Company's proposal is a complete package including delivery, freight, and sales tax. The FY 2007/08 Long Term Debt portion of the Budget includes funds for this purchase. No payment is due on this machine until it is delivered in February 2008, or slightly sooner.

CONCLUSION

Staff has concluded that the RFP approach to equipment selection, which encompassed a variety of factors, proved to be extremely beneficial in the comparison of two extremely varied proposals for two very different pieces of equipment. A proper emphasis was placed on an evaluation of the total life-cycle cost of the equipment, as well as the post-purchase maintenance and product support, which is critical for equipment which is expected to last anywhere from 7 to 10 years. Staff will evaluate this proposal process again in the future in regards to its major equipment purchases.

Staff recommends the purchase of the CAT 836H as specified for a total of \$1,104,675.



Tim Flanagan



Ron Mooneyham

Attachments

Non- Compliance Specification Analysis

Caterpillar Compactor

Item #	Non-Comply Item	Vendor Exception	Impact on District
	Delivery of compactor complete 120 days	Caterpillar February 2008 (175 days)	The approximate 1.5 months additional delivery time will have no foreseeable effect on District operations
8.j	Rear vision camera system	Quinn cost was \$2500 for system, District decided to purchase separately and have dealer install	District savings of \$2200

Terex Compactor

Non-Comply Item or Other	Vendor Exception	Impact on District
1.f	Medium duty fuel consumption	Based on \$2.50 per gallon and 15,000 hour life cycle of machine Terex additional operating cost \$75,000
8.p	Multi-level diagnostic system monitoring that will warn in stages to allow early detection before complete failure occurs. In most cases these early warnings allow preventive measures that reduce repair cost.	Terex does not offer
9.a	Caron wheels with pin retained compaction lugs. Pin retained compaction lug offers reduced maintenance cost to replace and possible wheel life of 20,000 hours with scheduled position rotation.	Terex welded on wheel lugs are labor intensive to replace. Caron wheels are a specific equipment specified by District and gives Terex a price advantage over Cat of approximately \$134,000.
9.c	Caron blade	Caron blade is a specific equipment specified by District and gives Terex a price advantage over Cat of approximately \$13,000
2.j	500 hour engine oil change interval	Terex additional operating cost at 15,000 hour life cycle \$27,000 (estimated cost of 250 hour service \$450.00)
2.p	Radiator fan swing out to provide ease of cleaning to radiator	Added operating cost, increases difficulty and frequency of cleaning radiator core.
2.q	Reversible hydraulic driven fan	Added operating cost, increases difficulty and frequency of cleaning radiator core.
2.o	Radiator made of copper	Concern of corrosion from landfill and coastal environment and heat dissipation compared to copper. Occurrences of insufficient cooling shorten component life.
6.a-h	Axle, differential requirements	Hydrostatic driven machines of this size are relatively new and drive components are likely to experience shorter life expectancy and cost more to repair based on District's current knowledge of this type of drive technology.
4.a, b, d, f	Transmission operation requirements	Hydrostatic driven machines of this size are relatively new and drive components are likely to experience shorter life expectancy and cost more to repair based on District's current knowledge of this type of drive technology.

Terex Exceptions Contined on Reverse

Non-Compliance Specification Analysis

Terex Compactor (continued)

	Non-Comply Item or Other	Vendor Exception	Impact on District
7.g	4000 hour hydraulic oil change interval	Terex requires hydraulic oil change at 2000 hours	Additional operating cost due to more frequent hydraulic oil change requirement and increased system oil capacity requirement. Hydraulic oil capacity, Cat 36 gallons, Terex 170 gallons. Terex additional oil cost over 15,000 hour life cycle (15,000 \ 2,000 = 7.5 x 170 = 1275 x \$9 = \$11,475 - Cat total \$1165 = \$10,310)
7.h	Use of current District hydraulic oil type for this component	Terex requires different hydraulic oil type	Additional cost to District, expand oil storage area to add bulk inventory, pipe dispenser components into shop (estimated cost \$20,000)
1.g	Protection to center hinge	Terex does not require center hinge protection	Price advantage over Cat of approximately \$2,000
1.i	120,000 machine weight minimum	Terex TC550 machine 110,000 lbs	Possible loss in compaction
2.g	Optimax engine air pre-clean system.	Terex does not offer	Added operating cost due to shorter air filter life. Price advantage over Cat of \$2,500.
3.b	12 volt power supply in cab	Terex does not offer	Additional maintenance cost to wire 12 volt supply in cab (estimated labor and parts \$420)
2.l	Quick engine oil change system	Terex does not offer	Add one hour labor to engine oil change due to lowering of guard pan under engine. Terex additional operating cost (60/occurrences x 40/hour = \$2400)
8.l. m	Panoramic rear view mirror	Terex does not offer	May effect operator rear vision capability
9.b	Striker bars at wheels	Terex uses different system and covers wheels	Concern of Terex machine ability to keep wheels clean
5.c	Load sense steering	Terex not available	None
2.h	Air restriction gauge in cab and at filter housing	Terex gauge only in cab	None
3.a	Charging system 80 amp or larger 4 battery	Terex 75 amp 2 battery	None
7.a	Closed hydraulic system	Terex offers open system	None
5.a	Single joystick to operate direction, steering and gear selection	Terex has two joystick system	None
1.b	Identify major components not designed by manufacturer	Terex did not identify Cummins engine	None
8.k	Wet arm wiper washer	Terex has washer but not on arm of wiper	None
4.e	Use of current district oil type for transmission	Terex does not have transmission	Does not apply

MRWMD
Life Cycle Cost Financial Analysis
for
Landfill Compactor

CAT 836H		Terex TC 550	
Price	\$1,104,675	Price	\$730,909
15,000 hour buyback	(\$250,000)	15,000 hour buyback	(\$50,000)
Caron hinge protection	(\$2,000)	Added fuel consumption	\$75,000
Air pre-cleaner	(\$2,500)	Eng. Oil change interval	\$27,000
		Oil quick change system	\$2,400
		12 volt power cab	\$420
		Oil storage / dispensing	\$20,000
		Hydraulic oil change interval / capacity	\$10,300
Subtotal	\$850,175	Subtotal	\$816,029
<i>Specific Requirement of District</i>			
Caron wheels	(\$134,000)		
Caron blade	(\$13,000)		
TOTAL	\$703,175	TOTAL	\$816,029