

SPARTON**SPARTON CORPORATION**

June 6, 1996

VIA FAX

Mr. Norman Gaume
Public Works Department
City of Albuquerque
P. O. Box 1293
Albuquerque, NM 87103

Mr. Robert Swartwout
New Mexico Utilities, Inc.
4700 Erving, N.W.
Suite 201
Albuquerque, NM 87114

Dear Norm and Bob:

This letter is a follow-up to our settlement meeting of May 16, 1996. At that time, we discussed Secretary Weidler's idea that there might be a way for Sparton and the City or NMU to work together in dealing with impacted groundwater in the vicinity of Sparton's facility. In particular, Secretary Weidler thought the City or NMU might wish to provide financial assistance to a project that could provide either of you with usable water.

Three potential uses for recovered groundwater were identified at the meeting: (1) potable beneficial use; (2) non-potable beneficial use; and (3) use in a pilot project to study recharge potential near the Calabacillas Arroyo.

Norm suggested that the City was willing to consider such uses only if the recovered water was treated to achieve either MCLs or no detection of any constituents of concern. He also indicated the City had significant reservations about blending impacted water with non-impacted groundwater to achieve either quality goal.

At the meeting, we committed to develop estimates of what it would cost to produce water of the quality Norm described. Being sent under separate cover is a report that provides those estimates and conceptual process designs. Consistent with our discussions, the costs described in that report do not include the infrastructure necessary to put the treated water into your systems. Each of you intended to independently cost out that number, and then decide what you might be willing to pay for the treated water.

We have taken the cost information from the report and applied an amortization analysis to determine what the water would have to be sold for in order to recover invested capital and expenses. We have assumed operational periods of thirty years to one hundred years, and flow rates of 200 gallons per minute, 400 gallons per minute, and 800 gallons per minute. For the MCL scenario, the cost per thousand gallons of treated water ranges from \$18.09 to \$18.33 at the 200 gallon per minute flow rate, and \$16.20 to \$16.35 at the 800 gallon per minute flow rate.

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SPARTON

Messrs. Gaume and Swartwout
June 6, 1996
Page 2

With respect to the non-detect scenario, the cost per thousand gallons of treated water ranges from \$20.96 to \$21.22 at the 200 gallon per minute rate, and \$18.74 to \$18.90 at the 800 gallon per minute rate. For your convenience we have attached the spreadsheets that are the backup to these costs.

We doubt that either of you is willing to pay an amount close to these costs, which would be necessary to make either treatment goal something that Sparton would have the financial resources to afford.

There may be other acceptable alternatives, however. We have included a spreadsheet describing the amortized cost of treating water that could be used for non-potable purposes. Such a project is something Sparton may have the economic resources to handle.

Another alternative would involve considering the blending of impacted with non-impacted water, coupled with acceptance of TDS levels found in the groundwater, and a pilot project to confirm that removal of chromium and arsenic is not necessary, because the concentrations of those constituents in the recovered water before treatment would be below the MCLs. Under these conditions, the cost of treated water would be in the range of \$1.00 to \$2.00 per thousand gallons, depending on how long the system ran and to what extent equipment needed to be replaced. Contingent on what cost sharing arrangement could be worked out, such an approach might be something Sparton would have the economic resources to implement.

The cost of \$1.00 to \$2.00 per thousand gallons of treated water is based upon Black & Veatch's experience in designing and operating a treatment system for the South Adams Water and Sanitation District in Colorado. That system was put in place to treat TCE found in groundwater produced from wells supplying water to over 30,000 people. The customers of that district have readily accepted the treated water, which meets primary drinking water standards. That system does not involve treatment of TDS nor removal of any metals.

We believe a further meeting to discuss this letter and the attached report would be helpful. You may have suggestions on how costs could be further reduced. We could also explore in more detail the South Adams County Water and Sanitation District experience, which would seem to provide an excellent example of what might work at this site.

Our goal is to work with you to develop a realistic settlement proposal that is within Sparton's economic reach. As we shared with you on May 16, Sparton management has not yet been fully briefed on any pump and use proposal. We believe that it is advisable to try to obtain a conceptual consensus and better detail about any proposal before approaching management.

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SPARTON

Messrs. Gaume and Swartwout
June 6, 1996
Page 3

We look forward to hearing from you.

Respectfully,

SPARTON TECHNOLOGY, INC.



R. Jan Appel
Secretary

RJA:jc

Attachments

cc: Mark Weidler
Rob Pine

OGC-000510

GWB-00654-SPARTON

Figure 1

Sparton Technology, Inc.

Black & Veatch Process Design

Treatment Level = Potable or MCL

Plant Flow = 200 GPM = 105,120,000 GPY
 Capital Cost = \$2,780,000
 Annual O&M = \$1,679,544

Operation Period (Years)	Capital Factor i=8%	Annual Capital Cost (\$)	Annual O&M Cost (\$)	Total Annual Cost (\$)	Cost Per 1000 Gallons Treated (\$)
30	0.08883	\$246,947	\$1,679,544	\$1,926,491	\$18.33
50	0.08174	\$227,246	\$1,679,544	\$1,906,790	\$18.14
100	0.08004	\$222,511	\$1,679,544	\$1,902,055	\$18.09

Plant Flow = 400 GPM = 210,240,000 GPY
 Capital Cost = \$4,750,000
 Annual O&M = \$3,270,226

Operation Period (Years)	Capital Factor i=8%	Annual Capital Cost (\$)	Annual O&M Cost (\$)	Total Annual Cost (\$)	Cost Per 1000 Gallons Treated (\$)
30	0.08883	\$421,943	\$3,270,226	\$3,692,169	\$17.56
50	0.08174	\$388,279	\$3,270,226	\$3,658,505	\$17.40
100	0.08004	\$380,190	\$3,270,226	\$3,650,416	\$17.36

Plant Flow = 800 GPM = 420,480,000 GPY
 Capital Cost = \$6,940,000
 Annual O&M = \$6,256,320

Operation Period (Years)	Capital Factor i=8%	Annual Capital Cost (\$)	Annual O&M Cost (\$)	Total Annual Cost (\$)	Cost Per 1000 Gallons Treated (\$)
30	0.08883	\$616,480	\$6,256,320	\$6,872,800	\$16.35
50	0.08174	\$567,296	\$6,256,320	\$6,823,616	\$16.23
100	0.08004	\$555,478	\$6,256,320	\$6,811,798	\$16.20

Figure 2

Sparton Technology, Inc.

Black & Veatch Process Design

Treatment Level = Non-Detect

Plant Flow = 200 GPM = 105,120,000 GPY
 Capital Cost = \$3,137,500
 Annual O&M = \$1,951,694

Operation Period (Years)	Capital Factor i=8%	Annual Capital Cost (\$)	Annual O&M Cost (\$)	Total Annual Cost (\$)	Cost Per 1000 Gallons Treated (\$)
30	0.08883	\$278,704	\$1,951,694	\$2,230,398	\$21.22
50	0.08174	\$256,469	\$1,951,694	\$2,208,163	\$21.01
100	0.08004	\$251,126	\$1,951,694	\$2,202,820	\$20.96

Plant Flow = 400 GPM = 210,240,000 GPY
 Capital Cost = \$5,393,500
 Annual O&M = \$3,773,476

Operation Period (Years)	Capital Factor i=8%	Annual Capital Cost (\$)	Annual O&M Cost (\$)	Total Annual Cost (\$)	Cost Per 1000 Gallons Treated (\$)
30	0.08883	\$479,105	\$3,773,476	\$4,252,581	\$20.23
50	0.08174	\$440,881	\$3,773,476	\$4,214,357	\$20.05
100	0.08004	\$431,696	\$3,773,476	\$4,205,172	\$20.00

Plant Flow = 800 GPM = 420,480,000 GPY
 Capital Cost = \$7,928,000
 Annual O&M = \$7,244,120

Operation Period (Years)	Capital Factor i=8%	Annual Capital Cost (\$)	Annual O&M Cost (\$)	Total Annual Cost (\$)	Cost Per 1000 Gallons Treated (\$)
30	0.08883	\$704,244	\$7,244,120	\$7,948,364	\$18.90
50	0.08174	\$648,059	\$7,244,120	\$7,892,179	\$18.77
100	0.08004	\$634,557	\$7,244,120	\$7,878,677	\$18.74

Figure 3

Sparton Technology, Inc.

Black & Veatch Process Design

Treatment Level = Air Stripping Only

Plant Flow = 200 GPM = 105,120,000 GPY
 Capital Cost = \$60,000
 Annual O&M = \$12,000

Operation Period (Years)	Capital Factor i=8%	Annual Capital Cost (\$)	Annual O&M Cost (\$)	Total Annual Cost (\$)	Cost Per 1000 Gallons Treated (\$)
30	0.08883	\$5,330	\$12,000	\$17,330	\$0.16
50	0.08174	\$4,905	\$12,000	\$16,905	\$0.16
100	0.08004	\$4,802	\$12,000	\$16,802	\$0.16



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To:	<i>Mr. Rob Pine</i>
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Number of Pages Including This Page:	<i>7</i>

Message:

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