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**MWC Legal & Environmental Consulting**  
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Fax: 361-850-9604

August 31, 2005

Ms. Susan Widener  
Sparton Corporation  
2400 East Ganson Street  
Jackson, Michigan 49202

Re: Sparton Technology, Inc.  
Albuquerque, New Mexico  
Coors Road Facility Financial Assurance Estimate

Dear Ms. Widener:

MWC Legal & Environmental Consulting is pleased to provide the attached estimate of financial assurance to be included in the submission by Sparton Technology, Inc. (Sparton) to the Environmental Protection Agency (EPA) and New Mexico Environmental Department (NMED) per Section XXIV, Paragraph 90, of the March 3, 2000 Consent Decree and meets the requirements for cost estimates for closure found under 40 CFR §264.142. The attached estimate of \$3,863,115 is based on an effective value date on June 30, 2005, which is consistent with Sparton's fiscal year-end and also the RCRA regulatory requirements. This estimate is \$167,235 lower than the previous estimate provided to Sparton on August 31, 2004. The largest single item reducing the estimate is completion of another year, for a total of 6 of the 30 years of projected time for closure operations. The estimated contribution for the most recently completed fiscal year was \$208,220 for expenses and another \$129,500 for the abandoned MW-71R treatment system. The largest adjustment was installation, testing and operation of the Deep Flow Zone monitoring well at a total estimated cost of \$191,535. In addition, electricity costs decreased based on FY2005 actual costs. The modifications made as part of the update of the financial assurance estimate, are described both below and in the attached estimate as notes of the changes made. (See Attachment 1 – 24 Year Summary.)

The starting point for this update was the estimate provided to Sparton on August 31, 2004 with adjustments made to reflect an estimated effective value as of the end of FY2005, June 30, 2005, covering the project through the estimated remaining life of 24 years. Mr. Tony Hurst was again contacted as part of this update and he provided information, including monthly reports, on operations of the systems at the Coors Road Facility. The estimate for plugging and abandoning site wells was also confirmed. The May 2004 NMED Corrective Action Fund contractor fee schedule was confirmed to be the current update, thus validating the maximum hourly rates for professional services and sampling equipment costs. The update process and changes made to the estimate included the following:

- The one year of operations of the MW-71R treatment system scheduled to start in the 3<sup>rd</sup> Quarter of FY2005 was dropped.
- The capital expenditures for installation of the Deep Flow Zone well was estimated to be \$120,000 (including a 11% contingency) plus 340 hours of supporting labor for a total installed cost of \$151,000.
- The estimated cost to test the new Deep Flow Zone well was \$750 for power and \$4,300 for sampling and labor.
- The Deep Flow Zone well will most probably be operated as a monitoring well through the life of the project. Therefore, estimates for semi-annual monitoring sampling per the work plan (\$1,030 per year) and operations and maintenance (O&M) equipment (\$200 per year) and labor (\$280 per year) costs are included starting mid way through FY2006. Total of these costs for the life of the project is \$35,485.
- The average cost of electricity incurred during FY2005 was used to estimate future expenditures. The change decreased total electricity costs for the remaining 24 years of the project by approximately \$19,200.
- One additional year of higher modeling costs, an additional \$8,500, was added based on problems encountered with obtaining convergence between the current model and actual conditions.

Based on the information obtained, original assumptions are still valid with respect to the end date (FY2029), expected operations and maintenance of various systems (exceptions noted above), closure (including well plugging and abandonment costs), analysis costs, and other costs associated with evaluation and recommendations.

It has been my pleasure assisting Sparton Corporation with this matter. If you should have questions, please feel free to contact me at 361-850-9604 or 361-947-9003.



Mark W. Cheesman, J.D.  
Principal

cc: Mr. Tony Hurst – Hurst Engineering Services

**24-Year Summary**  
*Attachment 1*

*August 31, 2005*  
*Sparton Technology, Inc.*

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Sparton Technology, Inc.  
 Coors Rd. Facility  
 Albuquerque, New Mexico  
 Fiscal Year 2006  
 24 Year Summary

Changes										2006-2006	2010-2014	2015-2019	2020-2024	2025-2029	Totals
Notes	Material and Service Expenditures (t)				Labor Expenditures (s)				TOTAL TYPICAL ANNUAL COST						
	Unit	No.	Cost/Unit	Contingency	Percent	Hours	Hourly Rate	Contingency	Percent						
Remaining Capital Expenditures															
Offsite Containment I No remaining tasks										\$0	\$0	\$0	\$0	\$0	\$0
Vadose (SVE) No remaining tasks										\$0	\$0	\$0	\$0	\$0	\$0
Source Containment No remaining tasks										\$0	\$0	\$0	\$0	\$0	\$0
3 MW-71R Treatment System Proposal abandoned										\$0	\$0	\$0	\$0	\$0	\$0
5 Deep Flow Zone (DFZ) Monitoring/Extraction Well Design and Installation of MW-72/CW-3	1		108,000	12000	11%	340	82.50	2850	11%	151000	\$161,000				\$161,000
<b>Total Remaining Capital Expenditure</b>										<b>\$161,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$161,000</b>
<b>O&amp;M Expenditures</b>															
Offsite Containment II Permits / Licenses										\$235,200	\$294,000	\$294,000	\$0	\$0	\$823,200
Pipeline Easement	LS	1	500		0%					500	2000	2500	2500	0	0
Arroyos Easement	LS	1	3,000		0%					3000	12000	15000	15000	0	0
1 Operate System - Power (45hp) & Utilities	Month	12	1,875	2700	12%					25200	100800	126000	126000	0	0
Influent/Effluent Sampling	Month	12	315	420	11%					4200	16800	21000	21000	0	0
O&M - Equipment (a)	Month	12	1,140	1320	10%					15000	60000	75000	75000	0	0
O&M - Labor (b)						155	53.25	1033.00	10%	10900	43600	54500	54500	0	0
Ground water monitoring -see below														0	0
O&M - Chromium Treatment, Complete											0	0	0	0	0
Vadose (SVE) Monitoring - Soil gas samples, Complete										\$0	\$0	\$0	\$0	\$0	\$0
Monitoring - Soil gas samples, Complete											0	0	0	0	0
2 Source Containment										\$132,880	\$166,100	\$166,100	166,100	166,100	\$797,280
Operate System - Power	Month	12	655	945	12%					8800	35200	44000	44000	44000	44000
Influent/Effluent Sampling	Month	12	315	420	11%					4200	16800	21000	21000	21000	21000
O&M - Equipment (a)	Month	12	890	1120	10%					11800	47200	59000	59000	59000	59000
O&M - Labor (b)						117	83.25	799.75	11%	8200	32800	41000	41000	41000	41000
Lease of water rights	LS	1	220		0%					220	880	1100	1100	1100	1100
3 MW-71R Treatment System - Abandoned										\$0	\$0	\$0	\$0	\$0	\$0
4 Deep Flow Zone (DFZ) Monitoring/Extraction Well (r) Well Testing										\$10,335	\$7,650	\$7,650	\$7,650	\$7,650	\$40,535
Power	Month	1	655	95	15%	44	83.25	317	11%	750	750	0	0	0	0
Sampling and Labor	Sample	4	270	120	11%					4300	4300	0	0	0	0
5 Monitoring Samples	Sample	2	270	60	11%	8	83.25	51	13%	1030	3505	5150	5150	5150	5150
6 O&M - Equipment	Month	12	15	20	11%					200	700	1000	1000	1000	1000
6 O&M - Labor						4	63.25	27	11%	280	980	1400	1400	1400	1400
<b>Evaluation, Analysis &amp; Recommendation</b>															
7 Quality Check (c)										\$240,600	\$279,500	\$279,500	\$279,500	\$279,500	\$1,358,600
Aquifer Model (Estimate) (d)						5	65.00	70.00	21%	400	1600	2000	2000	2000	2000
Annual Reports Incl. Perf. & Alt. Eval. (e)						100	82.50	1650.00	20%	9900	22500	7000	7000	7000	7000
Ground Water Monitoring and Sampling						50	95.00	700.00	21%	4000	18000	20000	20000	20000	20000
Data Collection and Sampling (f)						255	63.25	1671.25	10%	17800	71200	89000	89000	89000	89000
Sampling Equipment (g)	Sample	93	19.50	186.5	10%					2000	8000	10000	10000	10000	10000
Analysis (Lab Costs) (h)	Sample	93	270	2790	11%					27900	111600	139500	139500	139500	139500
QA/QC and Data Analysis (i)						26	82.50	255.00	12%	2400	9500	12000	12000	12000	12000
Analysis of Additional Modeling Information (j)						180	82.50	1550.00	10%	16400	0	0	0	0	0
Closure										\$0	\$0	\$0	\$0	\$103,300	\$103,300
Plug and Abandon 63 wells	Well	63	1,300	12300	15%					94200	0	0	0	0	94200
Remove Piping (LS)			1,650	550	33%					2,200	0	0	0	0	2200
Closure Certification Report (k)						60	104.50	630.00	10%	6900	0	0	0	0	6900
Soil Sampling at Infiltration Galleries (l)															
<b>Project Management</b>															
Management (m)										\$98,200	\$122,750	\$122,750	\$122,750	\$122,750	\$589,200
Data Tabulation (n)						25	82.50	237.50	12%	2300	9200	11500	11500	11500	11500
Monthly Reporting (o)						25	82.50	237.50	12%	2300	9200	11500	11500	11500	11500
Annual Reporting (p)						50	82.50	425.00	10%	4550	18200	22750	22750	22750	22750
<b>Total O&amp;M Expenditure</b>										<b>\$717,215</b>	<b>\$869,900</b>	<b>\$869,900</b>	<b>\$876,900</b>	<b>\$879,200</b>	<b>\$3,712,115</b>
<b>Summary</b>															
<b>Total Remaining Capital Expenditure</b>										<b>\$161,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$161,000</b>
<b>Total O&amp;M Expenditure</b>										<b>\$717,215</b>	<b>\$869,900</b>	<b>\$869,900</b>	<b>\$876,900</b>	<b>\$879,200</b>	<b>\$3,712,115</b>
<b>TOTAL</b>										<b>\$868,215</b>	<b>\$869,900</b>	<b>\$869,900</b>	<b>\$876,900</b>	<b>\$879,200</b>	<b>\$3,863,115 (q)</b>

**Changes made:**

1. Offsite Containment O&M Expenditures to operate system - Power (45hp) & Utilities has decreased from \$1,888/Unit to \$1,875/Unit and contingency decreased from \$2,744 to \$2,700.  
This was based on using the average monthly actual electricity cost in FY2005 adjusted for operating 100% of the time.
2. O&M Expenditures to Operate System - Power (12hp) has decreased from \$707/Unit to \$655/Unit and contingency from \$1,016 to \$945 based on average FY2005 monthly actual electricity costs.
3. Proposed MW-71R Treatment System abandoned per agreement with NMED and EPA and replaced with Deep Flow Zone (DFZ) well MW-72/CW-3.
4. Deep Flow Zone well installation and testing per work plan. Installation cost estimated at \$120,000 with 340 hours of supporting labor. Allow for 1 month of extraction testing.  
Sampling per DFZ well work plan.
5. New deep flow zone well semi-annual sampling per overall project work plan starting mid way through FY2006. Assume monitoring for duration of operation.
6. New deep flow zone well operations and maintenance starting mid way through FY2006. Estimate consistent with estimates for other monitoring wells.
7. Included one additional year of higher modeling costs based on problems encountered with obtaining convergence between the model and actual conditions.

**Notes**

- (a) The equipment cost of \$15,000 per year each for offsite systems and \$11,800 per year for the onsite system includes \$200,000 for replacing a total of 14 wells.
- (b) Labor cost for operation and maintenance of the containment systems (off-site and source) assumes \$63.25/hour plus a minimum contingency of 10%. The labor requirement assumes performing routine inspection on each of the two systems an average of 3 hours per week for the offsite and 2.25 hours per week for the onsite, not including 15 minute inspections each week included in sampling labor. This is consistent with experience and the experience of Sparton. The inspection and monitoring program will entail checking and recording information related to the status of the system. The parameters that will be monitored are listed in Appendix K of the System O&M Manual.
- (c) Quality Check entails additional evaluation of previously collected analytical data, resulting in 5 hours of work annually for a staff scientist (\$66.00 / hour) plus a minimum of 10% contingency.
- (d) Aquifer Modeling will require 100 hours per year through 2007 and 14 hours per year for the remaining years. Basis for the reduction of effort relates to the improved calibration of the model over time, assuming only minor adjustments will be required to confirm model outputs are consistent with observations. Modeling will be executed by a Project Scientist (\$82.50 / hour) plus a minimum of 10% contingency.
- (e) The preparation of annual reports includes performance and alternative system evaluation. Due to the data generated throughout the process, with costs contained in other sections of the budget (i.e. modeling, data analysis, etc.), 50 hours annually are allocated to prepare the Annual Report for a Staff Engineer (\$66.00 / hour). A minimum of 10% contingency and additional review by a Senior Engineer are included in a total contingency not to exceed \$700.00.
- (f) Data collection and sampling for the 63 wells located both on- and off-site require 255 hours annually for a field technician (\$63.25), plus a minimum of 10% contingency.
- (g) Assumes 19 days for rental of pH/specific conductance/temperature meter (\$50/day), water level indicator (\$25/day), disposable bailers (\$3/day), miscellaneous equipment (gloves, tape, replacement drums, etc., \$5/well), which averages about \$19.50/sample.
- (h) Number of samples based on 63 wells plus approximately 30 quality control samples.
- (i) Quality Assurance and Control of data analysis results consists of 1 hour every other week for a Project Engineer (\$82.50 / hour) plus a minimum of 10% contingency.
- (j) Analysis of Modeling Information will entail combining previous annual reports, modeling results and other previously collected data with the 5 year annual report; interactions with NMED & EPA; the data analysis and performance evaluation for this report is included under aquifer modeling, annual reports and project management.
- (k) Closure Certification Report entails compiling historical data and a written analysis of 30 years of progress, as a result of the remedial actions, by a Senior Engineer (\$104.50/ hour) plus a minimum of 10% contingency.
- (l) Task to be completed only if significant exceedances of discharge limits occur, thus no expenditure is anticipated. If this expenditure is required, the contingency for closure (\$12,850) is ample to cover the anticipated sampling cost (\$1000).
- (m) "Management" consists of meetings with agency representatives, consultants and individuals from Sparton Technologies, in addition to handling routine administrative tasks. The total estimate for these tasks is 170 hours per year.
- (n) "Data Tabulation" is assumed to be on a quarterly basis for about 6 hours per quarter.
- (o) "Monthly Reporting" is assumed to be about 2 hours per month.
- (p) "Annual Reporting" is assumed to be 50 hours annually.
- (q) Total includes contingency.
- (r) New deep flow zone well to be installed and tested in FY2006. Semi-annual sampling starting second half of FY2006 per overall project work plan. Most probable operation as a monitoring well for duration of project. Labor provided by a technician. Power allows for 1 month of extraction testing. O&M estimated costs are consistent with costs estimated for other monitoring wells.
- (s) Labor rates per May 2004 (most current version) NMED Corrective Action Fund contractor fee schedules for the maximum hourly rates for professional services.
- (t) Material rates per May 2004 (most current version) NMED Corrective Action Fund contractor fee schedules for field equipment.