



U.S. Department of Justice
Environment and Natural Resources Division
Environmental Enforcement Section

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5 August 1998

By telefax and first class U.S. mail

James B. Harris
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Re: Albuquerque v. Sparton Technology, Inc., No. CV-97-0206 (D.N.M.)

Dear Jim:

Attached please find a proposed schedule for settlement activities during the month of August 1998. I look forward to hearing from you regarding this matter.

Sincerely,

Michael T. Donnellan

c: counsel of record

Agreed Schedule for Settlement Activities during August 1998

Task I: Groundwater Monitoring Program Plan

- 07/27/98** **Second Quarter 1998 sampling event**
- 08/14/98** **EPA revised Groundwater Monitoring Program Plan ("GMPP")**
- 08/19/98** **Sparton written response to 08/12/98 revised GMPP**
- 08/24/98** **EPA provides Final GMPP to Sparton**
- 08/26/98** **Settlement Conference in Albuquerque, NM--Sparton decision regarding whether it will commit to implementing the Final GMPP during 3rd Quarter 1998 and subsequent sampling events.**
- 10/ /98** **Third Quarter 1998 sampling event**

Task IV: Soil Vapor Extraction Workplan

- 06/09/98 Sparton Workplan dated May 18, 1998 (received by Plaintiffs on June 9, 1998)
- 07/14/98 EPA/Sparton meeting in Dallas to discuss SVE Workplan
- 07/20/98 EPA written comments summarizing EPA position at 07/14/98 meeting
- 07/30/98 Discussion prior to settlement conference
- 07/30/98 Settlement conference discussing Co-Plaintiffs' Summary List of Major Outstanding Issues
- 08/05/98 EPA written follow-up to discussion prior to 07/30/98 settlement conference
- 08/10/98 Sparton written response to EPA comments (07/14/98 & 08/05/98)
- 08/13/98 Co-Plaintiffs' written list of outstanding issues (Agenda for 08/14/98 conference call)
- 08/14/98 Co-Plaintiffs/Sparton conference call to discuss remaining issues
- 08/20/98 Co-Plaintiffs provide written outline of elements to be included in a revised SVE workplan
- 08/24/98 Sparton written response to Co-Plaintiffs' 08/20/98 written outline of elements to be included in a revised SVE workplan
- 08/26/98 Settlement Conference in Albuquerque, NM
- 09/04/98 Revised SVE Workplan

Task V: Groundwater remedy
(1) On-Site Containment

04/23/98 Sparton 20 gallon per minute On-Site Containment proposal

07/23/98 Sparton 50 gmp proposal

07/28/98 Co-Plaintiffs/Sparton conference call

07/30/98 Settlement conference discussing Co-Plaintiffs' Summary List of Major Outstanding Issues

08/07/98 Sparton response to Co-Plaintiffs' 07/30/98 Summary List of Major Outstanding Issues

08/10/98 Co-Plaintiffs' written comments on Sparton's 07/23/98 Workplan

08/14/98 Co-Plaintiffs/Sparton conference call to discuss remaining issues

08/20/98 Co-Plaintiffs provide written outline of elements to be included in a revised workplan

08/24/98 Sparton written response to Co-Plaintiffs' 08/20/98 written outline of elements to be included in a revised workplan

08/26/98 Settlement Conference in Albuquerque, NM

09/04/98 Revised On-Site Containment Workplan

Task V: Groundwater remedy (cont.)**(2) Off-Site Containment Evaluation Plan**

- 06/22/98 Sparton's Workplan for the Evaluation of Containment System Performance and for the Assessment of Aquifer Restoration
- 06/30/98 EPA comments on Sparton's 06/22/98 Workplan
- 07/14/98 Sparton's Revised Workplan for Evaluation of Off-Site Containment System Performance (including 07/15/98 memo from S. Papadopoulos)
- 07/28/98 Co-Plaintiffs/Sparton conference call
- 07/30/98 Settlement conference discussing Co-Plaintiffs' Summary List of Major Outstanding Issues
- 08/07/98 Sparton response to Co-Plaintiffs' 07/30/98 Summary List of Major Outstanding Issues
- 08/13/98 Co-Plaintiffs' written list of outstanding issues (Agenda for 08/14/98 conference call)
- 08/14/98 Co-Plaintiffs/Sparton conference call to discuss remaining issues
- 08/21/98 Revised Evaluation Off-site Containment System Performance Workplan
- 08/26/98 Settlement Conference in Albuquerque, NM

Task V: Groundwater remedy (cont.)

- (3) **Restoration Workplan**
- 06/22/98 **Sparton's Workplan for the Evaluation of Containment System Performance and for the Assessment of Aquifer Restoration**
- 07/08/98 **EPA comments on 06/22/98 Workplan**
- 07/20/98 **Sparton's revised Workplan for Assessment of Offsite Aquifer Restoration**
- 07/28/98 **Co-Plaintiffs/Sparton conference call**
- 07/30/98 **Settlement conference discussing Co-Plaintiffs' Summary List of Major Outstanding Issues**
- 08/07/98 **Sparton response to Co-Plaintiffs' 07/30/98 Summary List of Major Outstanding Issues**
- 08/13/98 **Co-Plaintiffs' written list of outstanding issues (Agenda for 08/14/98 conference call)**
- 08/14/98 **Co-Plaintiffs/Sparton conference call to discuss remaining issues**
- 08/20/98 **Co-Plaintiffs provide written outline of elements to be included in a revised workplan**
- 08/24/98 **Sparton written response to Co-Plaintiffs' 08/20/98 written outline of elements to be included in a revised Restoration workplan**
- 08/26/98 **Settlement Conference in Albuquerque, NM**
- 09/04/98 **Revised Restoration Workplan**

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TO: Michael Hebert **DATE:** June 7, 1996
FROM: Jim Peeples **FILE:** sparton\SVEmemo.doc
CC: Steve Amter (DSI)
Mark Schmidt (City of Alb.)
Jim McCord (Dan B. Stevens)
Dennis McQuillan (NMED)
Baird Swanson (NMED)
SUBJECT: Start of SVE Design Issues Document for Sparton

As we discussed today in our telephone conversation, I have prepared the following SVE design related comments for the Sparton project. These comments reiterate some of the design issues that were discussed in the July 30, 1998 meeting with Sparton, and some of the comments go beyond the issues discussed in the meeting. Please excuse the organization of the comments. They are definitely a first draft.

SVE DESIGN ISSUES FROM JULY 30, 1998 DISCUSSIONS

Based on or discussions held on July 30, 1998 regarding the SVE workplan, the following design issues were raised and are reiterated and expanded here for your convenience in understanding our position.

1. The current SVE system is working well for remediating a limited area of the site (approximately a 50 foot radius). The thermal and catalytic destruction of contaminants appear to have worked well for the initial phase of the project and have made unnecessary the use of additional treatment equipment. Although we do not know what the actual operating costs of the internal combustion SVE system have been, or what the actual projected future costs are, it appears that the system has proved effective for the first phase of this vapor extraction project.
2. As anticipated, the concentration of contaminants of interest in the extracted vapor has declined dramatically since the start-up of the SVE system. This is typical of vapor extraction systems. As a

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result of this decline in vapor concentrations, the SVE system has entered a new phase of operation. The concentration of VOCs in the extracted vapor is now low enough that the vapor could be discharged to the atmosphere without treatment. In addition, pulling more soil gas from the current extraction well (VR-1) would result in a larger mass removal but, very likely, would result in lower VOC concentrations in the off-gas. This new phase of operation offers the potential to run an SVE system at a much higher extraction rate while requiring no off-gas treatment. There are several benefits to this. If the system were operated at a significantly higher rate, (a) the single extraction well could treat a much larger area, (b) the total mass removal for the system would be greatly increased, (c) the length of time that the system will have to be operated can be greatly reduced, (d) a robust SVE system may allow Sparton to forgo some difficult aspects of site characterization.

3. As we discussed in the meeting on July 30, we would like to see characterization of the lower portion of the vadose zone to determine if there are significant "hot spot" areas which may not be treated by working on individual "hot spots" identified in the upper portion of the vadose zone. A low flow system moved from place to place to address upper vadose zone "hot spots" has limited application for addressing potential lower vadose zone "hot spots" of unknown location. However, a higher flow SVE system capable of treating large areas may overcome these limitations. While we still would not know where "hot spots" exist in the lower vadose zone, a robust system eliminates some of this concern. It tends to allow treatment of such areas as long as they are within a reasonable distance of the extraction point(s).
4. The vadose zone soils at the Sparton Coors Road Facility are well suited to higher flow vacuum extraction, and it seems likely that a much more robust SVE system could be implemented with VR-1 as the primary point of extraction. Other vapor extraction points, such as the other VR wells on site and other wells placed at locations where "hot spots" have been identified, could be used as secondary extraction points to treat specific areas while the main vacuum extraction continues at VR-1. The advantages are as described above. The soil vapor extraction project can be completed more rapidly and the system will be robust enough to make up for characterization deficiencies.
5. Given the likelihood that no off-gas treatment will be needed, the suggested rate for extraction from VR-1 is at or near its maximum extraction capability. For a 4-inch vapor extraction well, the practical flow limit is approximately 400 scfm. Adding capability for extraction from "hot spot" areas at up to perhaps 100 scfm, a system capable of 500 scfm should be sufficiently robust to alleviate many concerns regarding characterization. An SVE system that relies so heavily on

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extraction from a single well, requiring significant travel times from outlying areas is not ideal, but it is a workable system for this site. It should reduce the total number of extraction points that will be needed to complete the project in a reasonable period of time. An estimate of the radius of influence of VR-1 operated at 400 scfm, based on data obtained to date, is 300 to 350 feet. This radius has the capability of reaching areas under the building and many of the known and suspected "hot spot" areas.

6. The cost of a simple vapor extraction system, that does not require off-gas treatment, is low, and great savings can be anticipated in operating costs. The current vapor extraction system, while it was well suited for extraction of high concentration vapors, is not well suited for the current task. Without the need for off-gas treatment, the existing internal combustion SVE system has a high operational cost relative to its performance capabilities. It could be utilized to supply the additional 100 scfm needed for "hot spot" treatment, but it would do so with an operational cost far in excess of an entire 500 scfm traditional SVE system. The better approach would be to acquire an SVE system that has the capability of 500 scfm at the needed vacuum and salvage the existing system. The existing system has been well maintained and is in good operating condition, the salvage value is probably considerably greater than the cost for the 500 scfm system. Alternatively, the cost for the higher capacity system could be recouped by the lower monthly operating cost of the traditional SVE system. The length of operation required to achieve the stated goals would also be greatly reduced and correspondingly the currently projected project costs would be dramatically reduced. Given that Sparton already has a building to house the SVE system and adequate piping to VR-1, the cost to upgrade to a 500 scfm electrically driven SVE system should be less than \$10,000.
7. We understand that Sparton's plan for operation of the existing SVE system was to move it between locations and treat individual "hot spot" areas one at a time. For treating areas of known impact, there is nothing wrong with this approach. The problems occur when dealing with uncertainties that presently exist in the vadose zone characterization. If we do not completely know where vadose zone contamination exists, then an approach that treats only small areas provides little confidence that all "hot spots" will be treated adequately. A full characterization of the upper and lower portions of the vadose zone would alleviate this problem, but it would leave an additional problem. If many "hot spots" are identified, Sparton would have to place vacuum extraction wells at each location. Moving the extraction between many locations would be problematic and could take a very long period of time to complete. Because of the small radius of influence of influence provided by

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the existing SVE system, areas identified under the building would have to be treated by extraction wells located inside the building. This could also be problematic. Ultimately, the problem to the approach will be cost. There will be additional costs in utilizing wells with small radii of influence and there will be operation costs associated with operating the system for a long period of time. The time required to achieve the stated goals with this type of system would be very long in comparison to the time required with the more robust system proposed above. Additional time translates to additional months of operational costs. These costs will far outweigh any costs made now to provide a more robust system.

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FROM: Michael T. Donnellan (202) 514-4226
DATE: August 5, 1998
NUMBER OF PAGES (including cover sheet): 7
SUBJECT: Albuquerque v. Sparton Technology, Inc., No CIV 97 0206 (D.N.M.)

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MESSAGE: 08/05/97 letter from Donnellan to Harris transmitting proposed schedule for August 1998