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HURST ENGINEERING SERVICES

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August 31, 2005

Mr. Charles A. Barnes, Project Manager  
Compliance Assurance & Enforcement Division  
U.S. Environmental Protection Agency  
Region 6  
1445 Ross Avenue, Suite 1200  
Dallas TX 75202-2733



✓ Mr. John Kieling,  
Hazardous & Radioactive Materials Bureau  
New Mexico Environment Department  
P. O. Box 26110  
Santa Fe, NM 87502-6110

Albuquerque City Attorney  
Legal Department (Attention: Kevin Curran)  
P.O. box 2248  
Albuquerque, New Mexico 87103

Dear Messrs. Barnes, Kieling and Curran:

Re: Consent Decree; Albuquerque v. Sparton Technology, Inc.  
No. CV 97 0206 (D.N.M.); D.J. No. 90-7-1-875  
Update of corrective action activities.

Pursuant to the requirements of Attachment B of the Consent Decree, attached is the draft 2002 through 2004 combined Fact Sheet that is being submitted for review and comments prior to public issuance.

If you have any questions, please feel free to give me a call at 719 649 1944.  
Respectfully,

Hurst Engineering Services

A handwritten signature in black ink that reads "Tony Hurst".

Tony Hurst  
Project Coordinator for Sparton Technology Inc.

AJH:ajh

Attachment: Draft Fact Sheet "FACT SHEET ON REMEDIAL ACTIVITIES AT SPARTON TECHNOLOGY, INC.'S FORMER COORS ROAD FACILITY ALBUQUERQUE, NEW MEXICO 8/30/2005 An Update on Remedial Operations 2002 through 2004

**FACT SHEET  
ON REMEDIAL ACTIVITIES AT  
SPARTON TECHNOLOGY, INC.'S FORMER COORS ROAD FACILITY  
ALBUQUERQUE, NEW MEXICO**

**8/30/2005**

**An Update on Remedial Operations 2002 through 2004**

SpartonTechnology, Inc., a New Mexico corporation (Sparton) wishes to provide you with information concerning the progress of the current and planned environmental remediation activities at their former plant at 9621 Coors Road. Sparton operated a defense electronics component manufacturing plant at this location from 1961 through 1994. In the late 1980's it was determined that several industrial solvents and plating wastes had impacted soil and groundwater. Trichloroethylene (TCE), 1,1,1-trichloroethane (TCA) and its degradation product 1,1-dichlorethylene (DCE), and chromium were the primary constituents impacting the site soils, and groundwater. A series of investigations over the ensuing years detailed the nature and extent of the contamination. These investigations indicated that contaminated groundwater had migrated off site up to one-half mile to the northwest of the plant. There are no water supply wells within the area impacted by the contaminated groundwater.

Sparton began environmental remediation activities at the plant in 1983. In late 1988 Sparton installed a groundwater recovery and treatment system on site. During the next 10 years, extensive investigations, including the installation of numerous monitoring wells, were undertaken and negotiations were conducted among various interested parties to establish appropriate remedial measures. In 1998, Sparton reached an agreement with the United States Environmental Protection Agency (USEPA), the City of Albuquerque, the Bernalillo County Commissioners, the New Mexico Environment Department (NMED), the New Mexico Attorney General's Office, and the New Mexico Office of the Natural Resources Trustee to implement additional remedial measures. This agreement was documented in a Consent Decree [CIV 97 0206 LH/JHG (D.N.M.)] dated March 3, 2000, which was filed with the U.S. District Court for the District of New Mexico.

Under the terms of the Consent Decree, Sparton is required<sup>1</sup> to "prepare a fact sheet which summarizes corrective measure activities and schedules and indicates how information can be obtained through Sparton." Sparton is also required to distribute this fact sheet "on an annual frequency, after regulatory approval," "to local residents, businesses, and property owners situated over the TCE plume . . . and that are adjacent to areas where corrective measures are planned or being implemented." During 2003 and 2004, Sparton prepared annual fact sheets summarizing remedial activities for 2002 and for 2003, but these fact sheets were not distributed because regulatory approval had not been issued. Consequently, this fact sheet summarizes remedial activities and their results for the 3-year period of January 1, 2002 through December 31, 2004.

The additional remedial measures agreed upon in the Consent Decree and implemented by Sparton consist of:

- (a) The installation and operation of an off-site containment system;

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<sup>1</sup> Attachment B to the Consent Decree in Albuquerque v. Sparton Technology, Inc., No. CV 07 0206 (D.N.M.), *Public Involvement Plan for Corrective Measure Activities*.

- (b) The operation of an on-site, 400-cubic foot per minute (cfm) Soil Vapor Extraction (SVE) system<sup>2</sup> for an aggregate period of one year.
- (c) The installation and operation of a source containment system.

The goals of these remedial measures are:

- (a) To capture and remove the contaminated groundwater that had migrated off-site, and stop its migration farther off-site;
- (b) To remove most of the contaminants found in on-site soils and thus eliminate or reduce their being a source of groundwater contamination;
- (c) To capture and remove the contaminated groundwater leaving the site and thus stop its continuing migration to the off-site area;
- (d) To treat the removed contaminated groundwater and return it to the aquifer; and
- (e) In the long-term, to restore the aquifer and make it available to beneficial use.

The installation of the off-site containment system, consisting of an extraction well, a water treatment system, an infiltration gallery in the Calabacillas Arroyo for returning the treated water to the aquifer, and associated conveyance and monitoring components, began in late 1998 and was completed in early May 1999. The extraction well began operating on December 31, 1998. Except for a brief interruption in late April and early May 1999 to connect it to the treatment system and infiltration gallery, the well has been in operation since that date.

The 400-cfm SVE system began operation on April 10, 2000, and completed an aggregate period of operation of one year on June 15, 2001. Testing conducted after the shutdown of the system indicated that the system had met the performance standards specified in the Consent Decree.

Construction of the source (on-site) containment system began in February 2001 and was completed in December 2001. This system also consisted of an extraction well and a water treatment system, a series of on-site rapid infiltration ponds for returning the treated water to the aquifer, and associated conveyance and monitoring components. The system began operating on January 3, 2002 and has been in operation since that date.

#### **2002 - 2004 Activities:**

During the 3-year period between January 1, 2002 and December 31, 2004, considerable progress was made towards achieving the goal of the remedial measures:

- The extraction well of the off-site containment system was operated 98.2 percent of the time available during these 3 years at a rate sufficient to contain the plume of contaminated groundwater. The pumped water was treated and discharged to the infiltration gallery.
- The extraction well of the source containment system was operated 97.5 percent of the time available during these 3 years. The pumped water was treated and discharged to the rapid infiltration ponds.

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<sup>2</sup> The Soil Vapor Extraction system used a vacuum pump to remove vapors of contaminants from the soil pores above the water table.

- Groundwater monitoring was conducted as specified in Attachment A to the Consent Decree. Water levels in all accessible wells and/or piezometers, and the Corrales Main Canal were measured quarterly. Samples were collected for water-quality analyses from monitoring wells and from the influent and effluent of the air stripper at the frequency specified in the Consent Order and applicable permits. Water samples were analyzed for TCE, DCE, TCA and total chromium.
- A groundwater flow and transport model that was developed in 1999 to simulate the hydrogeologic system underlying the site was recalibrated each year, against data collected during that year, and used to simulate TCE concentrations in the aquifer from start-up of the off-site containment well in December 1998 through November 2004, and to predict water-quality conditions during 2005.

The off-site extraction well operated at an average rate of about 220 gallons per minute (gpm) during this period, capturing and removing contaminated groundwater and preventing the expansion of the contaminant plume throughout the 3-year period. A total of about 348 million gallons, averaging about 116 million gallons per year, were pumped from the well during this period. The total volume of water pumped from this well between the start of the well operation on December 1998 and the end of 2004 is about 692 million gallons.

The source extraction well operated at an average rate of about 51 gpm during this period, capturing and removing contaminated groundwater leaving the site, and preventing its migration to off-site areas throughout this period. A total of about 79 million gallons, averaging about 26 million gallons per year, were pumped from this well between the start of its operation on January 3, 2002 and the end of 2004.

Thus, the total volume of water pumped during this 3-year period by both the off-site and source extraction wells was about 427 million gallons and averaged about 142 million gallons per year. This volume of pumped water represents about 38 percent of the initial volume of contaminated groundwater that was estimated to be present in the aquifer (pore volume). The total volume of water pumped by both wells between the start of the current remedial operations in December 1998 and the end of 2004 was about 770 million gallons, and represents about 68 percent of the initial pore volume.

Approximately 1780 kg (3,920 lbs) of contaminants consisting of about 1680 kg (3,700 lbs) of TCE, 95 kg (210 lbs) of DCE, and 6.2 kg (14 lbs.) of TCA were removed from the aquifer by the off-site containment well during this 3-year period. The mass removed by the source containment well during the same period was approximately 160 kg (350 lbs) of contaminants consisting of about 135 kg (300 lbs) of TCE, 20 kg (44 lbs) of DCE, and 3.1 kg (6.8 lbs.) of TCA were. Thus, the total mass of contaminants removed by both wells during this 3-year period was about 1,940 kg (4,270 lbs) consisting of about 1,820 kg (4,000 lbs) of TCE, 115 kg (250 lbs) of DCE, and 9.2 kg (20 lbs.) of TCA.

The total mass of contaminants removed by both wells between the start of the off-site containment well operation on December 1998 and the end of 2004 is about 3,350 kg (7,380 lbs) consisting of about 3,160 kg (6,960 lbs) of TCE, 180 kg (400 lbs) of DCE, and 9.2 kg (20 lbs) of TCA. This represents about 48 percent of the contaminant mass (48 percent of the TCE, 47 percent of the DCE, and 46 percent of the TCA mass) estimated in 2004 as being dissolved in groundwater prior to the start of pumping from the off-site containment well.

While the mass of dissolved contaminant has been substantially reduced, as exemplified by the reduction of contaminant concentrations observed in most monitoring wells, the areal extent of the TCE plume, and hence the volume of contaminated groundwater, had not changed significantly by the end of 2004.

Monitoring well MW-71, which was monitoring the water quality in the deep flow zone (the part of the aquifer that underlies the zone addressed by the current remedial measures), was plugged and abandoned in October 2001 due to the presence of contaminants that were attributed to leakage from shallower parts of the aquifer. This well was replaced in early 2002 by well MW-71R located about 30 feet south of the original well. Quarterly samples collected from this well during 2002 through 2004 indicated the continuing presence of contaminants in this well. To address this problem, Sparton submitted a Work Plan in January 2004 proposing to pump this well and re-inject the pumped water after treatment. Discussions with USEPA and NMED during 2004, however led to an alternate scheme, that of installing a new deep flow zone well near the off-site containment well, and using this well as a monitoring or as an extraction well, depending on the water-quality condition found in the new well. A Work Plan for the implementation of this scheme was submitted to the agencies on December 2004 and approved in January 2005.

**Future Plans:** Data collection will continue in accordance with the Groundwater Monitoring Program Plan and site permits, and as necessary for the evaluation of the performance of the remedial systems. As additional data are being collected, calibration and improvement of the flow and transport model developed to assess aquifer remediation will continue.

The off-site containment system will continue to operate at the current average operating rate of 215 to 225 gpm, and the source containment system at its current average operating rate of 45 to 55 gpm.

In accordance with the approved Work Plan, a deep flow zone monitoring well will be installed on the lot occupied by the off-site containment system water treatment building, located at 9917 Benton Rd., NW. If the well is significantly contaminated or if it becomes significantly contaminated during monitoring, it will be converted to an extraction well. The pumped water will be treated in the existing water treatment building and discharged to the existing infiltration gallery.

The groundwater flow and contaminant transport model that was developed to simulate hydrogeologic conditions under the site will continue to be recalibrated against data collected during the coming years until it is deemed suitable for making reliable predictions of future conditions.

Sparton, through the remedial systems that has implemented at the site, has: (a) reduced the mass of contaminants present in the soils beneath its former plant and thus eliminated any significant sources of groundwater contamination, (b) stopped the off-site migration of contaminated groundwater to the off-site areas, (c) prevented further expansion of the off-site contaminant plume, and (d) removed a considerable amount of contaminant mass from the plume. Continuing operation of these remedial systems will eventually lead to the restoration of the affected aquifer to conditions suitable for beneficial use.

Copies of the Consent Decree and its associated remediation work plans as well as historical investigation/remedial work plans, Annual Reports on the remedial program, and other reports submitted to the City, County, NMED, and USEPA are available for review at the:

Taylor Ranch Public Library, (Telephone # 505 897-8816) located at:  
5700 Bogart NW, Albuquerque, NM 87120.

City of Albuquerque Department of Public Works, (Telephone # 505 768-2561)  
located at:  
One Civic Plaza NW, Albuquerque, NM 87103

New Mexico Environment Department  
(Telephone # 505 428-2500) located at:  
2905 Rodeo Park Drive East, Building 1, Santa Fe, NM 87505-6303

Alternatively, you may contact Mr. Tony Hurst, Sparton's representative, at (719) 599-7960 or Ms. Susan Widener of Sparton at 517 787 8600.