



Kieling, John, NMENV

From: Stavros Papadopoulos [stavros@sspa.com]
Sent: Tuesday, November 16, 2010 11:22 AM
To: 'Gary Richardson'
Cc: Hendrickson.Charles@epamail.epa.gov; Kieling, John, NMENV; 'Joseph Lerczak'; 'James Harris'; 'ANTHONY HURST'
Subject: Combined 2007-2009 Fact Sheet
Attachments: Combined 2007-2009 Fact Sheet.pdf

Dear Gary:

Attached please find the final version of the subject Fact Sheet. This final version incorporates the USEPA and NMED edits that accompanied the agency approval of the Fact Sheet and includes a new site location map suggested by the agencies. As such, the Fact Sheet is ready for distribution to those on your distribution list.

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11/17/2010

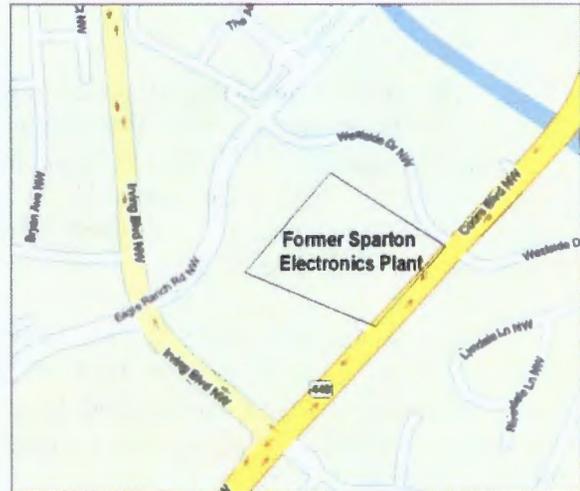
2007 through 2009

FACT SHEET

An Update on Sparton Technology's Coors Road Facility, Albuquerque, New Mexico

November, 2010

Sparton Technology, Inc., a New Mexico corporation (Sparton Technology) 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 Technology operated a defense electronics component manufacturing plant at this location, shown on the map, from 1961 through 1994. In the late 1980's it was determined that several industrial solvents had impacted soil and groundwater. A series of investigations over the following years detailed the nature and extent of the solvent contamination. Trichloroethylene (TCE), 1,1,1-trichloroethane (TCA) and lesser amounts of methylene chloride (MC) and acetone, and a degradation product of TCA, 1,1-dichloroethylene (DCE), were the primary constituents impacting soil, soil gas, and groundwater. (By the late 1990s the primary solvent constituents found in soils, soil gas, and groundwater were TCE, DCE, and TCA.) Groundwater sampling further indicated that these constituents had migrated off site up to one-half mile to the northwest of the plant. Various studies have indicated that the contaminant plume has not impacted any existing supply wells.



Sparton Technology began environmental remediation (that is, cleanup) activities at the plant in 1983. In late 1988 Sparton installed a groundwater recovery and treatment system on site. The next 10 years saw extensive investigation, installation of monitoring wells, and negotiations among various interested parties to establish appropriate remediation measures. In 1998, additional remediation activities were implemented. All cleanup activities are now being implemented according to the requirements of the agreement reached between Sparton Technology, 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, as documented in a Consent Decree [CIV 97 0206 LH/JHG (D.N.M.)] dated March 3, 2000, which is filed with the U.S. District Court for the District of New Mexico. These remedial measures consisted of:

- (a) The installation and operation of an off-site groundwater containment system;
- (b) The operation of an on-site, 400-cfm (cubic feet per minute) Soil Vapor Extraction (SVE) system¹ for an aggregate period of one year;

¹ The Soil Vapor Extraction system used a vacuum pump to remove vapors of contaminant from the soil pores above the water table.

- (c) The installation and operation of a source-area groundwater containment system.

The goals of these remedial measures are:

- (a) To control hydraulically the migration of the off-site contaminant plume;
- (b) To reduce contaminant concentrations in vadose-zone² soils in the on-site area and so reduce the likelihood that these soils would contribute to any groundwater contamination;
- (c) To control hydraulically any potential source areas that may be continuing to contribute to groundwater contamination at the on-site area;
- (d) In the long-term, to clean up to the performance standards described in the Consent Decree.

The installation of the off-site containment system, consisting of a pumping containment well, a treatment system, an infiltration gallery, and associated conveyance and monitoring components, began in late 1998 and was completed in early May 1999. The off-site containment 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 on-site 400-cfm SVE system began operation on April 10, 2000, and completed a total of one full year of operation on June 15, 2001. Follow-up performance monitoring of the system conducted in September and October, 2001 indicated that the system had met the performance criteria specified in the Consent Decree; based on these results the SVE system was dismantled in May 2002.

Construction of the source (on-site) containment system, consisting of a pumping containment well, an on-site treatment system, six on-site rapid infiltration ponds, and associated conveyance and monitoring components, began in February 2001 and was completed in December 2001. The source containment well began operating on January 3, 2002 and has been in operation since that date. Based on the performance of the infiltration ponds during their early years of operation, four ponds were deemed sufficient for returning the treated water to the aquifer and, therefore, two of the six ponds were abandoned and backfilled during the second half of 2005 with the approval of the regulatory agencies.

Remedial activities during 1999, 2000, and 2001 were reported in Fact Sheets that were prepared during each year and distributed after approval by the regulatory agencies. Activities during 2002 through 2006 were reported in a combined Fact Sheet for these years that was also distributed after approval by the agencies. The purpose of this Fact Sheet is to provide an update and summary of activities that occurred during 2007 through 2009.

2007 - 2009 Activities: During this three-year period, considerable progress was made towards achieving the goal of the remedial measures:

² The vadose zone is that portion of the soil below the ground surface and above the water table.

- The off-site containment well was operated 98.6 percent of the time available during this period at a rate sufficient to contain the plume. The pumped water was treated and discharged to the infiltration gallery located in the subsurface beneath the Calabacillas arroyo, where it returned to groundwater.
- The source containment well was also operated 98.6 percent of the time available during this three-year period. The pumped water was treated and discharged to the rapid infiltration ponds north of the former Sparton Facility building, where it returned to groundwater.
- Groundwater monitoring was done as specified in Attachment A to the Consent Decree. Water levels in all accessible wells, the infiltration gallery, 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 Decree and applicable permits. Water samples were analyzed for TCE, DCE, TCA and total chromium. The flow rates of both containment wells were monitored by totalizer meters that were read at intervals that ranged from one to 10 days.
- The computer-based groundwater flow and transport model that was developed in 2000 to simulate the hydrogeologic system underlying the site was recalibrated and adjusted each year, and used to simulate TCE concentrations in the aquifer from start-up of the off-site containment well in December 1998 through November 2009. After the revision and recalibration conducted in early 2009, the model was used for making predictions of the future performance of the existing and of alternative groundwater extraction systems.
- To address concerns raised by the regulatory agencies regarding the potential presence of contaminants in areas beyond the control of the off-site containment system, Sparton agreed in early 2009 to install a new monitoring well, MW-80. Negotiations between the agencies and Sparton, on the location and construction characteristics of this well, continued during the remainder of the year.

The off-site containment well operated at an average rate of about 220 gpm (gallons per minute) during this three-year period, preventing expansion of the contaminant plume. A total of about 350 million gallons were pumped from the well during these three years. The total volume of water pumped between the start of the well operation on December 1998 and the end of 2009 was about 1.27 billion gallons.

The source containment well operated at an average rate of about 47 gpm during this three-year period, preventing the off-site migration of contaminants from the site. A total of about 70 million gallons were pumped from the well during these three years. A total of about 200 million gallons were pumped from this well between the start of its operation on January 3, 2002 and the end of 2009.

Thus, the total volume of water pumped during this three-year period by both the off-site and source containment wells was about 420 million gallons. This volume of pumped water

represents about 37.2 percent of the initial volume of contaminated groundwater (pore volume). The total volume of water pumped by both wells between the start of the off-site containment well operation and the end of 2009 was about 1.47 billion gallons, and represents about 130 percent of the initial pore volume.

Approximately 1,350 kg (2,980 lbs) of contaminants consisting of about 1,250 kg (2,770 lbs) of TCE, 94 kg (210 lbs) of DCE, and 3.3 kg (7.4 lbs.) of TCA were removed from the aquifer by the off-site containment well during this three-year period. The total mass of contaminants that was removed since the beginning of the off-site containment well operation was about 5,645 kg (12,460 lbs) consisting of about 5,310 kg (11,710 lbs) of TCE, 320 kg (700 lbs) of DCE, and 13 kg (28 lbs.) of TCA.

Approximately 30 kg (65 lbs) of contaminants consisting of about 26 kg (58 lbs) of TCE, and 3.3 kg (7.2 lbs) of DCE were removed from the aquifer by the source containment well during these three years; TCA concentrations in the water pumped from the well were less than the detection limits of the chemical analysis method indicating that TCA mass removal by this well was minimal during this three-year period. This is consistent with the lack of detection of this compound in all but a few of the on-site monitoring wells. The total mass of contaminants that was removed by this well since the beginning of its operation and the end of 2009 was about 230 kg (500 lbs) consisting of about 200 kg (430 lbs) of TCE, 27 kg (60 lbs) of DCE, and 3.4 kg (7.4 lbs.) of TCA.

Thus, the total mass of contaminants removed from the aquifer during this three-year period by the off-site and source containment wells was about 1,380 kg (3,040 lbs) consisting of about 1,280 kg (2,830 lbs) of TCE, 98 kg (215 lbs) of DCE, and 3.3 kg (7.4 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 2009 was about 5,880 kg (12,960 lbs) consisting of about 5,510 kg (12,140 lbs, or 990 gallons) of TCE, 350 kg (760 lbs, or 75 gallons) of DCE, and 16 kg (36 lbs, or 3.2 gallons) of TCA. This represents about 75 percent of the contaminant mass estimated in 2009 as being dissolved in groundwater prior to the start of pumping from the off-site containment well.

While the mass of dissolved contaminants has been substantially reduced, as indicated by the reduction of contaminant concentrations measured in most monitoring wells, the areal extent of the TCE plume, and hence the volume of contaminated groundwater, did not change significantly during these three years.

The groundwater flow and contaminant migration model that was revised and recalibrated during this period was used in 2009 to evaluate the performance of the existing and of alternative groundwater extraction systems towards achieving the goal of restoring the affected aquifer to beneficial use. The results of this evaluation indicated that while the existing systems would achieve this goal, the restoration of the aquifer could be cost-effectively expedited by increasing the pumping rate of the off-site containment well from the current 225 gpm to 300 gpm. This increase in the pumping rate was recommended by Sparton and approved by the regulatory agencies.

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 collected, they will be compared to the predicted model results and adjustments will be made to the model if necessary so that the model can continue to be used to evaluate the future performance of the remedial systems and of any potential future modifications to these systems.

The pumping rate of the off-site containment system will be increased to 300 gpm. It is anticipated that this change will occur in late 2010.

The source containment system will continue to operate at the current average operating rate of 45 to 50 gpm.

A new monitoring well, MW-80, which was installed northwest of the leading edge of the off-site plume during the summer of 2010, was found to be free of any site-related contaminants. This result indicates that the off-site containment well was effective at containing the plume and preventing the further migration of contaminants. This monitoring well will be put on the site's monitoring schedule for quarterly water-level and water-quality sampling.

Sparton, through its off-site containment system, has prevented further expansion of the ground water contaminant plume and has removed a considerable amount of mass from the plume. The planned increase in the pumping rate of the off-site containment system will increase the area within the hydraulic control of this well and the mass removal rate by this well and will accelerate the restoration of the aquifer at the off-site areas.

Copies of the Consent Decree and its associated remediation work plans as well as historical investigation/remedial work plans and reports submitted to the City, County, NMED, and EPA 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 # 505 476-6000)
located at 2905 Rodeo Park Drive East, Building 1, Santa Fe, NM 87505-6303

Alternatively, you may contact Mr. Tony Hurst, Sparton's Project Coordinator for the site, at (303) 388-8613 or Mr. Joseph Lerczak of Sparton at (847) 762-5816.