STATEMENT OF BASIS/FINAL DECISION AND RESPONSE TO COMMENTS SUMMARY

REGION VI
ID # 2332
NMD 083 212 332

Sparton Technology, Inc.
Albuquerque, New Mexico
(Signed June 1996)

Facility/Unit Type:	**Manufacture of commercial, industrial, and military electronic components, including printed circuit boards**
Contaminants:	**Trichloroethylene, 1,1,1-Trichloroethane, Methylene Chloride, 1,1-Dichloroethylene, Tetrachloroethylene, Toluene, Benzene, Chromium**
Media:	**Groundwater, Soil**
Remedy:	**Expanded groundwater extraction and soil vapor extraction**

FACILITY DESCRIPTION

The Sparton Technology, Inc. Coors Road facility manufactured commercial, industrial, and military electronic components, including printed circuit boards, from 1961 to 1994. The facility consists of a 64,000-square-foot building on a 12-acre parcel of land on the northwest side of Albuquerque, New Mexico.

The printed circuit board manufacturing process at the facility generated an aqueous plating waste which is classified as hazardous due to heavy metals and a low pH. Waste solvents were generated primarily from cleaning of electronic components. From 1961 to 1975, the plating wastes were stored in an in-ground concrete basin. This basin was replaced by two ponds, the West Pond in 1975 and the East Pond in 1977. These impoundments were constructed of concrete block or cast-walls with a natural sand base and a 30-mil, two-ply hypalon liner. These remained in use until 1983 when Sparton stopped discharging to the ponds and removed all remaining wastes.

From 1961 to 1980, waste solvents were accumulated in an on-site concrete sump and allowed to evaporate. Sparton ceased discharging to the sump in October 1980, by removed all wastes, and filled the sump with sand. Drums of hazardous waste were stored on the ground surface prior to May 1981, when a new drum storage area was constructed for storage of all drummed hazardous waste. The new drum storage area consists of a covered concrete pad and a spill collection system.

The Sparton Technology, Inc. Coors Road facility is on the edge of a terrace approximately 60 feet above the adjacent Rio Grande floodplain and approximately 0.5 mile west of the Rio Grande. The Corrales Main Canal, a man-made hydraulic structure used for irrigation eight months of the year, is approximately 200 feet southeast of the facility. The Calabacillas Arroyo is located about 1,000 feet north of the site, and the elevation rises approximately 250 feet from the terrace to form the surrounding hills beyond Irving Boulevard, to the west of the site.

Land in the surrounding area is used for commercial, residential, and agricultural purposes, and is also partially undeveloped. Residential developments are primarily located 1/3-3/4 mile west of the facility. Subsurface soils across the facility consist of sandy muds, sands, and gravel. The depth to groundwater is approximately 65 feet under the facility, varying two to three feet during the year. Groundwater flow is generally to the southwest across the facility, changing to the west-northwest between the facility and Irving Boulevard; the nearest downgradient municipal water supply well is located approximately 2.6 miles northwest of the facility. EPA considers the aquifer beneath the facility to be a Class IIA aquifer because it is a current and potential source of drinking water.

Sparton installed a groundwater monitoring system for the RCRA regulated hazardous waste management units at the facility (East and West ponds) in response to a Consent Agreement and Final Order signed in 1983. Analysis of samples

CONTAMINATION DETECTED AND CLEANUP GOALS

Media	Estimated Volume	Contaminant	Maximum Concentration (ppb)	MCL Action Level (ppb)	MCL Cleanup Goal (ppb)	Point of Compliance
Groundwater		Trichloroethylene	27 - 90,900	5	5	Throughout
		1,1,1-Trichloroethane	14 - 54,900	200	60	the plume.
		Methylene Chloride	420 - 78,400	Not Avail.	100	
		1,1-Dichloroethylene	18 - 31,600	7	5	
		Tetrachloroethylene	17 - 953	5	5	
		Toluene	5 - 4,720	5	5	
		Benzene	20 - 193	1000	750	
		Chromium	22 - 32,100	100	50	
Soil		Chromium	>3,000,000	100	NA	NA

*NA = Not Applicable

collected revealed that hazardous waste had been released to the groundwater as a result of previous and ongoing hazardous waste management practices. A soil investigation conducted from 1986 through 1987 revealed inorganic contaminants in excess of background levels beneath the former pond and sump area, and organic contaminants indicating the presence of volatile chemicals throughout the soil profile.

EXPOSURE PATHWAYS

Soil and groundwater are the two potential pathways for environmental exposure. Both ingestion and dermal contact to contaminants are potential exposure pathways.

SELECTED REMEDY

The selected remedy consists of an expanded groundwater extraction system and soil vapor extraction system. The major components of the selected remedy included: 1) continued operation of the existing on-site groundwater extraction and treatment system; 2) further characterization of the extent of contamination in the groundwater and vadose zone; 3) installation and operation of additional groundwater extraction well(s); and 4) installation and operation of on-site soil vapor extraction (SVE) system. This selection was made in an effort to restore potentially drinkable groundwater to levels safe for drinking throughout the contaminated plume, regardless of whether the water is in fact currently being consumed.

Based on the available sampling data, Sparton was required to install and operate a groundwater recovery well network in the upper 10 feet of the aquifer as an interim measure. The recovery system became operational in 1988 and consists of eight on-site recovery wells designed to remove approximately 1300 gallons per day of contaminated groundwater. Groundwater pumped from the recovery wells is discharged to a 550-gallon fiberglass-coated steel collection tank.

Water from the collection tank is transported to the top of a 20 gallon per minute (gpm) packed tower air stripper to remove volatile organic compounds from the water. Contaminant concentrations in the treated water are in the range of 1 ppb for each contaminant. The volatile organic contaminants which are removed from the groundwater in the air stripper are released to the atmosphere as permitted by the City of Albuquerque Environmental Health Department.

Treated water from the air stripper is discharged to a 15,000-gallon fiberglass-coated steel tank for storage. When the plant was operational, treated water from the storage tank was used in the main plant building as cooling and flushing water and eventually discharged into the sewer system. Since facility operations have been discontinued, the treated water is utilized in the sanitary system prior to discharge in to the sewer system.

INNOVATIVE TECHNOLOGIES CONSIDERED

Alternatives for remediation of the contaminated groundwater and contaminant source areas included: 1) expanded groundwater extraction, soil vapor extraction, and air sparging, 2) expanded groundwater extraction and soil flushing, and 3) in-situ bioremediation.

PUBLIC PARTICIPATION

EPA conducted a public comment period from December 8, 1995, to February 8, 1996, and a public hearing on February 1, 1996, to inform the community about the remedial alternatives. Numerous public comments were received and were supportive of a comprehensive remedy to address the contamination originating from the facility. EPA prepared a Response to Comments document to address questions and comments received during the public comment period.

NEXT STEPS

Sparton Technology will proceed with implementation of selected remedy steps 2 through 4.

KEYWORDS:

groundwater, soil; dermal contact, ingestion; trichloroethylene, 1,1,1-trichloroethane, methylene chloride, 1,1-dichloroethylene, tetrachloroethylene, toluene, benzene, chromium; air stripping, extraction, groundwater monitoring, soil monitoring, innovative technology considered (air sparging, soil flushing, in situ bioremediation); interim remedy.

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