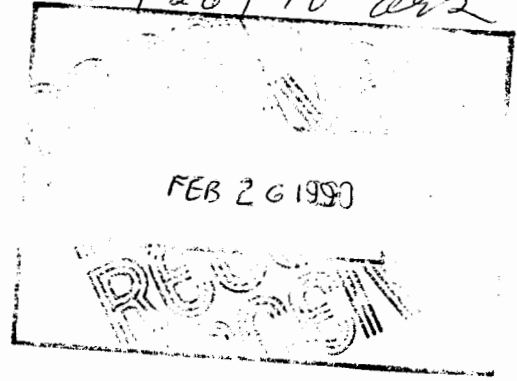


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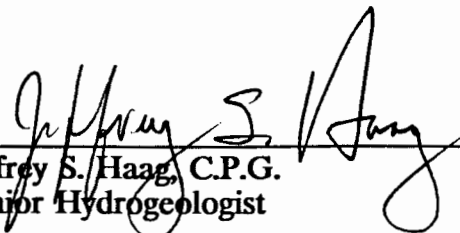
Sparton Technology, Inc.  
9621 Coors Road NW  
Albuquerque, New Mexico

**EFFECTIVENESS OF THE GROUNDWATER  
RECOVERY WELL SYSTEM**

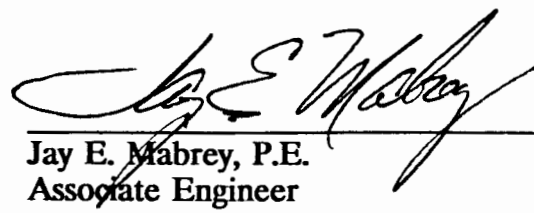
Coors Road Facility  
Albuquerque, New Mexico

HLA Job No. 06310,039.12

by

  
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Report in magazine file  
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October 20, 1989  
February 23, 1990 - Revised

**Harding Lawson Associates**  
Engineering and Environmental Services

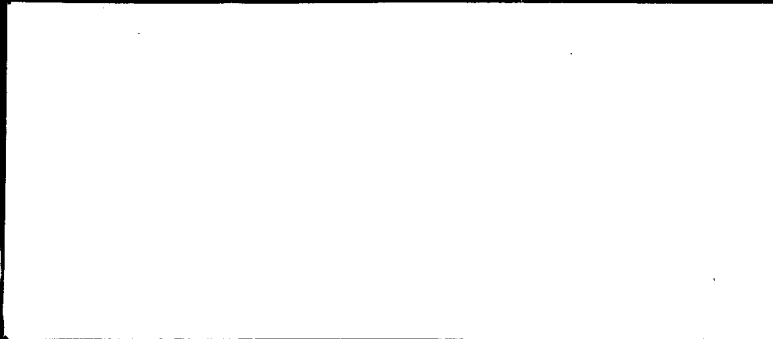


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## I INTRODUCTION

In accordance with Section IV.A.1.(a) of the Consent Order, an Interim Measures groundwater recovery well system was installed at the Sparton Technology, Inc. (Sparton) facility located on Coors Road in Albuquerque, New Mexico. This report presents the results of an evaluation of the effectiveness of that recovery system pursuant to the requirements of Section IV.A.1.(a)ii of the Consent Order.

Sparton filed a report evaluating the effectiveness of this system in October, 1989. Both Sparton and U.S. EPA recognized that the October report was hastily prepared due to a misunderstanding of the due date. The October report was discussed in detail at a meeting with U.S. EPA in Dallas on January 10, 1990, at which time U.S. EPA staff provided written comments and made other requests for information associated with the groundwater recovery well system. The written comments were also furnished by U.S. EPA to Sparton by letter dated January 22, 1990.

Based on the constructive comments of U.S. EPA and further review of the October report, we have prepared what is virtually a new report in a different format, rather than simply attempt to revise, change or otherwise patch up the October report. In doing so, we have made every effort to address the substance of the concerns contained in the U.S. EPA written comments and to respond to the other U.S. EPA requests. This new report is submitted to entirely replace the October report.

## II DESCRIPTION OF RECOVERY SYSTEM

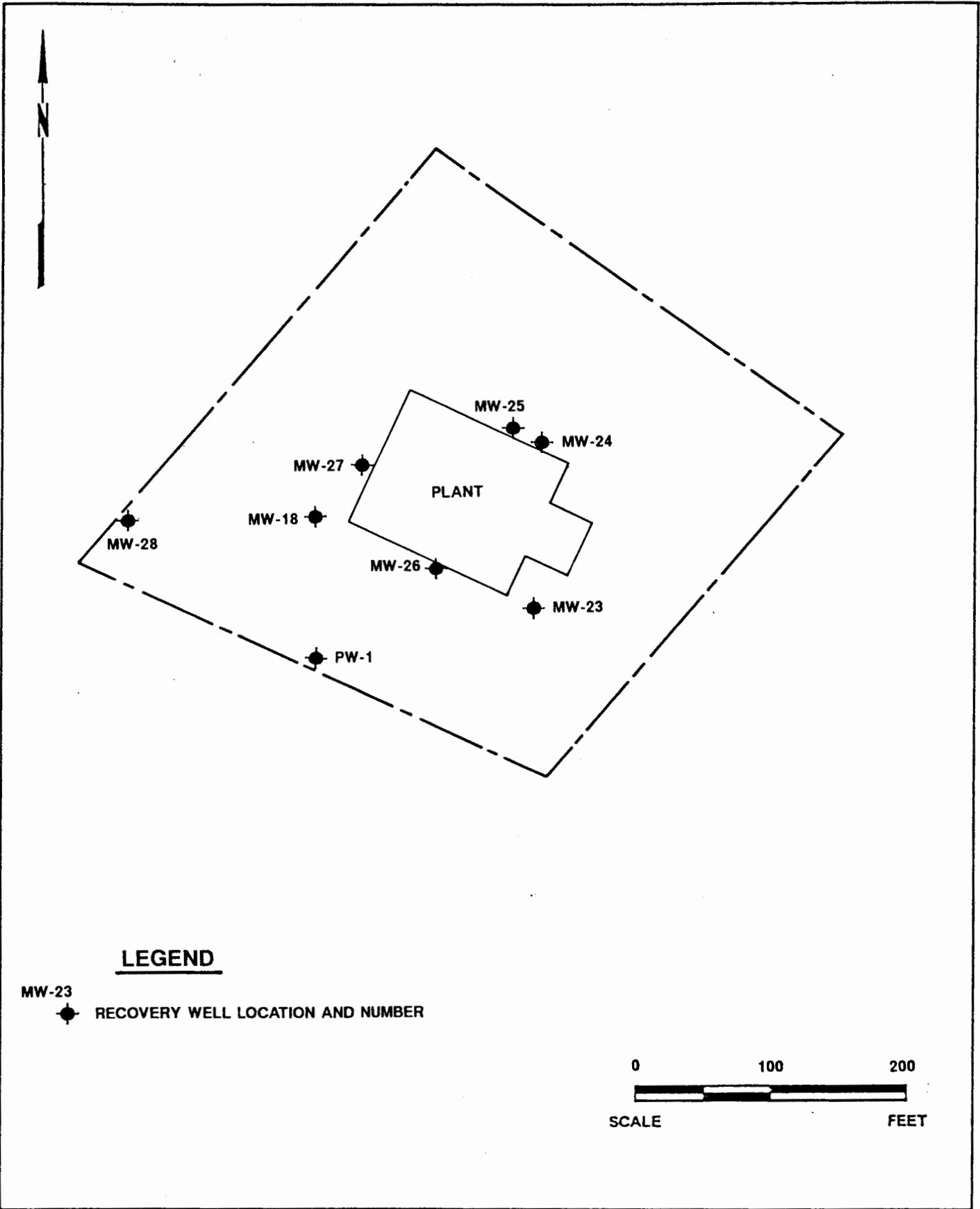
Pursuant to the requirements of the EPA Consent Order, a groundwater recovery system was installed in the upper flow zone as an interim measure. the purpose of this system is to retard the spread of the contaminant plume while the RCRA Facility Investigation (RFI) and the Corrective Measures Study (CMS) are being completed. The approach used to accomplish this goal was to locate a number of onsite recovery wells in the more contaminated portions of the contaminant plume in order to maximize the mass of contaminant removed. This system is not intended to serve as a final solution. The final solution will be determined upon completion of the RFI and CMS.

The recovery system was designed and constructed according to the provisions of the Interim Measures Workplan approved by EPA on March 1, 1989. The system became operational in January of 1989.

The system is comprised of eight wells (PW-1, MW-18, MW-23, MW-24, MW-25, MW-26, MW-27, and MW-28) installed in the upper flow zone of the site (see Figure 1). Compressed air operated pumps were installed in each well. Groundwater extracted at each of these locations is piped to an air stripper system for treatment and ultimate use in the Sparton facility.

The wells are set with the bottom of the well screen located at the top of the aquitard. The depth to the aquitard varies. The screened intervals generally fell within the interval of 60

to 78 feet in depth below ground surface. Construction of the wells varies because the designated wells used for the recovery system were constructed over a four year period. Figure 2 lists the pertinent construction details for each of the eight wells.



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**RECOVERY WELLS**  
 Sparton Technology, Inc.  
 Albuquerque, New Mexico

FIGURE

**1**

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Figure 2  
Recovery System Well Construction Details

<u>Well No.</u>	<u>Well Diameter (inches)</u>	<u>Well Materials</u>		<u>Screened Interval (ft)</u>	<u>Construction Date</u>
		<u>Screen</u>	<u>Riser</u>		
PW-1	10	PVC	PVC	60-70	9/84
MW-18	4	PVC	PVC	68-78	5/86
MW-23	2	PVC	PVC	72-77	8/86
MW-24	2	PVC	PVC	68.4-73.4	12/86
MW-25	2	PVC	PVC	67.7-72.7	12/86
MW-26	2	SS <sup>(1)</sup>	PVC	73-78	5/88
MW-27	2	SS	PVC	67-72	5/88
MW-28	2	SS	PVC	65-70	5/88

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<sup>(1)</sup> Stainless Steel



### III CONTAMINANT PLUME DESCRIPTION

Since trichloroethene (TCE) is the predominant contaminant, and since there is a more exhaustive historical database of TCE analyses, we have focused on this parameter for the purposes of this evaluation. We feel that this is a fair representation, and that any conclusions drawn from this evaluation would apply equally to other contaminants included in the plume.

Figure 3 shows the configuration of the TCE plume in the 3rd quarter of 1989. Data used to generate this map included both the quarterly groundwater analyses generated under the State (New Mexico) monitoring program (1986 - 1989), and the limited analyses of upper flow zone wells, both on-site and off-site, conducted under the terms of the Consent Order. Figure 3 also reflects our analysis of the direction of groundwater movement in the upper flow zone.

For the on-site wells included in the State program, the high degree of variation in the quarterly data was smoothed by using least squares regression analysis. The resulting regression equation was then used to calculate the "normalized" concentration of TCE in the 3rd quarter of 1989. This technique also allowed the use of historical data for wells which had been plugged and abandoned or had been converted to recovery wells. Based on the historical data, the regression analyses allowed for the calculation of a normalized TCE concentration for each of these wells in the 3rd quarter of 1989.

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