Sparton 2002

S. S. PAPADOPULOS & ASSOCIATES, INC.
ENVIRONMENTAL & WATER-RESOURCE CONSULTANTS

September 24, 2002

United States Environmental Protection Agency
Region VI - Technical Section (6EN-HX)
Compliance Assurance & Enforcement Division
1445 Ross Avenue
Dallas, TX 75202
Attn: Sparton Technology, Inc. Project Coordinator Michael Hebert

Director, Water & Waste Management Division
New Mexico Environment Department
1190 St. Francis Drive, 4th Floor
Santa Fe, NM 87505

Chief, Hazardous & Radioactive Materials Bureau
New Mexico Environment Department
1190 St. Francis Drive, 4th Floor
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Chief, Groundwater Bureau
New Mexico Environment Department
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Santa Fe, NM 87505

Mr. Baird Swanson
New Mexico Environment Department – District 1
4131 Montgomery Boulevard, NE
Albuquerque, NM 87109

Subject: Sparton Technology, Inc. Former Coors Road Plant Remedial Program
Capture Analysis for Source Containment Well CW-2

Gentlemen:

On behalf of Sparton Technology, Inc. (Sparton), S. S. Papadopulos & Associates, Inc. (SSP&A) is pleased to submit the results of its evaluation of the capture zone of the source containment well CW-2 that was installed about 80 feet downgradient (northwest) of the Sparton property and began operating at an average rate of 50 gallons per minute on January 3, 2002. This evaluation was based on water-level data collected on August 1, 2002 as part of the quarterly water-level monitoring program.

Following the format of the off-site containment well capture zone analyses presented in the 2001 Annual Report[1], the results of the evaluations are presented in maps of the on-site water table, of the combined "Upper/Upper Lower" Flow Zone (UFZ/ULFZ), and "Lower Lower" Flow Zone (LLFZ) water levels.

The elevation of the on-site water table, based on data from wells screened above the 4970-foot silt/clay unit is presented in Figure 1. As shown in this figure, the pumping from the source containment well CW-2 does not have a significant effect on the on-site water table contours. Well CW-2 is screened between an elevation of 4968.5 feet above mean sea level (ft MSL) and an elevation of 4918.5 ft MSL. The sand-pack extends about ten feet above the top of the screen, to an elevation of about 4978.5 ft MSL. The top of the 4970-foot silt/clay at this location is about 4969.5 ft MSL. Most of the water pumped from the well, therefore, comes from the ULFZ and LLFZ underlying the 4970-foot silt/clay unit. The direct contribution of the on-site water table into the well is relatively small and occurs by leakage through the sand pack. However, contaminated groundwater above the 4970-foot silt/clay unit is leaking through this unit, or discharging beyond the limit of this unit, into the capture zone of the source containment well CW-2, and thus it is captured by this well.

As also shown in Figure 1, the treated groundwater infiltrating from the infiltration ponds has created a water-table mound in the pond area. In fact, since the commencement of the source containment system operation the water table rose throughout most of the area underlain by the 4970-foot silt/clay unit (see Figure 2). The higher water levels have resulted in steeper gradients, and hence, faster flow rates, both horizontally and vertically. These faster flow rates and the flushing effects of the infiltrating water will expedite the migration of contaminants remaining above the 4970-foot silt/clay unit into the capture zones of the source and off-site containment wells.

The capture zones of both the off-site and source containment wells within the UFZ/ULFZ and the LLFZ are shown in Figures 3 and 4, respectively. As shown in these figures, the source containment well is capturing most of the portion of the plume underlying the Sparton property. The extent of the capture zone in both the UFZ/ULFZ and the LLFZ is wider than that predicted earlier[2].

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[1] S. S. Papadopulos & Associates, Inc. *in association with* Metric Corporation, 2001, **Sparton Technology, Inc. Former Coors Road Plant Remedial Program, 2001 Annual Report**, prepared for Sparton Technology, Inc., Rio Rancho, New Mexico, May 7.

[2] S. S. Papadopulos & Associates, Inc., 2000, **Work Plan for the Installation of a Source Containment System**, Attachment F to the Consent Decree in City of Albuquerque et al. v. Sparton Technology, Inc., Civil action No. CV 07 0206, in the U. S. District Court for the District of New Mexico, filed March 3, 2000.

I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based upon my inquiry of either the person or persons who manage the system and/or the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I further certify, to the best of my knowledge and belief, that this document is consistent with the applicable requirements of the Consent Decree entered among the New Mexico Environment Department, the U.S. Environmental Protection Agency, Sparton Technology, Inc., and others in connection with Civil Action No. CIV 97 0206 LH/JHG, United States District Court for the District of New Mexico. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you have any questions concerning the report, please contact me.

Sincerely,

S. S. PAPADOPULOS & ASSOCIATES, INC.

Stavros S. Papadopulos, PhD, PE
Founder & Senior Principal

cc: Secretary, Sparton Technology, Inc., c/o Ms. Susan Widener
Mr. James B. Harris
Mr. Tony Hurst
Mr. Gary L. Richardson

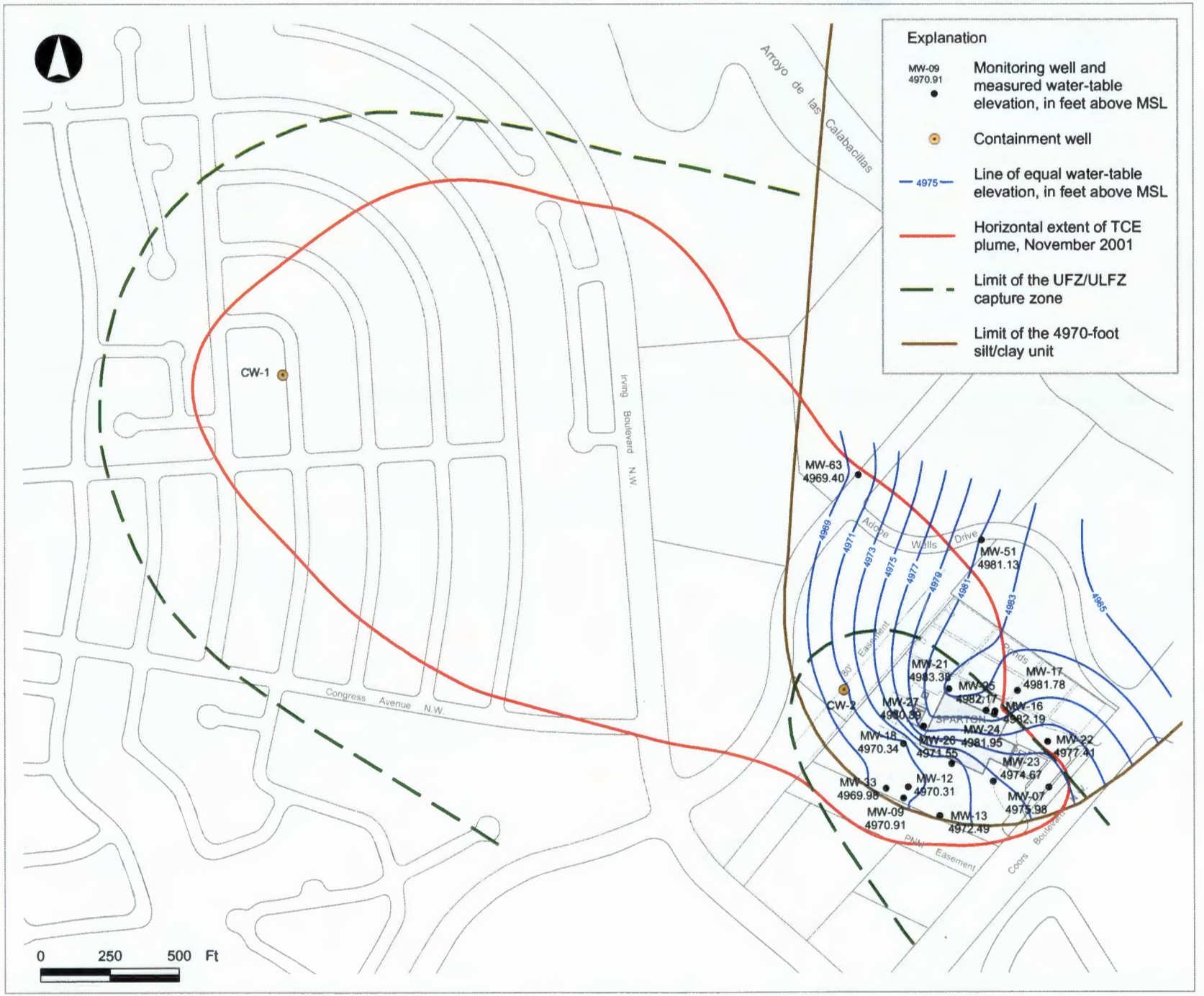

Figure 1 Elevation of the On-Site Water Table - August 1, 2002

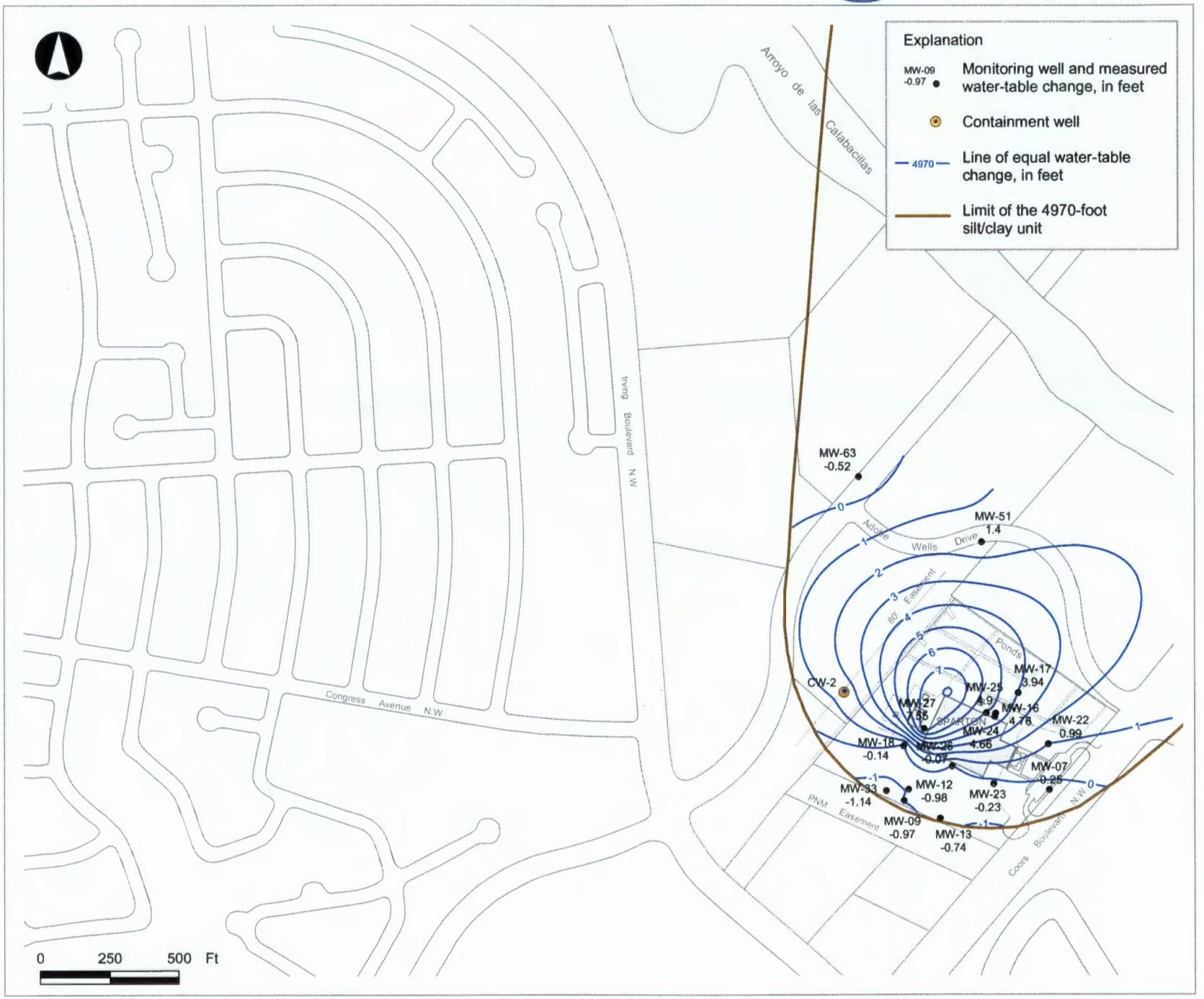

Figure 2 Changes in the Elevation of the On-Site Water Table - November 1, 2001 to August 1, 2002

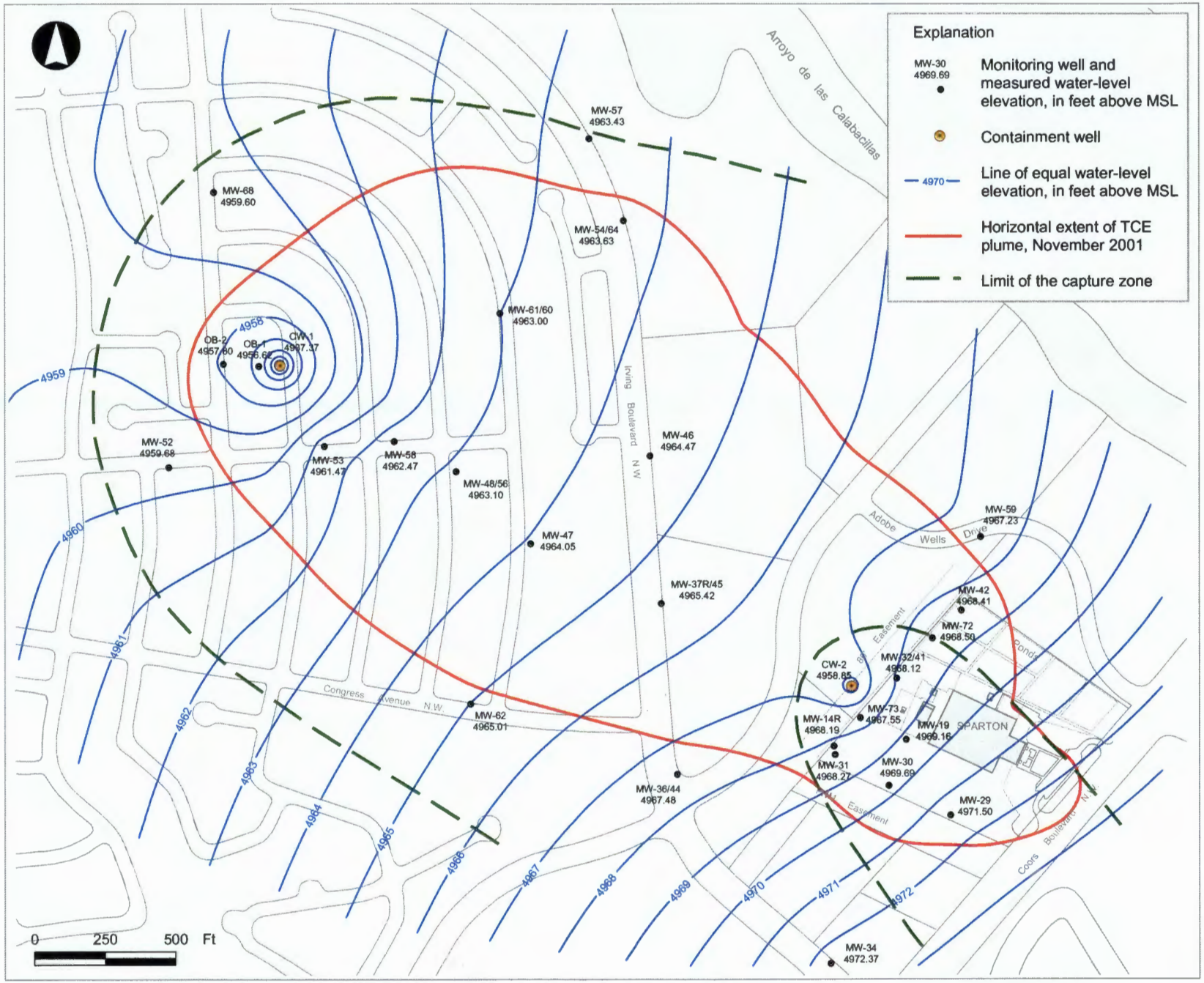

Figure 3 Elevation of the Water Levels in the UFZ/ULFZ and the Capture Zones of the Off-Site and Source Containment Wells
August 1, 2002

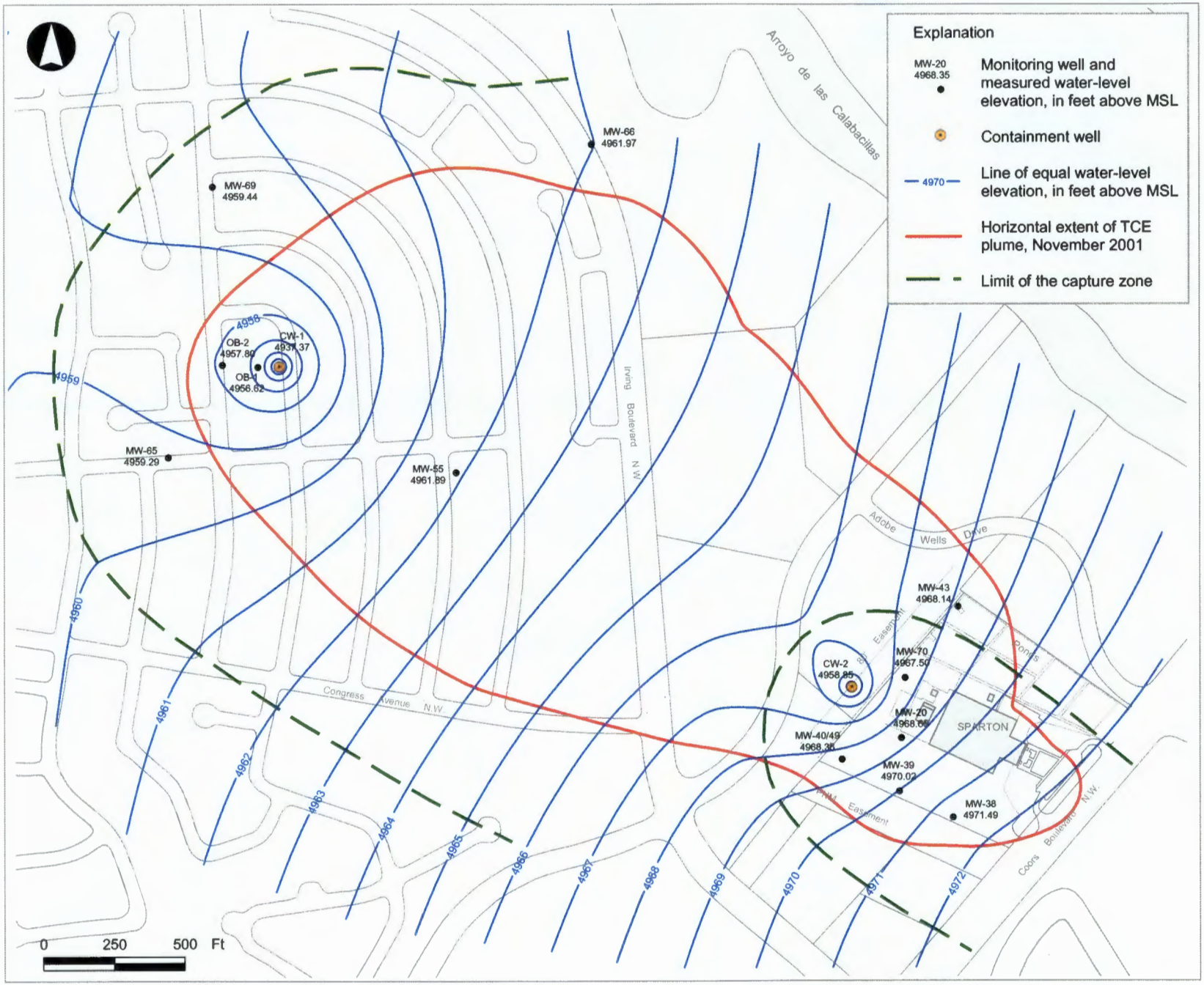

Figure 4 Elevation of the Water Levels in the LLFZ and the Capture Zones of the Off-Site and Source Containment Wells
August 1, 2002