

DRAFT

December 17, 1992

CERTIFIED MAIL-RETURN RECEIPT REQUESTED P

Mr. Richard D. Mico
Sparton Technology, Inc.
Vice President and General Manager
4901 Rockaway Blvd., SE
Rio Rancho, New Mexico 87124

RE: Comments on Draft CMS Report

Dear Mr. Mico:

The Environmental Protection Agency (EPA) has completed its review of the Draft Corrective Measures Study (CMS) submitted November 9, 1992. The EPA does not accept the recommended corrective action alternative provided in Section VIII Justification and Recommendation of the Corrective Measure (p. 115) of the draft CMS report. The recommended corrective measure in the CMS report must address the following objectives:

- 1) Hydraulic containment of the contaminant plume; The September 1992 sampling results indicate that the down-gradient limit of the contaminant plume has not continued a reduction in TCE concentration as previously indicated by the June 1991 sampling results. Concentrations of TCE have continued to increase in the Upper Flow Zone (UFZ) well MW-53, Upper Lower Flow Zone (ULFZ) well MW-56, and the Lower Lower Flow Zone (LLFZ). The contaminant plume appears to be moving past the down-gradient limit of the ground water monitoring wells for the individual flow zones and the location and rate of current and future movement will be unknown. In addition, well MW-32 (LLFZ) has consistently shown elevated levels of TCE apparently unaffected by the IM pump and treat system or any natural degradation.
- 2) Remediation of the contaminant plume; 40 CFR 264.100(e)(2) and 264.101(c) requires the protection of human health and the environment for off-site releases. The ground water underlying the Sparton Technology site is a source of drinking water for the City of Albuquerque and no alternate source is available. As a result, the aquifer is considered a Class I aquifer based on the criteria presented in the EPA Guidelines for Ground Water Classification under the EPA Ground Water Protection Strategy (1986). Cleanup levels for contamination will be based on the more stringent standard found in either the Safe Drinking Water Act MCLs or the State ground water standards. Restoration of contaminated ground water to its beneficial use within a reasonable time frame is protective of human health and the environment.

30 days for Sparton to respond.

- 3) Elimination of volatile organics in the vadose zone which may contribute to ground water contamination.

The following comments address deficiencies in the draft CMS report with regard to requirements specified in Tasks VII, VIII, and IX.

III Description of Current Situation (CAP Task VII.A)

B. Contamination Characterization (p. 24)

Results of the September 21, 1992 sampling event needs to be included in the contaminant characterization section and all references to ground water contamination and plume movement needs to be updated.

D. Potential Receptors (p. 44)

2. Groundwater

Please provide the reference and contact person for the city/county representative documenting the plans for additional municipal wells in the general plume area. In addition, documentation (contacts, etc.) needs to be provided for the presence/absence of plans for private area development water supply wells in the general plume area.

5. Commercial/Industrial

This section needs to be expanded for comparison of soil gas VOC concentrations with exposure limits.

E. Ground Water Protection Standards

5. Background Concentrations (p. 49)

The section needs to be updated to indicate that MW-51 showed non-detect for the June 1991 sampling event and that monitoring wells MW-57, 61, 63 located north and west of the dealership have shown historical non-detect for TCE.

F. Purpose for Response

The corrective action objectives for the site is the hydraulic containment and remediation of the contaminant plume to restore the beneficial use of the Class I aquifer to levels (MCLs) safe for drinking throughout the plume, regardless of whether human or environmental exposure to the contamination is currently occurring. Based on ground water sample analyses obtained from the September 21, 1992, event, monitoring wells MW-53, 55, and 56 have already shown significant increases in TCE concentrations. Since these wells are at the down-gradient limit, the leading edge of the plume in the ULFZ and LLFZ will not be tracked and the location and rate of movement will be unknown. In addition, the high and increasing TCE concentration in well MW-32 represents a vertical extent of contamination that is not currently being monitored.

IV Establishment of Corrective Action Objectives (p. 57; CAP Task VII.B)

The objectives of the CMS are not clearly stated in the report. Specifically, the objectives must be:

- 1) Hydraulic containment of the contaminant plume; The September 1992 sampling results indicate that the down-gradient limit of the contaminant plume has not continued a reduction in TCE concentration as previously indicated by the June 1991 sampling results. Concentrations of TCE have continued to increase in the Upper Flow Zone (UFZ) well MW-53, Upper Lower Flow Zone (ULFZ) well MW-56, and the Lower Lower Flow Zone (LLFZ) well 55. The contaminant plume appears to be moving laterally past the down-gradient limit of the monitoring wells for the individual flow zones and the location and rate of current and future movement will be unknown. The increase in contaminant concentration within well cluster 48/56/55 may also indicate the presence of vertical flow within the aquifer. In addition, consistently elevated levels of TCE in well MW-32 (LLFZ) apparently unaffected by the IM pump and treat system or any natural degradation may indicate the presence of a DNAPL.
- 2) Remediation of the contaminant plume; 40 CFR 264.100(e)(2) and 264.101(c) requires the protection of human health and the environment for off-site releases. The ground water underlying the Sparton Technology site is a source of drinking water for the City of Albuquerque and no alternate source is available. As a result, the aquifer is considered a Class I aquifer based on the criteria presented in the EPA Guidelines for Ground Water Classification under the EPA Ground Water Protection Strategy (1986). Cleanup levels for contamination will be based on the more stringent standard found in either the Safe Drinking Water Act MCLs or the State ground water standards. Restoration of contaminated ground water to its beneficial use within a reasonable time frame is protective of human health and the environment.
- 3) Elimination of volatile organics in the vadose zone which may contribute to ground water contamination.

V Screening of Corrective Measure Technologies (Figure 20, p. 60-65; CAP Task VII.C)

Groundwater

The No Further Action as a general response action needs to be updated in Figure 20 to reflect the September 21, 1992 sampling data. In addition, the "Applications" heading is incorrect with regard to aquifers currently used, or the potential to be used, as drinking water sources.

Soil

The No Further Action as a general response needs to be addressed as a potential source to further contaminant loading to the ground water.

VII Evaluation of the Corrective Measure Alternative or Alternatives (CAP Task VIII)

The evaluation of the implementability for each corrective measure alternative does not include a detailed analysis of the time frames for implementation and beneficial results (*CAP Task VIII.A.1.c.ii*). In particular, factors such as subsurface heterogeneity, contaminant-related factors including the presence of possible NAPLs, system design parameters, and fate and transport processes should be accounted for in establishing timeframes.

B. Containment for the Dissolved Groundwater Phase (Saturated Zone)

The use of extraction wells as a technology for containment of the ground water plume (Figure 20) needs to be discussed as a corrective measure alternative in this section.

1. No Further Action (p. 77)

This alternative needs to be updated to address the September 1992 sampling results and continued lateral and vertical movement of the contaminant plume. The existing discussion needs to be updated to address the 1) technical criteria for effectiveness, 2) environmental criteria, 3) human health criteria, and 4) institutional criteria for allowing continued lateral and vertical plume movement.

2. Infiltration Gallery/Injection Wells (p. 78)

The use of injection wells in this alternative is discussed in vague terms with reference to technical, environmental, human health criteria, and institutional criteria. Specific determination and the source of the data used to support a conclusion must be provided in this section. Cost estimates under *CAP Task VIII.B* were not provided for this alternative.

C. Remediation of the Dissolved Groundwater Phase (Saturated Zone)

1. No Further Action (p. 82)

This alternative needs to be updated to address the September 1992 sampling results and continued lateral and vertical movement of the contaminant plume. The existing discussion needs to be updated to address the 1) technical criteria for effectiveness, 2) environmental criteria, 3) human health criteria, and 4) institutional criteria for allowing continued lateral and vertical plume movement.

2. Continuation of Interim Measure Corrective Action (p. 83)

This alternative needs to be updated to address the September 1992 sampling results and continued lateral and vertical movement of the contaminant plume. The existing discussion needs to be updated to address the 1) technical criteria for effectiveness, 2) environmental criteria, 3) human health criteria, and 4) institutional criteria for allowing continued lateral and vertical plume movement.

3. Expansion of Interim Measure (p. 84)

This alternative needs to be updated to address the September 1992 sampling results and continued lateral and vertical movement of the contaminant plume. The existing discussion needs to be updated to address the 1) technical criteria for effectiveness, 2) environmental criteria, 3) human health criteria, and 4) institutional criteria for allowing continued lateral and vertical plume movement.

VIII Justification and Recommendation of the Corrective Measure

The ground water remediation design will likely involve more than one remedial technology to achieve the cleanup goals within a reasonable time frame. The process of ground water remediation at the site will require an ongoing evaluation of the system design, time frame for remediation, and continued need for ground water data. Both water-level and water quality data will be required to demonstrate that the extraction system is effectively containing the aqueous contaminant plume.

A. General (p. 115)

The recommended corrective action alternative of continued operation of the Interim Measure ground water recovery and treatment system and the basis for supporting the corrective action alternative (listed below in italics) is rejected by EPA. The basis for rejecting the corrective action alternative is as follows:

- * *Risk assessment considering both current and potential receptors and exposure pathways identified at the site.*
- * *Reduction in areal and vertical extent (and concentration) observed in both groundwater and soil gas plumes since the late 1980s.*
- * *Lack of significant forward movement in the ground water plume.*
- * *Elevated constituent concentrations are retreating to the facility boundaries.*
- * *Specific requirements of 40 CFR 264.100 with respect to "where necessary to protect human health and the environment."*
- * *Effectiveness of the currently operating IM system.*

The corrective action objective for the site is the remediation of potentially drinkable ground water to levels (MCLs) safe for drinking throughout the plume, regardless of whether human or environmental exposure to the contamination is currently occurring. At the site, neither the Interim Measure system or natural degradation appears to have any effect on the high contaminant concentrations found in MW-32 (LLFZ) or continued movement (9/92 sampling event) of the leading edge of the contaminant plume in the UFZ (MW-53), ULFZ (MW-56) and the LLFZ (MW-55).

- * *Inability of available technologies to restore groundwater quality to MCLs.*
- * *Off-site constituent concentrations in much of the plume area have already dropped below technology application levels.*

Documentation was not provided in the CMS report which supports these statements. Please

provide specific information and case examples which support the use of minimum constituent concentrations in ground water for selection of available technologies. It should be noted that the leveling out of contaminant concentrations noted in case examples can be the result of a number of factors, including: 1) non-representative monitoring techniques, 2) the presence of NAPLs, 3) the extraction system design, and 4) operation of the extraction network. An additional goal of the selected remedy is to also prevent continued off-site movement of the contaminant plume.

B. Description of Recommended Alternative (p. 116)

**As part of this recommendation, groundwater monitoring wells at selected locations would be sampled and analyzed on a quarterly basis to verify degradation of the plume.*

Based on ground water sample analyses obtained from the September 21, 1992, event, monitoring wells MW-53, 55, and 56 have already shown significant increases in TCE concentrations. Since these wells are at the down-gradient limit, the leading edge of the plume in the ULFZ and LLFZ will not be tracked and the location and rate of movement will be unknown. In addition, the high and increasing TCE concentration in well MW-32 represents a vertical extent of contamination that is not currently being monitored. Thus, based on the current data available, ground water monitoring will not be able to verify the degradation of the plume.

Please submit the Final CMS report within 30 days from receipt of this letter. If you have any questions or would like to meet and discuss these comments further, please contact me at (214) 655-6745.

Sincerely,

Vincent Malott
Geologist
Technical Section (6H-CX)
RCRA Enforcement Branch