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CONFIDENTIAL

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

Dear Mr. Mico:

The U.S. Environmental Protection Agency (EPA) has completed its review of the draft Report on the Effectiveness of the Groundwater Recovery Well System in the Upper Flow Zone submitted under Administrative Order on Consent No. VI-004(h)-87-H. The enclosed comments on the draft Report are transmitted per Section IV.A.1.d of the Order and address deficiencies with regard to requirements specified in Section IV.A.1.a.ii. The Final Report is now due to EPA within 30 days from receipt of this letter.

If you have any questions regarding these comments, please contact Vincent Malott of my staff at (214) 665-8313.

Sincerely,

Randall E. Brown, Chief
RCRA Enforcement Branch

Enclosure

cc: Mr. Ron Kern, HRMB, NMED, (w/ enclosure)
Mr. Dennis McQuillan, GWPRB, NMED, (w/enclosure)

TECHNICAL REVIEW COMMENTS
REPORT ON THE EFFECTIVENESS OF THE GROUND WATER RECOVERY WELL SYSTEM IN THE UPPER FLOW ZONE
SPARTON TECHNOLOGY, INC.
ALBUQUERQUE, NEW MEXICO

EPA reviewed the Report on the Effectiveness of the Groundwater Recovery Well System in the Upper Flow Zone for the Sparton Technology facility located in Albuquerque, New Mexico.

1. General Comment

The requirements specified in Section IV.A.1.a.ii of the Order have not been met in the report. Specifically, the requirements for the present capture zone, projected capture zone, and what actions will be necessary to ensure efficient capture zone characteristics at the Facility will need to be included in the revised Report. The calculations presented in the report reflect the radius of influence for each recovery well but may not be indicative of the capture zone for each recovery well based on the current pumping rates. Utilizing the "best-case" radius of influence calculations, the existing recovery well network in the upper flow zone at the Facility is not capable of mitigating further migration of off-site contaminants in the upper flow zone. Sparton shall be prepared to propose schedules of installation of additional recovery wells in the revised Report should expansion of the recovery system be necessary.

2. Section III - Description of Groundwater Contamination in Upper Flow Zone

Paragraph 2, on page 8, does not accurately represent current conditions and will need to be deleted.

3. Section IV.C.2 - In Situ Permeability

Paragraph 2, on page 15, states that based upon the subsurface soils and well construction, Hvorslev's Case G, Well Point-Filter in Uniform Soil, was selected as best representing the site conditions. However, in paragraph 3 on page 18, the upper flow zone is described as heterogeneous and anisotropic. Explain why Hvorslev's Case G, Well Point-Filter in Uniform Soil, is best suited for conditions encountered at the facility since this method is for homogeneous and isotropic conditions.

4. Section IV.C.2 - In Situ Permeability

Paragraph 3, on page 16, states that the results of the calculations for permeabilities using Hvorslev's equation are very similar to permeability values calculated using

methods described in NAVFAC DM-7.1, Soil Mechanics. Present the values calculated using methods described in NAVFAC DM-7.1, Soil Mechanics in Table 3. This will further substantiate the values of permeability calculated using Hvorslev's Case G, Well Point-Filter in Uniform Soil, equation.

5. Section IV.C.3 - Radius of Influence

Table 4, on page 18, presents the calculated radius of influence and the minimum observed radius of influence for each recovery well. However, for MW-16, the calculated radius of influence is less than the minimum observed radius of influence (46 feet < 50 feet). Ideally, the calculated radius of influence should not be less than the minimum observed radius of influence. Modify the report to explain this discrepancy.

The values of the calculated radius of influence for MW-23, MW-25, and MW-28 reported in Table 4 are significantly different than the values obtained when the values are recalculated using the method and example presented in Appendix 4. These values are presented in the following table. Recalculate the radius of influence for MW-23, MW-25, and MW-28 and modify Table 4 and Figure 7 to reflect these changes.

Well Number	Calculated Radius of Influence, R_o (ft)	Recalculated Radius of Influence (ft)
PW-1	54	*54*
MW-16	46	*46*
MW-18	56	*56*
MW-23	136	*151*
MW-24	63	*63*
MW-25	93	*64*
MW-26	57	*57*
MW-27	162	*162*
MW-28	35	*16*

6. Section IV.C.3 - Radius of Influence

Figure 7, on page 19, will need to be amended to include the existing upper flow zone TCE contours and the present capture zone for each recovery well.

7. Section VI - Analysis and Conclusions

Paragraph 2, on page 25, will need to be amended to remove references to the shrinking areal extent of the plume.

Paragraph 2, on page 32, will need to be amended in response to the capture zone determinations for the recovery wells. Utilizing the "best-case" radius of influence calculations, the existing recovery well network in the upper flow zone at the Facility is not capable of mitigating further migration of off-site contaminants in the upper flow zone.

8. Appendix 4

Appendix 4 presents example calculations used throughout the report. These examples allow for the verification of all calculated results except permeabilities using Hvorslev's Case G. Modify the report to include the values of t_1 and t_2 used in Hvorslev's Case G calculation for each of the recovery wells. These values will permit verification of the *in situ* permeability values for the recovery wells in Table 3 on page 17 of the report.