CITY OF Albuquerque

Martin J. Chávez, Mayor

FEB 1996 RECEIVED

February 8, 1996

Mr. Vincent Malott, Project Manager
U. S. Environmental Protection Agency, Region 6
Hazardous Waste Enforcement Branch (6EN-HX)
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Subject: Sparton Ground Water Contamination and Cleanup Alternatives

Dear Mr. Malott:

This letter is the City of Albuquerque's (City's) written statement for the record regarding Sparton Technology, Inc.'s contamination of drinking water resources and the alternatives for cleanup presented in the Environmental Protection Agency's Statement of Basis.[1] This statement supplements my oral comments made at EPA's February 1, 1996, public hearing.

I have prepared this statement in my capacities as the co-chair of the City/County Policy Implementation Committee charged with implementing the Albuquerque/Bernalillo County Ground Water Protection Policy and Action Plan[2] and as the City of Albuquerque's Water Resources Manager. As co-chair of the Policy Implementation Committee and its designated representative for the Sparton case, I am representing the committee's membership which includes the City of Albuquerque's Environmental Health, Planning, and Public Works Departments and Bernalillo County's Environmental Health Department, Planning and Zoning Department, and Public Works Division. I am a registered professional engineer.

---

[1] *Statement of Basis RCRA Corrective Action, Sparton Technology, Inc. Coors Road Facility Albuquerque, New Mexico*, attached to author's copy of Desi Crouther's December 18, 1995, letter to Richard Mico.

[2] Albuquerque/Bernalillo County Ground Water Protection Policy and Action Plan, as adopted by the Board of County Commissioners, November 1993, and the City Council, August 1994.

I. EXECUTIVE SUMMARY

In summary, these comments:

- establish that the contaminated resources damage a valuable City interest,
- present the City's position regarding cleanup alternatives and necessary criteria the selected remedy must meet,
- comment regarding the lack of credibility of Sparton's submittals and representations,
- respectfully request the EPA's priority attention to compel Sparton to expeditiously commence an adequate remedy due to the substantial and imminent endangerment to public health and the environment caused by the actively spreading contamination, and
- offer the City of Albuquerque's active assistance and cooperation to expedite implementation of an adequate remedy.

II. SUMMARY OF THE VALUE AND USE OF THE GROUND WATER SPARTON HAS CONTAMINATED

The City has a valuable proprietary interest in the ground water in the area that Sparton has contaminated. The Sparton contamination substantially devalues and damages the City's interest in this critical drinking water resource. The value of the ground water and other resources damaged by Sparton is quantifiable.

Ground water is the sole source of drinking water and all other non-agricultural water uses in Albuquerque, Bernalillo County, and the entire Middle Rio Grande Basin. New wells are needed for water supply, regardless of the future option(s) selected for supplementary conjunctive use of surface water.[3] For several reasons, ground water in the vicinity of the Sparton contamination, were it not for the contamination, would be especially attractive for development of new wells and/or enhanced aquifer recharge systems. The surrounding area is rapidly growing.

---

[3] San Juan-Chama Diversion Project Options, summary report and five appendices, CH2M Hill, July 1995. This report was previously submitted to EPA for the Sparton record. This report was substantially misrepresented by Sparton in their November 6, 1995, letter to EPA.

Albuquerque's existing water master plan[4] designates the contaminated area for a future well field. Naturally occurring arsenic concentrations at the site are unusually low, making water production from this area especially desirable. The area is adjacent to existing groundwater recharge sources and is hydrogeologically very well suited to enhanced artificial recharge, making high levels of ground water production especially sustainable. And very importantly, the area is in a relatively small portion of the city, generally located along the river where historic drawdown is low, where State Engineer Office staff recommendations[5] would allow new wells to be drilled. These recommendations would prohibit additional wells within the City's current well fields providing water supply to the west side of the Rio Grande.

In summary, the ground water contaminated by Sparton's disposal and continuous releases is a valuable natural resource committed to beneficial use by the citizens of Albuquerque. The ground water is committed to use by the City of Albuquerque through various City resource planning documents.

III. THE CITY/COUNTY GROUND WATER PROTECTION POLICY CLASSIFIES THE AREA IN QUESTION AS AN IMPORTANT AND VULNERABLE SOURCE OF DRINKING WATER

I have previously submitted for the record a copy of the Albuquerque/Bernalillo County Ground Water Protection Policy and Action Plan. It is a comprehensive source water protection policy and wellhead protection policy formally adopted by the governing bodies of both the City and the County. It classifies areas within the county as crucial for ground water quality protection based on either the current or planned use of the ground water as a drinking water supply or on the geohydrologic vulnerability of the ground water system to contamination. The ground water contaminated by Sparton is both planned for drinking water supply and is vulnerable to contamination.

The document specifies six policy statements formulated to "Ensure the quality of our ground-water resources so that the public health, quality of life, and economic vitality of this and future generations are not diminished." Policy B is focused on contamination such as that caused by Sparton: "The City and County shall identify ground water contamination [in crucial areas] and expedite corrective action." Policy C commits the City and Bernalillo County to "promote the vigorous enforcement of regulations throughout the Upper Rio Grande Drainage Basin" to

---

[4] Master Plan of Water Supply for City of Albuquerque N.M. & Environs, Gordon Herkenhoff and Associates, Inc., 1982

[5] *Rio Grande Task Force Memorandum Report,* State Engineer Office, December 1994.

improve protection of drinking water supplies. The City of Albuquerque respectfully requests EPA's vigorous enforcement of RCRA and other laws and regulations to expedite corrective action of the Sparton contamination.

Sparton has made numerous unsubstantiated and false assertions regarding (1) the magnitude, extent, and migration of the ground water contamination it has caused and continues to cause, (2) the value and future use of the ground water resource that it has contaminated, and (3) the practicality of corrective measures that it is actively opposing.[6] The City's response to some of these assertions is contained in my December 5, 1995, letter to EPA's Mr. Desi Crouther, in the four posters prepared by the City of Albuquerque and displayed at the public hearing, and in the attached four page handout distributed by the City of Albuquerque at the public hearing. Additional and more detailed technical rebuttal is also presented in the attached report prepared for the City of Albuquerque.[7] Exact copies of the four City of Albuquerque posters displayed at the public hearing have been sent to you under separate cover for inclusion in the record.

This letter relies on these separate statements for the record and will not repeat the information contained in them except to emphasize selected points they make.

IV. THE SELECTED REMEDY MUST MEET CERTAIN MINIMUM CRITERIA--RECOMMENDED ALTERNATIVE

The contamination levels presently identified as emanating from the Sparton site exceed established RCRA corrective action levels, and pose an imminent and substantial threat to health and the environment. Therefore, the City believes that EPA does not have discretion to select no further action or natural attenuation as an appropriate remedy. Rather, implementation of the selected remedy must, at a minimum, accomplish the following:

- delineate the three dimensional extent of the contaminated ground water,

---

[6] Letter to EPA from James B. Harris of Thompson and Knight, attorneys and counselors, with attached report, November 6, 1995.

[7] Review of Ground-Water Contamination at Sparton Technology Inc.'s Coors Road Facility, prepared by Amy Halloran and Michael Bitner, CH2M Hill, January 1996.

- implement routine quarterly, or more frequent as necessary to understand the dynamics of the plume, monitoring of contaminant concentrations and water levels in existing and additional monitoring wells,

- arrest the spread of the plume of contaminated ground water,

- stop the continuing source of contamination entering the plume from the vadose zone and from probable liquid phase solvents within the ground water at the Sparton site,

- restore the polluted drinking water resource to meet federal and state safe drinking water standards,

- recharge the aquifer with or make other genuine beneficial use of the contaminated ground water that is pumped and treated, commensurate with the City's adopted Long-Range Water Conservation Strategy[8], copy attached, and

- design the remedy to accommodate the hydrologic effects, without interference with the remedy, of the City of Albuquerque's potential near-term uses of the Calabacillas Arroyo recharge window for enhanced ground water recharge and the ground water resources in the vicinity of the Sparton contamination for drinking water supply production, during the decades that successful cleanup is anticipated to require.

The City of Albuquerque requests that EPA cause Sparton to implement Alternative #5: Expanded Ground Water Recovery System, Air Sparging, and Soil Vapor Extraction, as presented in the Statement of Basis but with design features to meet the last two criteria in the bullet list above. The containment and pump and treat system is necessary to arrest the continuing spread of the plume. Containment and remediation of the continuing sources of contamination to the ground water system at the site are also required. Both concentrated dissolved solvents and probable liquid phase solvents are a continuing source of contamination within the ground water system that are feeding the off-site plume. Air sparging appears to be the most practicable means available to expedite removal of measured concentrated dissolved solvents. Air sparging will also assist in addressing the likely occurrence of liquid phase trichloroethene (TCE) that the circumstances of the contaminant release and the ground water monitoring data indicate are probably present in the ground water underneath the Sparton site. Soil vapor extraction is the best available technology and an effective means to remove the vadose zone contamination that is another continuing source of contamination feeding the plume.

---

[8] City of Albuquerque Council Resolution, Enactment 40-1995, adopting a Long-Range Water Conservation Strategy for the City of Albuquerque, March 1995.

Pump and treat and reinject systems and soil vapor extraction systems have successful histories of solvent contamination removal at multiple sites in Albuquerque.

Extracted and treated ground water must not be wasted. It must either be beneficially used or must be returned to the aquifer. The Calabacillas Arroyo recharge window may make recharge of the treated water relatively easy and inexpensive. Recharge by surface spreading in the arroyo could also create a hydraulic barrier that would confine the plume to the south of the arroyo and prevent the spread of the contamination underneath the arroyo and into the active recharge window. Alternately, the treated water could be reinjected though wells.

The containment and pump and treat system must be sufficiently robust to arrest the spread of contamination in three dimensions into and through the Calabacillas Arroyo recharge window. This recharge window has been identified by the Bureau of Reclamation in cooperation with the New Mexico Bureau of Mines and Mineral Resources[9] to be a hydrogeologically rare high conductivity path from the land surface to the Upper Santa Fe Group aquifer system and through the Santa Fe Group to public water supply well fields. The environmental sensitivity of the contaminated site caused by its proximity to the recharge window is being described in separate comments prepared by the Bureau of Reclamation.

The remedy must not preclude the City of Albuquerque's active use of this ground water resource during the estimated 30 year or longer duration of the pump and treat system operation. Nor must the selected remedy preclude the City's possible near-term use of the Calabacillas Arroyo recharge window to increase sustainable ground water system yield through enhanced artificial recharge of the Upper Santa Fe Group aquifer system. Instead, the remedy must be sufficiently robust to accommodate the ground water flow system effects of these water resources management measures and uses without causing interference with or failure of the remedy.

Time is of the essence in selection and implementation of a remedy. Design issues, such as those regarding use or recharge of the treated water and the design features of the remedy needed to allow the City's use of the resource during the long duration of remediation, that have not been considered to date but are raised by this statement and by others, should be made during remedy design and should not further delay EPA's selection of a remedy.

[9] Bureau of Reclamation, Middle Rio Grande Water Assessment, summary report with 20 technical appendices, in preparation. One major purpose of the Assessment, a four year water resources assessment program jointly funded by the City of Albuquerque, the Bureau of Reclamation, and the New Mexico Bureau of Mines and Mineral Resources, was to identify enhanced ground water recharge opportunities for the City of Albuquerque.

V. SPARTON'S SUBMITTALS AND REPRESENTATIONS ARE NOT CREDIBLE

Sparton has made numerous unsubstantiated technical claims and assertions which purport to justify "no action" as a solution to the massive and actively spreading contamination continuing to emanate from their Coors Road Facility. These claims and assertions (the plume mass is decreasing due to natural attenuation, the plume is not spreading, concentrations in monitoring wells are decreasing, the contaminated water is not planned or needed for water supply, etc.) are refuted by the City's previous statements for the record. Simply stated, the data on the record belie Sparton's unsubstantiated assertions. The technical report attached and the poster showing Sparton's and the City of Albuquerque's interpretation of the extent of the plume based on the same data are clear evidence that Sparton's interpretation is wrong, and that the depiction of the plume contained in EPA's Statement of Basis, as provided by Sparton, is wrong.

Sparton's submittal for the record dated February 1, 1996, reproduces and attaches old documentation that proclaims these fictions. Why did Sparton not refer to the substantial and formerly secret data base that they have collected over the last four years associated with their quarterly monitoring of 18 monitoring wells at the site? These data are contained in a January 26, 1996, memo to Vincent Malott, EPA, and Ron Kern and Rob Pine of the New Mexico Environment Department (NMED). NMED faxed these data to the City of Albuquerque on the same date. I am attaching a copy of this fax and ask that it be made part of the administrative record.

These new, formerly secret, data even more strongly expose Sparton's incorrect and misleading assertions and lack of credibility. An example is illustrated by two overhead slides I showed at the public hearing. They are attached. TCE concentrations have increased rapidly to very high levels at the farthest down gradient monitoring well #61. Sparton's publicly released data falsely showed two samples above detection limits from this well with a maximum TCE concentration of 720 micrograms per liter (μg/L). However, Sparton's knowingly withheld data contains nine additional measurements above detection limits. The knowingly withheld data shows steady increases in TCE concentrations with time to a current concentration of 2,000 μg/L. Meanwhile, Sparton proclaims that the plume is attenuating, the contamination is not moving, and contamination concentrations in monitoring wells are decreasing.

Does Sparton's issuance of misleading official statements for EPA's record that are contradicted by directly relevant data which they have knowingly withheld constitute criminal conduct? Obviously, at this point, that is an issue for appropriate enforcement officials to consider. At the very least, it certainly reveals that their intentions and credibility are suspect with regards to the present administrative process. Therefore, Sparton's assertions on the administrative record should be given little or no weight in EPA's decision-making.

VI. THE SPARTON CONTAMINATION POSES AN IMMINENT AND SUBSTANTIAL ENDANGERMENT TO PUBLIC HEALTH AND THE ENVIRONMENT

In the event that Sparton does not willingly and promptly begin implementation of EPA's selected remedy, EPA should act unilaterally to abate the imminent and substantial endangerment to public health and the environment caused by Sparton's pollution. The data gathered to date clearly shows continuous disposal of hazardous wastes, including TCE and hexavalent chromium from the Sparton site, above RCRA corrective action levels. The data, on their face, clearly indicate that contamination levels both on-site and off-site present an imminent and substantial endangerment to public health and the environment.

Very high concentrations of TCE exist in the deepest and farthest down gradient monitoring wells. Contamination concentrations have increased rapidly from zero three years ago to over 400 times drinking water standards at the farthest down-gradient monitoring well #61. Contamination concentrations increase with depth in the nest of monitoring wells #48, #55, and #56 located farthest downgradient from the Sparton site. In addition, the formerly undisclosed data also show high levels of hexavalent chromium in the farthest downgradient monitoring wells. This form of chromium is extremely mobile in the environment, acutely toxic in moderate doses, and a known human carcinogen.

The plume, which has escaped the site and is rapidly expanding, is still being supplied continuously from concentrated contamination at the site. There is insufficient data on the administrative record to adequately characterize the extent of the contamination. However, it is clear that the presence of the massive contamination of a high quality drinking water supply, and its location in a hydrogeologically rare recharge window with an associated ground water flow path from the area of contamination to the public water supply well fields that the recharge window supplies, constitutes an imminent and substantial endangerment to drinking water supplies, public health, and the environment. Neither Sparton nor the EPA have taken action to abate the imminent and substantial endangerment presented by the past, present, and continuous release of hazardous wastes from the site. In fact, as stated above, evidence now on the record suggests that Sparton may have deliberately suppressed information regarding the magnitude of the threat to the citizens of Albuquerque and Bernalillo County and to the environment.

The City believes that imminent endangerment requires swift and decisive action as a matter of law and as a matter of sound public policy. In summary, the City of Albuquerque respectfully requests the EPA's priority attention to compel Sparton to expeditiously commence an adequate remedy without further delay due to the substantial and imminent endangerment to public health and the environment caused by the actively spreading contamination.

VII. Offer of City of Albuquerque Assistance and Cooperation to Expedite Implementation of an Adequate Remedy

It is the City of Albuquerque's adopted policy to expedite clean-up of contamination. Therefore, the City of Albuquerque offers its cooperation to EPA and Sparton in their implementation of an effective remedy. We would appreciate an opportunity to meet with EPA and Sparton to identify specific areas where City of Albuquerque assistance and cooperation can speed the implementation of a remedy meeting the criteria outlined above. Please let us know how we can assist. We simply cannot allow this damage to our vital water resources to go unabated.

Sincerely yours,

A. N. Gaume

A. Norman Gaume, P.E.
Manager, Water Resources Program

c: Martin J. Chavez, Mayor, City of Albuquerque
Mark E. Weidler, Secretary, New Mexico Environment Department
William M. Turner, State of New Mexico Natural Resources Trustee
Lawrence Rael, Chief Administrative Officer, City of Albuquerque
Robert E. Gurule, Director, Public Works Department
Sarah Kotchian, Director, Environmental Health Department
Ron Short, Director, Planning Department
Robert White, City Attorney
Juan Vigil, County Manager, Bernalillo County
Richard Brusuelas, Director, Bernalillo County Environmental Health Department
Thaddeus Lucero, Director, Bernalillo County Planning and Zoning Department

Attachments