



DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

Interim Final 2/5/99

RCRA Corrective Action
Environmental Indicator (EI) RCRIS code (CA750)
Migration of Contaminated Groundwater Under Control

Facility Name: Former Columbia Magnetics
Facility Address: 15 Great Pasture Road, Danbury, Connecticut
Facility EPA ID #: CTD 050628148

1. Has all available relevant/significant information on known and reasonably suspected releases to the groundwater media, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been considered in this EI determination?

- X If yes - check here and continue with #2 below.
If no - re-evaluate existing data, or
if data are not available, skip to #8 and enter "IN" (more information needed) status code.

BACKGROUND

Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

Definition of "Migration of Contaminated Groundwater Under Control" EI

A positive "Migration of Contaminated Groundwater Under Control" EI determination ("YE" status code) indicates that the migration of "contaminated" groundwater has stabilized, and that monitoring will be conducted to confirm that contaminated groundwater remains within the original "area of contaminated groundwater" (for all groundwater "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are nearterm objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The "Migration of Contaminated Groundwater Under Control" EI pertains ONLY to the physical migration (i.e., further spread) of contaminated ground water and contaminants within groundwater (e.g., non-aqueous phase liquids or NAPLs). Achieving this EI does not substitute for achieving other stabilization or final remedy requirements and expectations associated with sources of contamination and the need to restore, wherever practicable, contaminated groundwater to be suitable for its designated current and future uses.

Duration / Applicability of EI Determinations

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

RCRA RECORDS CENTER
FACILITY Columbia Magnetics
I.D. NO. CTD 050628148
FILE NO. R-13
OTHER #107822

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2. Is groundwater known or reasonably suspected to be "contaminated"¹ above appropriately protective "levels" (i.e., applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action, anywhere at, or from, the facility?

_____ If yes - continue after identifying key contaminants, citing appropriate "levels," and referencing supporting documentation.

X If no - skip to #8 and enter "YE" status code, after citing appropriate "levels," and referencing supporting documentation to demonstrate that groundwater is not "contaminated."

_____ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s):

Letter from GZA Environmental to Mr. Kenneth Feathers, CTDEP. October 31, 1996. Page 3 & Table 1 (See Attachment).

Between December 1986 and October 1996, 40 groundwater monitoring events were conducted. Based on data from the 40 rounds of quarterly groundwater monitoring that were completed as of September 12, 1996, groundwater quality at the Site had improved over time. Analytical data from the last 19 quarterly monitoring rounds indicated concentrations of chemical constituents below current applicable RSRs, as well as those standards specifically approved for Site remediation by CTDEP in 1987. As a result, CTDEP issued a September 16, 1997 decision to cease groundwater monitoring at the Site.

¹ "Contamination" and "contaminated" describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriate "levels" (appropriate for the protection of the groundwater resource and its beneficial uses).

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3. Has the migration of contaminated groundwater stabilized (such that contaminated groundwater is expected to remain within "existing area of contaminated groundwater"² as defined by the monitoring locations designated at the time of this determination)?

_____ If yes - continue, after presenting or referencing the physical evidence (e.g., groundwater sampling/measurement/migration barrier data) and rationale why contaminated groundwater is expected to remain within the (horizontal or vertical) dimensions of the "existing area of groundwater contamination"².

_____ If no (contaminated groundwater is observed or expected to migrate beyond the designated locations defining the "existing area of groundwater contamination"²) – skip to #8 and enter "NO" status code, after providing an explanation.

_____ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s):

² "existing area of contaminated groundwater" is an area (with horizontal and vertical dimensions) that has been verifiably demonstrated to contain all relevant groundwater contamination for this determination, and is defined by designated (monitoring) locations proximate to the outer perimeter of "contamination" that can and will be sampled/tested in the future to physically verify that all "contaminated" groundwater remains within this area, and that the further migration of "contaminated" groundwater is not occurring. Reasonable allowances in the proximity of the monitoring locations are permissible to incorporate formal remedy decisions (i.e., including public participation) allowing a limited area for natural attenuation.

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4. Does "contaminated" groundwater discharge into surface water bodies?

_____ If yes - continue after identifying potentially affected surface water bodies.

_____ If no - skip to #7 (and enter a "YE" status code in #8, if #7 = yes) after providing an explanation and/or referencing documentation supporting that groundwater "contamination" does not enter surface water bodies.

_____ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s):

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5. Is the discharge of "contaminated" groundwater into surface water likely to be "Insignificant" (i.e., the maximum concentration of each contaminant discharging into surface water is less than 10 times their appropriate groundwater "level," and there are no other conditions (e.g., the nature, and number, of discharging contaminants, or environmental setting), which significantly increase the potential for unacceptable impacts to surface water, sediments, or eco-systems at these concentrations)?

_____ If yes - skip to #7 (and enter "YE" status code in #8 if #7 = yes), after documenting: 1) the maximum known or reasonably suspected concentrations of key contaminants discharged above their groundwater "level," the value of the appropriate "level(s)," and if there is evidence that the concentrations are increasing; and 2) provide a statement of professional judgment/explanation (or reference documentation) supporting that the discharge of groundwater contaminants into the surface water is not anticipated to have unacceptable impacts to the receiving surface water, sediments, or eco-system.

_____ If no - (the discharge of "contaminated" groundwater into surface water is potentially significant) - continue after documenting: 1) the maximum known or reasonably suspected concentration³ of each contaminant discharged above its groundwater "level," the value of the appropriate "level(s)," and if there is evidence that the concentrations are increasing; and 2) for any contaminants discharging into surface water in concentrations greater than 100 times their appropriate groundwater "levels," the estimated total amount (mass in kg/yr) of each of these contaminants that are being discharged (loaded) into the surface water body (at the time of the determination), and identify if there is evidence that the amount of discharging contaminants is increasing.

_____ If unknown - enter "IN" status code in #8.

Rationale and Reference(s):

³ As measured in groundwater prior to entry to the groundwater-surface water/sediment interaction (e.g., hyporheic) zone.

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6. Can the discharge of "contaminated" groundwater into surface water be shown to be "currently acceptable" (i.e., not cause impacts to surface water, sediments or eco-systems that should not be allowed to continue until a final remedy decision can be made and implemented⁴)?

_____ If yes - continue after either: 1) identifying the Final Remedy decision incorporating these conditions, or other site-specific criteria (developed for the protection of the site's surface water, sediments, and eco-systems), and referencing supporting documentation demonstrating that these criteria are not exceeded by the discharging groundwater; OR 2) Providing or referencing an interim-assessment⁵, appropriate to the potential for impact, that shows the discharge of groundwater contaminants into the surface water is (in the opinion of a trained specialists, including ecologist) adequately protective of receiving surface water, sediments, and eco-systems, until such time when a full assessment and final remedy decision can be made. Factors, which should be considered in the interim-assessment (where appropriate to help identify the impact associated with discharging groundwater) include: surface water body size, flow, use/classification/habitats and contaminant loading limits, other sources of surface water/sediment contamination, surface water and sediment sample results and comparisons to available and appropriate surface water and sediment "levels," as well as any other factors, such as effects on ecological receptors (e.g., via bio-assays/benthic surveys or site-specific ecological Risk Assessments), that the overseeing regulatory agency would deem appropriate for making the EI determination.

_____ If no - (the discharge of "contaminated" groundwater can not be shown to be "currently acceptable") - skip to #8 and enter "NO" status code, after documenting the currently unacceptable impacts to the surface water body, sediments, and/or eco-systems.

_____ If unknown - skip to 8 and enter "IN" status code.

Rationale and Reference(s):

⁴ Note, because areas of inflowing groundwater can be critical habitats (e.g., nurseries or thermal refugia) for many species, appropriate specialist (e.g., ecologist) should be included in management decisions that could eliminate these areas by significantly altering or reversing groundwater flow pathways near surface water bodies.

⁵ The understanding of the impacts of contaminated groundwater discharges into surface water bodies is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration to be reasonably certain that discharges are not causing currently unacceptable impacts to the surface waters, sediments or eco-systems.

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7. Will groundwater monitoring / measurement data (and surface water/sediment/ecological data, as necessary) be collected in the future to verify that contaminated groundwater has remained within the horizontal (or vertical, as necessary) dimensions of the "existing area of contaminated groundwater?"

_____ If yes - continue after providing or citing documentation for planned activities or future sampling/measurement events. Specifically identify the well/measurement locations, which will be tested in the future to verify the expectation (identified in #3) that groundwater contamination will not be migrating horizontally (or vertically, as necessary) beyond the "existing area of groundwater contamination."

_____ If no - enter "NO" status code in #8.

_____ If unknown - enter "IN" status code in #8.

Rationale and Reference(s):

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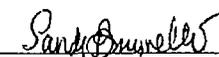
8. Check the appropriate RCRIS status codes for the Migration of Contaminated Groundwater Under Control EI (event code CA750), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (attach appropriate supporting documentation as well as a map of the facility).

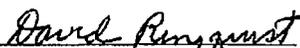
YE - Yes, "Migration of Contaminated Groundwater Under Control" has been verified. Based on a review of the information contained in this EI determination, it has been determined that the "Migration of Contaminated Groundwater" is "Under Control" at the former Columbia Magnetics facility, EPA ID # CTD 050628148, located at 15 Great Pasture Road, Danbury, Connecticut. Specifically, this determination indicates that the migration of "contaminated" groundwater is under control, and that monitoring will be conducted to confirm that contaminated groundwater remains within the "existing area of contaminated groundwater" This determination will be re-evaluated when the Agency becomes aware of significant changes at the facility.

NO - Unacceptable migration of contaminated groundwater is observed or expected.

IN - More information is needed to make a determination.

Prepared by (signature)  Date 7/30/09
(print) Mark-Peters
(title) Project Manager

DEP reviewed by (signature)  Date 8/3/09
(print) Sandy Brunelli
(title) EPA 3

DEP Supervisor (signature)  Date 8-5-09
(print) DAVID RINGQUIST
(title) SEA

(EPA Region or State) CTDEP

All References may be found at:

Connecticut Department of Environmental Protection located at 79 Elm Street, Hartford, Connecticut

DEP file room contact telephone and e-mail numbers

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GZA
GeoEnvironmental, Inc.

Engineers and
Scientists

October 31, 1996
File No. 50260.1



Mr. Kenneth Feathers
Site Remediation and Closure Division
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Connecticut Department of Environmental Protection
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Hartford, CT 06106

27 Naek Road
Vernon
Connecticut 06066
860-875-7655
FAX 860-872-2416

Re: Former Columbia Magnetics Facility
15 Great Pasture Road
Danbury, Connecticut

Dear Mr. Feathers:

On behalf of CBS Inc., GZA GeoEnvironmental, Inc. (GZA) has prepared this letter to discuss past remedial actions and groundwater monitoring at the above referenced property. The purpose of this letter is to request that DEP allow CBS Inc. to discontinue future groundwater monitoring. As further discussed below, remedial actions taken in the past at the property have resulted in improvements to groundwater quality such that quarterly groundwater monitoring data over the last several years of sampling have not indicated the presence of tested compounds in excess of Connecticut Remediation Standards Regulations for a Class GB area, such as the property.

BACKGROUND

A Subsidiary of GZA
GeoEnvironmental
Technologies, Inc.

In preparation for the sale of its Columbia Magnetics Danbury Plant, CBS Records conducted a site investigation and developed a proposed remediation plan (June 1986) to remove solvent impacted soils in four areas of concern at the plant. That Plan was initially submitted to DEP for approval in June of 1986, and was subsequently amended in November of 1986 and modified in March of 1987. The Plan was approved by DEP by letter dated April 13, 1987. In addition, a RCRA Closure Plan (November 1986) was prepared, submitted to both DEP and US EPA, and was approved by letters dated February 17, 1987 and April 7, 1987.

In accordance with the Plans, soil removal was conducted in four areas of concern. In three of the areas, excavation limit confirmation sampling data indicated that remaining soils were below site specific Action Levels which had been stipulated by the DEP. In the fourth area, soils were removed until CBS's consultant (Environmental Resources Management, Inc. [ERM]) believed that further removal would jeopardize the structural integrity of the site building. Additional subsurface explorations and testing were conducted in this fourth area



and the modified remedial action plan of March 1987 (Modified Negative Declaration Plan) was submitted to DEP. That Plan incorporated the use of a subsurface containment barrier. By letter dated April 13, 1987, DEP issued an approval to CBS to construct the containment barrier¹. By report dated July 1987², ERM documented the installation of the containment barrier and provided boring logs for groundwater monitoring wells installed downgradient of this feature. Concurrently, RCRA closure of former drum storage areas was completed. Closure certification for the drum storage area was signed by CBS Records and an independent professional engineer in May of 1987.

In October of 1987, CBS filed a Form II filing under the Connecticut Transfer Act in effect at the time. In addition, a Notice to the Deed was filed in connection to the sale of the property to alert future owners of the presence of the subsurface containment barrier and to prevent its disturbance without the approval of the Commissioner of the Department of Environmental Protection.

GROUNDWATER MONITORING

As proposed in the Modified Negative Declaration Plan and requested in a February 20, 1987 letter from DEP to CBS Records, post remedial groundwater monitoring has been conducted at the property on a quarterly basis since December 1986. Samples have been analyzed for volatile organic compounds using EPA Method 624. Table 1, attached, summarizes groundwater analytical data. Figure 1 shows sampling locations and provides a groundwater contour map for the most recent round of sampling. Analytical results and groundwater contour maps have been provided to DEP on a quarterly basis since sampling was initiated.

According to the Modified Negative Declaration Plan and DEP's February 20, 1987 letter, DEP was to have reviewed the need to continue monitoring on an annual basis. To our knowledge, DEP has not specifically reviewed this need. To date, forty rounds of groundwater samples have been obtained from monitor wells located at the 15 Great Pasture Road property. The most recent round of sampling was conducted on September 12, 1996 and results were provided to DEP in a report dated October 4, 1996.

To assess site groundwater quality and the need for continued monitoring, we compared historic analytical results to site specific Action Levels stipulated by DEP in 1987 and to Connecticut's Remediation Standard Regulations (RSRs) which were adopted in January 1996. Relevant criteria in the RSRs include Surface Water Protection Criteria and Volatilization Criteria. Since the site is in a Class GB groundwater area and the area is served by public water mains, the RSR Groundwater Protection Criteria would typically not apply,

¹ Letter from Mr. David Rinquist, CT DEP to Mr. Raymond Hughes, CBS Records, April 13, 1987.

² "Completion of Required Remedial Action at the Columbia Magnetics Danbury Plant Site in Preparation for Negative Declaration Filing", by Environmental Resources Management, Inc., dated July 1987 and date stamped by DEP Hazardous Materials Management Unit on August 1, 1987.

however, for informational purposes, we also compared site groundwater data to GWPC. All historic exceedances of relevant criteria and GWPC are listed on Table 2, attached.

As demonstrated by Table 2, Action Levels approved for site remediation by DEP in 1987 and numeric Volatilization Criteria listed within the January 1996 RSRs have not been exceeded in groundwater since September of 1991. Numeric Surface Water Protection Criteria listed within the RSR have never been exceeded since groundwater sampling was initiated. Numeric Groundwater Protection Criteria (GWPC) listed in the RSRs are not directly relevant to the site, as discussed above, however it is pertinent to note that GWPC have also not been confirmed to have been exceeded in site samples since September of 1991. In September of 1994 and June of 1996, laboratory results indicated a number of samples (6 in 9/94 and 2 in 6/96) contained methylene chloride slightly above GWPC, however during both sampling periods, methylene chloride was also detected in field blank samples at similar concentrations, indicating that the methylene chloride was due to sampling or laboratory anomaly rather than reflective of site groundwater quality. Methylene chloride was not used in past Site operations.



DISCUSSION

As described within the RSRs (Section 22a-133k-3(g)(3)(B)), "Unless otherwise specified in writing by the Commissioner, ground-water monitoring in a GB area may be discontinued two years after the cessation of all remediation of such ground-water or soil if the applicable surface-water protection and volatilization criteria have been met in accordance with subsection (f) of this section, and such groundwater is suitable for all existing uses." As demonstrated above and on the attached Tables, applicable criteria have been met in groundwater since September of 1991. Groundwater is not used for potable supply at the site or in the near vicinity. To the best of our knowledge, site groundwater is suitable for all existing uses. However, as noted above, by letter dated February 20, 1987, Mr. David Rinqest of the DEP had requested quarterly groundwater monitoring with annual data review by DEP. Groundwater monitoring for an unspecified period of time had been incorporated into the remedial plan which DEP subsequently approved (April 13, 1987). Because a representative of the Commissioner had specified a groundwater monitoring program in writing which differs from that contained within the RSRs, written approval of the Commissioner may technically be necessary to discontinue groundwater monitoring.

REQUEST TO DISCONTINUE MONITORING

Based on the fact that groundwater quality at 15 Great Pasture Road property currently meets the Action Levels initially approved by DEP and RSR criteria, and has met such criteria for the past five years, GZA GeoEnvironmental, Inc. on behalf of CBS Inc. hereby requests the Commissioner's Approval to discontinue groundwater monitoring at 15 Great Pasture Road

in Danbury, Connecticut. Upon receipt of approval monitoring wells would be sealed and closed.

Should you have any questions regarding the information provided above or comments regarding the request to discontinue groundwater monitoring, please feel free to call the undersigned or Mr. Joseph Horowitz, Director, Environmental Engineering, CBS Inc. (1-(212) 975-2933) at your convenience. The next round of groundwater monitoring is scheduled for December. Since we believe that the monitoring would serve no useful purpose, we hope that you can respond to this request at your earliest convenience. Unless I hear from you sooner, I will call you the week of November 11, 1996 to discuss this request in more detail.

Thank you for your consideration.

Very truly yours,
GZA GeoEnvironmental, Inc.

Kathleen A. Cyr
Associate Principal

Gary J. Cluen
Consultant/Reviewer

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cc: Mr. Joseph Horowitz
CBS Inc.
51 West 52nd Street
New York, NY 10019

Mr. Roger E. Wills Jr., Esq.
Assistant General Counsel
Westinghouse Electric Corporation
Westinghouse Building
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Pittsburgh, PA 15222

TABLES

TABLE 1
HISTORIC SUMMARY OF ANALYTICAL RESULTS
Former Columbia Magnetics Facility, Danbury, Connecticut
Results reported in parts per million (ppm)
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WELL NO.	NOTES	DATE	THF	TOLUENE	XYLENE	MEK	MIBK	ETHYL BENZENE	METHYLENE CHLORIDE
MW-1D	(1)	12/16/86	ND	ND	ND	ND	ND	ND	-
	(1)	01/14/87	ND	ND	ND	ND	ND	ND	-
	(1)	04/14/87	ND	ND	ND	ND	ND	ND	-
	(1)	07/22/87	ND	ND	ND	ND	ND	ND	-
	(2,3)	10/23/87	-	ND	0.09	ND	ND	0.020	0.180
	(2)	02/22/88	ND	ND	ND	ND	ND	ND	ND
	(2)	06/07/88	ND	ND	ND	ND	ND	ND	ND
	(4)	10/12/88	ND	ND	ND	ND	ND	ND	ND
	(4)	12/29/88	ND	ND	ND	ND	ND	ND	ND
	(4)	03/10/89	ND	ND	ND	ND	ND	ND	ND
	(4)	06/13/89	ND	ND	ND	ND	ND	ND	ND
	(4)	09/22/89	ND	ND	ND	ND	ND	ND	ND
	(4)	12/21/89	ND	ND	ND	ND	ND	ND	ND
	(4)	03/08/90	ND	ND	ND	ND	ND	ND	ND
	(4)	06/11/90	ND	ND	ND	ND	ND	ND	ND
	(4)	09/28/90	ND	ND	ND	ND	ND	ND	ND
	(7)	12/10/90	ND	ND	ND	ND	ND	ND	ND
	(7)	03/26/91	ND	ND	ND	ND	ND	ND	ND
	(7)	06/28/91	ND	ND	ND	ND	ND	ND	ND
	(7)	09/19/91	ND	ND	ND	ND	ND	ND	ND
	(7)	12/05/91	ND	ND	ND	ND	ND	ND	ND
	(7)	3/26/92	ND	ND	ND	ND	ND	ND	ND
	(7)	06/26/92	ND	ND	ND	ND	ND	ND	ND
	(7)	09/23/92	ND	ND	ND	ND	ND	ND	ND
	(7)	12/08/92	ND	ND	ND	ND	ND	ND	ND

TABLE 1
HISTORIC SUMMARY OF ANALYTICAL RESULTS
Former Columbia Magnetics Facility, Danbury, Connecticut
Results reported in parts per million (ppm)
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WELL NO.	NOTES	DATE	THF	TOLUENE	XYLENE	MEK	MIBK	ETHYL BENZENE	METHYLENE CHLORIDE
	(7)	03/02/93	ND	ND	ND	ND	ND	ND	ND
	(7)	06/02/93	ND	ND	ND	ND	ND	ND	ND
	(7)	09/03/93	ND	ND	ND	ND	ND	ND	ND
	(7)	12/06/93	ND	ND	ND	ND	ND	ND	ND
	(6,7)	03/23/94	ND	ND	ND	ND	ND	ND	(0.0032)
	(7)	06/06/94	ND	ND	ND	ND	ND	ND	ND
	(6,7)	09/15/94	ND	ND	ND	ND	ND	ND	(0.0086)
	(7)	12/19/94	ND	ND	ND	ND	ND	ND	ND
	(6,7)	03/15/95	ND	ND	ND	ND	ND	ND	(0.0022)
	(7)	06/28/95	ND	ND	ND	ND	ND	ND	ND
	(6,7)	09/25/95	ND	ND	ND	ND	ND	ND	(0.0020)
	(7)	12/11/95	ND	ND	ND	ND	ND	ND	ND
	(7)	03/05/96	ND	ND	ND	ND	ND	ND	ND
	(7)	06/05/96	ND	ND	ND	ND	ND	ND	ND
	(7)	09/12/96	ND	ND	ND	ND	ND	ND	ND
MW-2S		06/07/87 to present	Well dry or containing insufficient water to sample	--	--	--	--	--	--
MW-2D		12/16/86	ND	ND	ND	ND	ND	ND	--
		01/14/87	ND	ND	ND	ND	ND	ND	ND
		04/14/87	ND	ND	ND	ND	ND	ND	ND
		07/22/87	ND	ND	ND	ND	ND	ND	0.0028
		10/23/87	--	ND	ND	ND	ND	0.024	0.16
		02/22/88	ND	ND	ND	ND	ND	ND	ND
		06/07/88	ND	ND	ND	ND	ND	ND	ND
		10/12/88	ND	ND	ND	ND	ND	ND	ND
	(5)	12/29/88	0.040	0.006	ND	ND	ND	ND	ND

TABLE 1
HISTORIC SUMMARY OF ANALYTICAL RESULTS
Former Columbia Magnetics Facility, Danbury, Connecticut
Results reported in parts per million (ppm)
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WELL NO.	NOTES	DATE	THF	TOLUENE	XYLENE	MEK	MIBK	ETHYL BENZENE	METHYLENE CHLORIDE
		03/10/89	ND	ND	ND	ND	ND	ND	ND
		06/13/89	ND	ND	ND	ND	ND	ND	ND
		09/22/89	ND	ND	ND	ND	ND	ND	ND
	(6)	12/21/89	ND	ND	ND	ND	ND	ND	0.003
		03/08/90	ND	ND	ND	ND	ND	ND	ND
	(6)	06/11/90	ND	ND	ND	ND	ND	ND	0.032
		09/28/90	ND	ND	ND	ND	ND	ND	ND
	(7)	12/10/90	ND	ND	ND	ND	ND	ND	ND
	(7)	03/26/91	ND	ND	ND	ND	ND	ND	ND
	(7)	09/19/91	ND	ND	ND	ND	ND	ND	ND
	(7)	06/28/91	ND	ND	ND	ND	ND	ND	ND
	(7)	09/19/91	ND	ND	ND	ND	ND	ND	ND
	(7)	12/05/91	ND	ND	ND	ND	ND	ND	ND
	(7)	03/26/92	ND	ND	ND	ND	ND	ND	ND
	-	06/26/92	Well inaccessible	-	-	-	-	-	-
	(7)	09/23/92	ND	ND	ND	ND	ND	ND	ND
	(7)	12/08/92	ND	ND	ND	ND	ND	ND	ND
	(7)	03/02/93	ND	ND	ND	ND	ND	ND	ND
	(7)	06/02/93	ND	ND	ND	ND	ND	ND	ND
	Other VOCs 0.0024 ppm (7), (10)	09/03/93	ND	ND	ND	ND	ND	ND	ND
	(7)	12/06/93	ND	ND	ND	ND	ND	ND	ND
	(6,7)	03/23/94	ND	ND	ND	ND	ND	ND	(0.0027)
	(7)	06/06/94	ND	ND	ND	ND	ND	ND	ND

TABLE 1
HISTORIC SUMMARY OF ANALYTICAL RESULTS
Former Columbia Magnetics Facility, Danbury, Connecticut
Results reported in parts per million (ppm)
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WELL NO.	NOTES	DATE	THF	TOLUENE	XYLENE	MEK	MIBK	ETHYL BENZENE	METHYLENE CHLORIDE
	(6,7)	09/15/94	ND	ND	ND	ND	ND	ND	(0.0098)
	(7)	12/19/94	ND	ND	ND	ND	ND	ND	ND
	(6,7)	03/15/95	ND	ND	ND	ND	ND	ND	(0.0042)
	(7)	06/28/95	ND	ND	ND	ND	ND	ND	ND
	(6,7)	09/25/95	ND	ND	ND	ND	ND	ND	(0.0023)
	(7)	12/11/95	ND	ND	ND	ND	ND	ND	ND
	(7)	03/05/96	ND	ND	ND	ND	ND	ND	ND
	(7)	06/05/96	ND	ND	ND	ND	ND	ND	ND
	(7)	09/12/96	ND	ND	ND	ND	ND	ND	ND
MW-3D		12/16/86	16	0.126	0.018	ND	ND	0.011	-
		01/14/87	12	8.1	ND	ND	ND	ND	ND
		04/14/87	4	0.9	0.016	ND	ND	0.001	ND
		07/22/87	9	0.034	0.027	ND	ND	0.015	ND
		10/23/87	--	ND	0.032	ND	ND	ND	0.16
		02/22/88	8.5	0.90	0.220	ND	ND	ND	ND
		06/07/88	0.105	ND	ND	ND	ND	ND	-
		10/12/88	2.44	ND	0.007	ND	ND	ND	ND
	(5)	12/29/88	2.5	0.005	0.007	ND	ND	ND	ND
		03/10/89	0.089 (0.076 dup.)	ND	<0.002	ND	ND	ND	ND
		06/13/89	1.05	ND	ND	ND	ND	ND	ND
		09/22/89	0.482	ND	ND	ND	ND	ND	ND
		12/21/89	0.570	ND	ND	ND	ND	ND	ND
		03/08/90	0.206	ND	ND	ND	ND	ND	ND
		06/11/90	0.350	ND	ND	ND	ND	ND	ND
		09/28/90	0.130	ND	ND	ND	ND	ND	ND

TABLE 1
HISTORIC SUMMARY OF ANALYTICAL RESULTS
Former Columbia Magnetics Facility, Danbury, Connecticut
Results reported in parts per million (ppm)
Page 5 of 11

WELL NO.	NOTES	DATE	THF	TOLUENE	XYLENE	MEK	MIBK	ETHYL BENZENE	METHYLENE CHLORIDE
	(7)	12/10/90	0.340	ND	ND	ND	ND	ND	ND
	(7)	03/26/91	0.490	ND	ND	ND	ND	ND	ND
	(7)	06/28/91	0.280	ND	ND	ND	ND	ND	ND
	(7)	09/19/91	0.360	ND	ND	ND	ND	ND	ND
	(7)	12/05/91	1.400	ND	ND	ND	0.017	ND	ND
	(7)	03/26/92	0.352	ND	ND	ND	ND	ND	ND
	(7)	06/26/92	0.188	ND	ND	ND	ND	ND	ND
	(7), (8)	09/23/92	0.331	ND	ND	ND	ND	ND	ND
	(7)	12/08/92	0.902	ND	ND	ND	ND	ND	ND
	(7)	03/02/93	0.096	ND	ND	ND	ND	ND	ND
	(7)	06/02/93	0.200	ND	ND	ND	ND	ND	ND
	(7)	09/03/93	0.140	ND	ND	ND	ND	ND	ND
	(7)	12/06/93	0.210	ND	ND	ND	ND	ND	ND
	(6,7)	03/23/94	0.210	ND	ND	ND	ND	ND	(0.0033)
	(7)	06/06/94	0.110	ND	ND	ND	ND	ND	ND
	(6,7)	09/15/94	0.110	ND	ND	ND	ND	ND	(0.019)
	(7)	12/19/94	ND	ND	ND	ND	ND	ND	ND
	(6,7)	03/15/95	0.130	ND	ND	ND	ND	ND	(0.0023)
	(7)	06/28/95	0.064	ND	ND	ND	ND	ND	ND
	(6,7)	09/25/95	0.160	ND	ND	ND	ND	ND	(0.0027)
	(7)	12/11/95	0.130	ND	ND	ND	ND	ND	ND
	(7)	03/05/96	ND	ND	ND	ND	ND	ND	ND
	(7)	06/05/96	0.100	ND	ND	ND	ND	ND	ND
	(7)	09/12/96	ND	ND	ND	ND	ND	ND	ND

TABLE 1
HISTORIC SUMMARY OF ANALYTICAL RESULTS
Former Columbia Magnetics Facility, Danbury, Connecticut
Results reported in parts per million (ppm)
Page 7 of 11

WELL NO.	NOTES	DATE	THF	TOLUENE	XYLENE	MEK	MIBK	ETHYL BENZENE	METHYLENE CHLORIDE
	Other VOC 0.0036 (7,9)	12/08/92	ND	ND	ND	ND	ND	ND	ND
	(7)	03/02/93	ND	ND	ND	ND	ND	ND	ND
	(7)	06/02/93	ND	ND	ND	ND	ND	ND	ND
		09/03/93	Insufficient water	--	--	--	--	--	--
	(7)	12/06/93	ND	ND	ND	ND	ND	ND	ND
	(6,7)	03/23/94	ND	ND	ND	ND	ND	ND	(0.0028)
	(7)	06/06/94	ND	ND	ND	ND	ND	ND	ND
	(6,7)	09/15/94	ND	ND	ND	ND	ND	ND	(0.0057)
	(7)	12/19/94	ND	ND	ND	ND	ND	ND	ND
	(6,7)	03/15/95	ND	ND	ND	ND	ND	ND	(0.0041)
		06/28/95	Insufficient recharge	--	--	--	--	--	--
		09/25/95	Dry	--	--	--	--	--	--
	(7)	12/11/95	ND	ND	ND	ND	ND	ND	ND
	(7)	03/05/96	ND	ND	ND	ND	ND	ND	ND
	(6,7)	06/05/96	ND	ND	ND	ND	ND	ND	(0.0040)
	(7)	09/12/96	ND	ND	ND	ND	ND	ND	ND
MW-4D		12/16/86	ND	ND	ND	ND	ND	ND	--
		01/14/87	0.03	ND	ND	ND	ND	ND	0.015
		04/14/87	ND	ND	ND	ND	ND	ND	ND
		07/22/87	ND	ND	ND	ND	ND	ND	ND
		10/23/87	--	ND	ND	ND	ND	0.025	0.240
		02/22/88	ND	ND	ND	ND	ND	ND	ND
		06/07/88	2.10	ND	0.038	ND	ND	ND	ND

TABLE 1
HISTORIC SUMMARY OF ANALYTICAL RESULTS
Former Columbia Magnetics Facility, Danbury, Connecticut
Results reported in parts per million (ppm)

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WELL NO.	NOTES	DATE	THF	TOLUENE	XYLENE	MEK	MIBK	ETHYL-BENZENE	METHYLENE CHLORIDE
	(7)	06/06/94	ND	ND	ND	ND	ND	ND	ND
	(6,7)	09/15/94	ND	ND	ND	ND	ND	ND	(0.0076)
	(7)	12/19/94	ND	ND	ND	ND	ND	ND	ND
	(6,7)	03/15/95	ND	ND	ND	ND	ND	ND	(0.0027)
	(7)	06/28/95	ND	ND	ND	ND	ND	ND	ND
	(7)	09/25/95	ND	ND	ND	ND	ND	ND	(0.0028)
	(7)	12/11/95	ND	ND	ND	ND	ND	ND	ND
	(7)	03/05/96	ND	ND	ND	ND	ND	ND	ND
	(6,7)	06/05/96	ND	ND	ND	ND	ND	ND	(0.0075)
	(7)	09/12/96	ND	ND	ND	ND	ND	ND	ND
MW-5		All samples except those below	Dry	--	--	--	--	--	--
		06/13/89	ND	ND	ND	ND	ND	ND	ND
MW-6		07/22/87	5	48.9	0.50	ND	ND	0.024	0.2
		10/12/88	Insufficient water	--	--	--	--	--	--
		12/29/88	8.1	50.8	0.14	ND	ND	ND	ND
		03/10/89	ND (28.9 dup.)	34.2	ND	ND	ND	ND	ND
		06/13/89	5.8	50.5	ND	ND	ND	ND	ND
		09/22/89	8.0	86	ND	ND	ND	ND	ND
		12/21/89	ND	6.4	ND	ND	ND	ND	ND
		03/08/90	2.35	2.6	ND	ND	ND	ND	ND
		06/11/90	1.90	12.0	ND	ND	ND	ND	ND
		09/28/90	4.30	3.3	ND	ND	ND	ND	0.160
	(7)	12/10/90	1.50	3.9	ND	ND	ND	ND	ND

TABLE 1
HISTORIC SUMMARY OF ANALYTICAL RESULTS
Former Columbia Magnetics Facility, Danbury, Connecticut
Results reported in parts per million (ppm)
Page 10 of 11

WELL NO.	NOTES	DATE	THF	TOLUENE	XYLENE	MEK	MIBK	ETHYL BENZENE	METHYLENE CHLORIDE
	(7)	03/26/91	<0.5	0.63	ND	ND	ND	ND	0.180
	(7)	06/28/91	.480	.010	.0082	ND	ND	ND	ND
	(7)	09/19/91	2.90	46.0	ND	ND	ND	ND	0.300
	(7)	12/05/91	1.60	0.95	ND	ND	ND	ND	ND
	(7)	03/26/92	0.023	0.072	0.0028	ND	ND	ND	ND
	(7)	06/26/92	ND	0.044	ND	ND	ND	ND	ND
	(7)	09/23/92	ND	0.513	0.0021	ND	ND	ND	ND
	(7)	12/08/92	0.474	0.114	ND	ND	ND	ND	ND
	(7)	03/02/93	ND	ND	ND	ND	ND	ND	ND
	(7)	06/02/93	ND	ND	ND	ND	ND	ND	ND
	(7)	09/03/93	ND	ND	ND	ND	ND	ND	ND
	(7)	12/06/93	0.068	ND	ND	ND	ND	ND	ND
	(6,7)	03/23/94	ND	0.015	ND	ND	ND	ND	(0.003)
	(7)	06/06/94	ND	ND	ND	ND	ND	ND	ND
	(6,7)	09/15/94	ND	ND	ND	ND	ND	ND	(0.0053)
	(7)	12/19/94	ND	0.033	ND	ND	ND	ND	ND
	(6,7)	03/15/95	ND	0.070	ND	ND	ND	ND	(0.0022)
	(7,11)	06/28/95	ND	0.026	ND	ND	ND	ND	(0.0022)
	(6,7)	09/25/95	ND	ND	ND	ND	ND	ND	(0.0024)
	(7)	12/11/95	ND	0.030	ND	ND	ND	ND	ND
	(7)	03/05/96	ND	ND	ND	ND	ND	ND	ND
	(6,7)	06/05/96	ND	0.034	ND	ND	ND	ND	(0.0084)
	(7)	09/12/96	ND	0.0035	ND	ND	ND	ND	ND

TABLE 1
HISTORIC SUMMARY OF ANALYTICAL RESULTS
Former Columbia Magnetics Facility, Danbury, Connecticut
Results reported in parts per million (ppm)

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WELL NO.	NOTES	DATE	THF	TOLUENE	XYLENE	MEK	MIBK	ETHYL BENZENE	METHYLENE CHLORIDE
SW-1	(4)	04/22/91	ND	ND	ND	ND	ND	ND	ND
SW-2	(4)	04/22/91	ND	ND	ND	ND	ND	ND	ND
SW-3	(4)	04/22/91	ND	ND	ND	ND	ND	ND	ND

NOTES: * = likely laboratory anomaly; - = Not Analyzed; ND = Not Detected; 1. Sampling and analyses provided by Environmental Resources Management. Data obtained from 8/12/87 letter to Columbia Magnetics; 2. Sampling and analyses by Envirote, Inc.: Data obtained from laboratory reports - as per 12/7/88 Goldberg-Zoino letter to Connecticut DEP Hazardous Materials Management Unit; 3. The 10/23/87 results indicated additional compounds present as shown on the Laboratory Report. Compounds were reported to include acetone, bromodichloromethane, chloroform, and 1,1,1-trichloroethane. Based on subsequent sampling by Envirote, that data was likely erroneous; 4. Sampling and analysis provided by Goldberg-Zoino/GZA GeoEnvironmental, Inc.; 5. The presence of toluene and tetrahydrofuran in the 12/29/88 sample MW-2D and of toluene in sample MW-3D is likely due to laboratory anomaly as these compounds were detected at similar or higher levels in a field blank sample; 6. The presence of methylene chloride in the 12/21/89 samples MW-2D and MW-4D; 6/11/90 sample MW-2D; 9/23/92 sample MW-4S; and 6/5/96 samples MW-4S, MW-4D, and MW-6 are likely due to laboratory anomaly as these compounds were detected at similar or higher levels in a field blank sample. In addition, the presence of toluene in the 12/21/89 MW-4D sample may be related to laboratory anomaly for similar reasons although the concentration in the field blank was lower (by three times). Methylene chloride was also detected in all 3/23/94, 9/15/94, 3/15/95, and 9/25/95 samples including the field blanks at similar concentrations. Its presence is therefore not reflective of groundwater quality; 7. Analysis provided by Environmental Science Corporation; 8. Bromomethane was also detected in this sample at a concentration of 0.012 ppm; 9. 1,1,1-Trichloroethane was detected in this sample (MW-4S) at a concentration of 0.0036 ppm; 10. 1,1,1-Trichloroethane was detected in this sample (MW-2D) at a concentration of 0.0024 ppm; 11. Methylene Chloride was detected in this sample and the laboratory method blank and is therefore not indicative of groundwater quality.

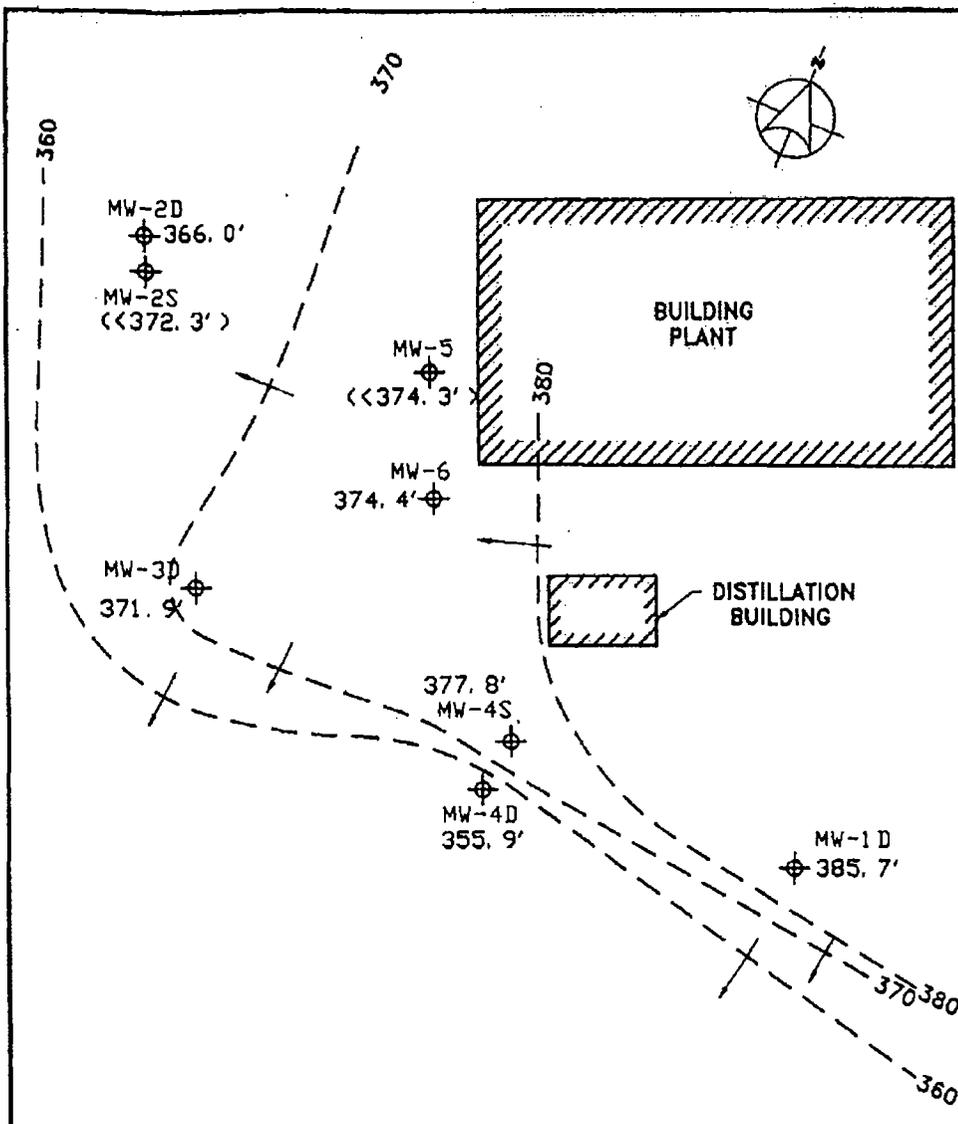
TABLE 2
HISTORIC EXCEEDANCES OF VARIOUS CRITERIA
Former Columbia Magnetics Site
Danbury, Connecticut

Location	THF	Toluene	Methylene Chloride
MW-1D	---	---	GWPC ⁽¹⁾ - 10/23/87 (GWPC - 9/15/94* ⁽²⁾)
MW-2D	---	---	GWPC - 10/23/87 GWPC - 6/11/90 (GWPC - 9/15/94*)
MW-3D	A.L. ⁽³⁾ - 12/86 to 2/88	A.L., GWPC - 1/14/87	GWPC - 10/23/87 (GWPC - 9/15/94*)
MW-4S	---	---	(GWPC - 9/15/94*)
MW-4D	---	---	GWPC - 1/14/87 GWPC - 10/23/87 (GWPC - 9/15/94*) (GWPC - 6/5/96*)
MW-6	A.L. - 12/29/88 A.L. - 3/10/89	A.L., GWPC - 7/87 to 12/90 VC ⁽⁴⁾ - 7/87 to 9/89 A.L., VC, GWPC - 9/19/91	GWPC - 7/22/87 GWPC - 9/28/90 GWPC - 3/26/91 GWPC - 9/19/91 (GWPC - 9/15/94*) (GWPC - 6/5/96*)
Remediation Standard			
Action Level	8.1 ppm	1 ppm	0.025 ppm
GWPC	None Established	1 ppm	0.005 ppm
VC	None Established	23.5 ppm	50 ppm

- (1) GWPC - Numeric Ground Water Protection Criteria from Remediation Standard Regulations (RSRs; 1/96).
- (2) * - Compound also found in field or laboratory blank at similar concentration - result considered non-representative of actual groundwater quality.
- (3) A.L. - Action Level approved by DEP in 1987 for site remediation.
- (4) VC - Numeric Volatilization Criteria from RSRs.
- (5) ppm - parts per million (mg/l)

FIGURES

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LEGEND:

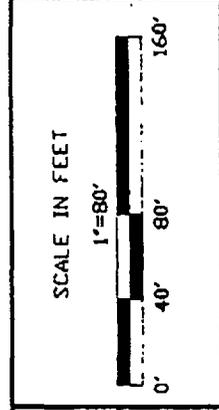
- MW-4D APPROXIMATE MONITOR WELL LOCATION
- 355.9' GROUNDWATER ELEVATION BASED ON 9/12/96 DEPTH TO WATER MEASUREMENT IN BEDROCK
- (<374.6') GROUNDWATER ELEVATION DATA NOT USED IN DEVELOPMENT OF INFERRED GROUNDWATER CONTOURS
- DIRECTION OF GROUNDWATER FLOW
- INFERRED GROUNDWATER CONTOUR

NOTES:

1. BASE MAP TAKEN INCLUDING WELL LOCATIONS FROM ERM LETTER DATED AUGUST 12, 1987.
2. GROUNDWATER CONTOURS BASED ON 9/12/96 WATER LEVEL MEASUREMENTS FROM WIDELY SPACED MONITOR WELLS AND REFERENCE ELEVATIONS TAKEN FROM THE ERM AUGUST 12, 1987 LETTER.

DESIGNED BY: C.J.T. DRAWN BY: KU/ESE
 CHECKED BY: K.A.C. SCALE: 1"=80'
 REVIEWED BY: K.A.C. DATE: SEPT. 1996

GZA GeoEnvironmental, Inc.



FORMER CBS RECORDS PLANT
 (COLUMBIA MAGNETIC)
 DANBURY, CONNECTICUT

GROUNDWATER CONTOUR MAP
 SEPTEMBER 12, 1996

PROJECT No.
50260.1

FIGURE No.
1