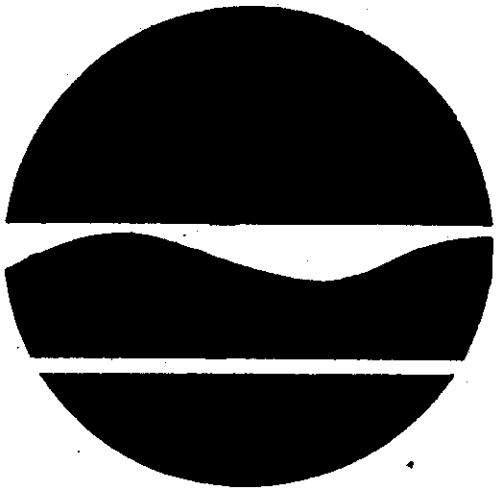
Amphenol BCO - Hill Site

Village of Sidney, Delaware County
Site Number 413003

Record of Decision



March 1993

Prepared by:
NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Region 4, 2176 Guilderland Avenue, Schenectady, N Y 12306
THOMAS C. JORLING, Commissioner

Declaration for the Record of Decision

Site Name and Location

Amphenol - BCO Hill Site, Village of Sidney, Delaware County, New York, Site ID #413003

Statement of Basis and Purpose

This decision document presents the selected remedial action for the Amphenol - BCO Hill Site, developed in accordance with the New York State Environmental Conservation Law (ECL), and is consistent with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), 42 USL Section 9601, et seq., as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA). Appendix A of this record lists the documents that comprise the Administrative Record for the Amphenol - BCO Hill Site. The documents in the Administrative Record are the basis for the selected remedial action.

Assessment of the Site

The source of the contamination, a disposal pit, was completely excavated and properly closed between 1982 and 1984. The site has residual contamination buried in the glacial till overburden and in the bedrock. The very tight soils at the site make any remediation system very expensive and ineffective. There is no health risk associated with this site.

Description of the Selected Remedy

The selected remedy for this site consists of:

1. Continued Monitoring - Monitoring at a level that is protective of human health and the environment will continue for 30 years. If sampling results from this monitoring show levels in significant excess of historical ranges, then action may be taken to correct the problem.

2. Reassessment - After a period of five years since the signing of the ROD, the site will be reexamined for any significant changes. Additionally, a search will be made for any new technologies that may be applicable to the Amphenol - BCO Hill Site.

DECLARATION

The selected remedy is designed to be protective of human health and the environment and is designed to comply with applicable State environmental quality standards and is cost effective. This remedy satisfies the Department's preference for treatment that reduces the toxicity, mobility or volume of hazardous substances, pollutants or contaminants as the principal goal.

March 24 1993
Date

Ann Hill DeBarbieri
Deputy Commissioner
Office of Environmental Remediation

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ATTACHMENTS

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
REGION 4 OFFICE
2176 Guilderland Ave, Schenectady, NY 12306

AMPHENOL-BCO HILL SITE
DELAWARE COUNTY
SITE NO. 4-13-003

SECTION 1: Site Description

The Amphenol-BCO Hill Site is a Class 2 site listed in the NYSDEC Registry of Inactive Hazardous Waste Disposal sites for New York State.

As shown in Figure 1-1, the site is located north of the NYS Route 8 and Interstate Route 88 intersection on the east side of Route 8. The original pit, now capped, where the contaminants were disposed of was about 1 acre in size.
The area where soil removal actions and the Interim Remedial Measure (IRM) occurred encompasses several more acres.
A detailed description of these areas are in the site history.

The site is approximately 1.1 miles from the Susquehanna River and the Sidney municipal well, which is located on the shores of the Susquehanna. To the east of the site is 1000 feet of wooded area, owned by Amphenol, and then a housing development. The housing development, like the rest of Sidney, is on municipal water. Access to the site is extremely limited; in addition to the wooded area the site is bounded on the west by Route 8 and on the south by Route 88. Figure 1 shows all of the monitoring points associated with this site. Figure 2 is a ground water contour map of the overburden; Figure 3 is an isoconcentration map of contaminant levels in the overburden.

SECTION 2: Site History

From about 1951 to 1964, Bendix disposed of waste oils and volatile organic compounds (VOCs) at a waste disposal pit located about a quarter mile from the Bendix plant on Bendix property. The waste materials were collected in barrels and drums at the Bendix plant, transported to the site by Bendix employees in company owned vehicles, deposited in the pit and thereafter occasionally burned. Bendix discontinued the use of the pit in 1964.

In 1979, Amphenol investigated the pit and reported it as a problem to the NYSDEC. It was subsequently listed as an inactive hazardous waste site.
The history of the Hill Site remediation is more than 10 years old and includes three construction events. A chronology of the site follows:

1981-1982 A Phase I investigation was completed, establishing the presence of VOCs in the groundwater and PCBs in the soil. In February 1982, 14 shallow borings were made to describe the occurrence of oil in the on site sediments and to collect soil samples for PCB and VOC analysis. After free oil was found in one of the borings, seven of the borings were turned into monitoring wells set in the overburden.

In October 1982, a Source Removal Plan (SRP) was submitted to the DEC and approved. During November/December 1982, the SRP was performed; a total of 4,300 cubic yards of VOC and PCB contaminated soil was removed from the waste pit and taken to a secure landfill. The size of the excavation grew from the original disposal area size of 25 by 50 feet to a final excavation of 45

by 90 by 16 feet deep. All visibly stained sediments in the pit were removed, along with all soil in the unsaturated zone below the pit. The source removal program was accomplished by removing the soil in layers, mixing it in the excavation, solidifying it, and stockpiling the soil prior to transportation. The PCB concentration decreased noticeably as the excavation deepened. Virtually all of the soil containing oil was excavated at land surface and in the upper few feet of the till. The permeability characteristics of the glacial till were the controlling factors for the vertical distribution of oil and PCBs. The excavation was enlarged to remove all traces of entrained oil, until no evidence of oil was visible in the walls or floor of the final excavation. After completion of the soil removal, detailed sampling of the walls and floor of the excavation was conducted. A total of 83 samples were analyzed to determine the PCB content of the walls and the sediments to a depth of fifteen feet below the excavation floor. Samples from the excavation walls indicate that, except for a layer of grey silt on the west wall, the PCB content of the soils was generally less than 10 ppm and none exceeded 25 ppm.

1982-1983 A Phase II investigation was performed at the site. Eighteen new overburden monitoring wells and one boring were drilled. The wells were clustered in groups and soil and water sampling and aquifer testing done. In September 1983, a second SRP was approved by the DEC. During September and October an additional 1,650 cubic yards of VOC and PCB contaminated soils were removed from the sixty by eighty foot west side of the pit and taken to a secure landfill in Niagara Falls. Excavation was completed to approximately eight feet below grade.

1984 In January, the Phase II pit was filled with clean soil. A pit closure design was submitted to the DEC and approved. In September and October a pit closure and capping operation was completed at the Hill Site. All contaminated water was removed from the pit.

Placement and compaction to previous elevations was done using NYSDOT standard specification material. Two six inch diameter monitoring sumps constructed of stainless steel well screen were installed. The pit was securely capped to minimize infiltration of water through the residual soil contaminants. A thirty-mil thick high density polyethylene liner was installed atop a one foot thick compacted clay unit.

To divert overland runoff from the pit area, drainage ditches were dug.

Elimination of the pit resulted in the cessation of the discharge of volatile organics and PCBs to the ground water system.

In October 1984, a total of ten sampling trenches were dug to establish the migration of PCBs in the soils north and west of the disposal pit.

1985-1990 Installation of several new monitoring wells and continued monitoring of existing wells and seeps.

1990 In July and August an Interim Remedial Measure (IRM) was done at the Hill Site. The IRM intercepted a hillside spring (flow approximately .8 gpm) before the spring surfaced and flowed down a Route 8 drainage ditch. This action eliminated the potential for exposure to VOC contaminated water. The water from the former spring was connected to a subsurface drain field, approximately 1,250 square feet in area, constructed on the east side of Route 8. The water no longer surfaces and instead flows under Route 8 following the general trend of ground water in the area. Also, a trench in the Route 8 drainage way was excavated. A section approximately 150 ft. long by 3 ft. wide by 2 ft. deep was dug up to remove sediment with PCB levels of between 70 ppm and non-detectable. Since this IRM the Hill Site has undergone quarterly monitoring.

SECTION 3: Site Geology

The Hill Site is situated on the eastern edge of the Susquehanna River Valley in Sidney, New York. The strata at the site consists of

glacial deposits overlying Devonian age shales, siltstones, and sandstones at depths ranging from 38 to 110 feet below surface. The Hill Site disposal pit area is located on glacial till which was deposited directly from glacial ice without significant sorting by water. This process created poorly sorted, very dense sediments with low permeability.

The glacial till unit consists of several distinct sub-units, each varying in color, composition, density and water content. The principal till unit is dense red till of compacted silt with varying amounts of embedded coarse sand and gravel. In most areas, this unit directly overlies the bedrock; under the disposal pit it is approximately 65 feet thick and is very hard. Till of this type typically has a very low hydraulic conductivity, an average value of around .077 feet per day. Conductivities of this range make groundwater recovery ineffective and very difficult.

Bedrock strata consists of a dense, grey siltstone underlain by a more fissile, but dense, red shale with some grey siltstone interbeds.

SECTION 4: Enforcement Status

A Consent Order was signed by the NYSDEC Commissioner on October 14, 1986. This Consent Order required Amphenol to investigate the possibility of improper disposal of hazardous waste done in the past and to initiate a remedial program to correct any problems found at the site.

SECTION 5: Remedial Investigation Findings:

In August 1985 a Remedial Investigation (RI) was done by ERM, Inc., at Amphenol's direction. The following summarizes the conclusions of the RI.

5.1 Groundwater at the Hill Site occurs under unconfined conditions in glacial till deposits and in partially confined conditions in the underlying bedrock. See Table 1 for Hill Site groundwater elevations.

5.2 The shallow groundwater flow component is the pathway of migration for a portion of the volatile organic solvents and all of the PCBs and oils at the site, flowing northward and then westward beneath Route 8.

5.3 The deeper flow component flows vertically downward beneath the former disposal pit, and proceeds northward and then northwestward, seeping in small quantities from the construction cut behind K-Mart.

5.4 There is no transfer of PCB contamination between the overburden and the bedrock aquifer. The contamination level of VOCs in the bedrock aquifer is an order of magnitude less than in the overburden. For example, well 83-1 is the most contaminated bedrock well at 710 ppb whereas well B-1, an overburden shallow well has a level of 13,357 ppb (third quarter 1992, sampling results).

5.5 A fringe of the plume surfaces approximately 800 feet west of the site, in the construction cut behind K-Mart, in concentrations ranging in the 100s of ppb or less. These discharges are extremely low volume, seasonal seeps, whose concentration values have remained constant or decreased slightly over the past several years. During summer and other times of low precipitation some of the seeps actually cease to flow. See Table 2 for recent monitoring results at the Hill Site.

5.6 The excavation and secure closure of the Hill Site disposal pit eliminated the source of the PCBs and the VOCs to the groundwater.

5.7 Sampling done in ten backhoe trenches, excavated in 1984, show PCB contamination up to 150 feet north of the original disposal pit. Samples had levels from non-detectable to 340 parts per million (ppm). The randomness of these PCB samples suggests spillage of oils enroute to the original disposal pit rather than dumping in areas outside of the disposal pit. However, the removal of all free oil from the subsurface

has eliminated the migration of PCBs from the site.

5.8 The VOCs in the groundwater associated with the Hill Site occupy a low to no impact environment, presenting no significant risk to human health or aquatic ecosystems. That is, there is no ground water use (i.e. wells) in the area.

Additionally, local ordinances prohibit any future well drilling. This ensures that groundwater cannot be utilized in any way within the Village of Sidney, eliminating the already remote opportunity for the public to come in contact with it. Accidental contact with the extremely low contaminant levels of the K-Mart seeps is nearly impossible. The seeps have such a low flow that they are literally only moisture on rocks or non-existent for a portion of the year. Additionally, the seeps are located on a rock cut behind K-Mart next to a truck delivery access way.

SECTION 6: Risk Assessment

The following is a risk assessment of the Hill Site prior to the 1990 IRM.

6.1 Conditions in the overburden exceeds the NYSDEC standards for TCE, benzene, and PCBs in groundwater. The groundwater standard for Trichloroethylene (TCE) is exceeded occasionally off site in the bedrock aquifer.

6.2 Noncarcinogenic risk at the Hill Site is below the minimum levels established for hazardous waste sites. A noncarcinogenic risk assumes that multiple subthreshold exposures could result in an adverse effect and that the magnitude of the adverse effect will be proportional to the sum of the ratios of the subthreshold exposures to acceptable exposures.

The calculated subchronic and chronic noncarcinogenic risk for the ambient conditions at this site are approximately 1.37×10^{-2} and 5.67×10^{-3}, respectively. Under EPA guidelines for evaluating exposures at CERCLA sites, risks greater than 1 are unacceptable and risks less than 1 are acceptable. Thus, the noncarcinogenic risk associated with the Hill Site is acceptable.

6.3 Prior to the 1990 IRM, the ambient site conditions represented a potential carcinogenic risk level within the EPA's potentially acceptable range of 1×10^{-7} to 1×10^{-4}.
The elimination of the PCB exposures in surface soils and Route 8 drainage sediments (done in the IRM), and elimination of the Hill Site Spring, results in an overall carcinogenic risk level well below the target level of 1×10^{-6}.

SECTION 7: Remedial Alternatives

In order to address the need for remediation at the Hill Site, a Feasibility Study which reviewed many technologies and ultimately resulted in the formulation and evaluation of several site specific groundwater alternatives.
The following are the groundwater alternatives. For a cost analysis of each proposal, refer to Table 3.

7.1 No Further Action This alternative would not require any more construction at the site. Under this alternative, monitoring of the site and adjacent seeps would continue for at least thirty years at a level to assure protection of human health and the environment. After a period of five years after the signing of the ROD, the site will then be reevaluated for significant changes in sample results and the potential for the use of new technologies in the remediation of the site.

7.2 Collection via Recovery Wells In this alternative, a large diameter recovery well or several small diameter wells would be installed in the glacial till downgradient of the former disposal pit in areas of high contamination. This alternative would require special engineering consideration due to the very tight soil in the area and to prevent silting of the wells.

7.3 Collection via Shallow

Interceptor Trench East of Route 8 This alternative would entail the installation of a 400 foot long by 20 foot deep groundwater trench and sump system. The trench would intercept any shallow ground water contamination after it has migrated from the Hill Site but before it reaches Route 8.

7.4 Collection via Shallow Interceptor Trench West of Route 8 This alternative would entail the installation of a 400 to 600 foot long groundwater trench and sump system. The trench would intercept any shallow groundwater contamination after it has migrated from the Hill Site and passed beneath Route 8.

7.5 Construction of Slurry Walls The bedrock surface could be used as a basal unit for the slurry wall. Slurry walls of two different depths could be used: a shallow wall (20 feet deep) to contain shallow flow or a deep wall up to 90 feet to cut off all migration. The slurry wall would be made of a soil/bentonite mixture. The slurry wall would be used to contain contaminated ground water which would then be treated and discarded.

SECTION 8: Evaluation of Remedial Alternatives

The alternatives were evaluated with respect to five criteria. Those five criteria are as follows:

Overall Protection of Human Health and the Environment - The various remedial alternatives were evaluated as to whether they are believed to be able to provide adequate protection of human health and the environment, once the remedial alternative has been completed.

Compliance with Clean-up Levels - The various remedial alternatives were evaluated as to whether or not they will be able to achieve the desired clean-up levels.

Reduction of Toxicity, Mobility or Volume of Contaminants - The various remedial alternatives were evaluated as to whether or not they will reduce the toxicity, mobility or volume of contaminants at the site.

Cost - The cost analysis estimates of expenditures required to complete each measure are developed in terms of capital and operation and maintenance costs. Once these figures are determined for each alternative, present worth and annual costs are calculated to facilitate comparative evaluation.

Implementability - The various remedial alternatives were evaluated as to whether they are easy, moderate or difficult to implement. There are various factors which were taken into account when determining implementability. The factors include permit requirements, availability of needed equipment, complexity of remedial systems, construction techniques/requirements and maintenance.

Efficiency - The alternatives were also evaluated for their respective efficiencies. That is, for each alternative what are its positive and/or negative effects and how effectively would the alternative remediate the problem.
The primary goal in developing a remedial strategy for a hazardous waste site is to reduce or remove the contaminants that are the source of the problem. In this case, the entire source area (disposal pit) was removed in 1982 and 1983. Additionally, the Hill Site spring and the contaminated surface sediments parallel to Rt. 8 were removed in an Interim Remedial Measure in fall, 1990.
Therefore, there is no source area to be removed, no contaminated surface sediment/soil to be removed, only contaminated groundwater. Also, this groundwater is either in bedrock or in a glacial till where transmissivity is very reduced.
The Hill Site is located in a rural area where there is no opportunity for humans to come in contact with this contaminated groundwater. All homes are on municipal water, so there is no possibility of personal wells being contaminated. Additionally, the Village of Sidney prohibits the installation of new groundwater wells. Only at the K-

Mart seeps is it possible to come in contact with very low level groundwater contamination. Even here, contact could hardly be accidental. The seeps are occasionally nonexistent, frequently nothing more than moisture on rock faces, never more than a drip. Located directly behind K-Mart next to a deliveryway, in an area with no parking or store fronts, its an unlikely location for unintentional contact.
These actions have effectively removed the health threat associated with this site.

A summary of the Feasibility Studies options are in Table 3.

SECTION 9: Selected Remedial Alternative

The Hill Site has had its contamination source removed. Also, the Hill Site spring has been diverted to a subsurface tile field and PCB contaminated sediments in the adjacent drainage have been removed. The selection of a preferred alternative is based on the current situation; A VOC contaminated glacial till where the soils are very tight and groundwater removal by any collection method would be extremely ineffective, a contaminated bedrock aquifer, and no threat to human health.
After completion of the Feasibility Study, the Remedial Alternative chosen by the NYSDEC as the most appropriate for implementation is alternative number 1, no further action. In this alternative, the NYSDEC would require Amphenol to continue to monitor at a level that will protect human health and the environment for at least thirty years after the signing of the Record of Decision. Additionally, five years after the signing of the ROD the site will be reevaluated for significant changes in sampling results and the potential for the use of new technologies in the remediation of the site.
Since the site is located in a rural area, has nontransmissive soils, and cannot impact potable water supplies, continued monitoring is a safe and practical solution.

Additionally, another inactive hazardous waste site, the Route 8 Landfill, will begin full scale remediation early in 1993.

This site is located approximately 200 yards north of the Hill Site and is hydrologically connected and downgradient. It has the same contamination problems as the Hill Site.

Remediation at the Route 8 Landfill will be interception and treatment of the overburden and pump and treat of the bedrock aquifer. It is very possible that contamination from the Hill Site bedrock aquifer will be captured by the Route 8 remediation systems and treated.

SECTION 10: Public Participation

As part of the remedial investigation process, a citizen participation plan was developed for the Hill Site. The principal objectives of the Citizen Participation Plan are: Promote public understanding of the NYSDEC's responsibilities, planning activities and remedial activities. Provide opportunities for the NYSDEC to learn from the public. Provide information that would facilitate a comprehensive remedial program, protective of both public health and the environment.

The following public participation activities have since been carried out:

A citizen participation plan has been developed and is available for inspection at the Sidney Civic Center.

A public meeting was held in Sidney in Fall, 1990 to discuss the proposed, now completed, IRM at the site.

A public meeting was held in February, 1993 to discuss the proposed remedial action plan.

SECTION 11: Legal Status

The remediation of the Amphenol Corporation's Hill Site is being completed under Administrative Order

on Consent with the Amphenol Corporation. Amphenol has complied with the Consent Order dated 1986, which outlined the requirements through the Remedial Investigation and IRM.

The remedial program carried out thus far at the Amphenol Corporation Hill Site, and the chosen remedy outlined in this document, comply with Article 27, Title 13 of the New York State Environmental Conservation Law, and with Public Law 96-510 and Public Law 99-489, the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) and the Superfund Amendments Reauthorization Act of 1986 (SARA), respectively. These laws provide the legal basis for the New York State Hazardous Site Remedial Program.

APPENDIX A

List of Documents in the Administrative Record

1. "Draft Citizen Participation Plan, Hill Site," Department of Environmental Conservation (undated)

2. "Volume I, Hydrogeologic and Soils Investigations, Remedial Investigation and Feasibility Studies at the Hill Site," ERM, Inc. - August 1987

3. "Volume II, Appendices to Hydrogeologic and Soils Investigations, remedial Investigations and Feasibilities Studies at the Hill Site," ERM, Inc. - August 1987

4. "Volume III, Risk Assessment at the Hill Site, Remedial Investigations and Feasibility Studies at the Hill Site," ERM Inc. - August 1987

5. "Volume IV, Feasibility Study for Remedial Action, Remedial Investigations and Feasibilities Studies at the Hill Site," ERM Inc. - May 1988

6. "Volume V, Interim Remedial Measures Plan, Remedial Investigations and Feasibility Studies at the Hill Site," ERM Inc. - July 1989

Figure 1-1
Site Location Map

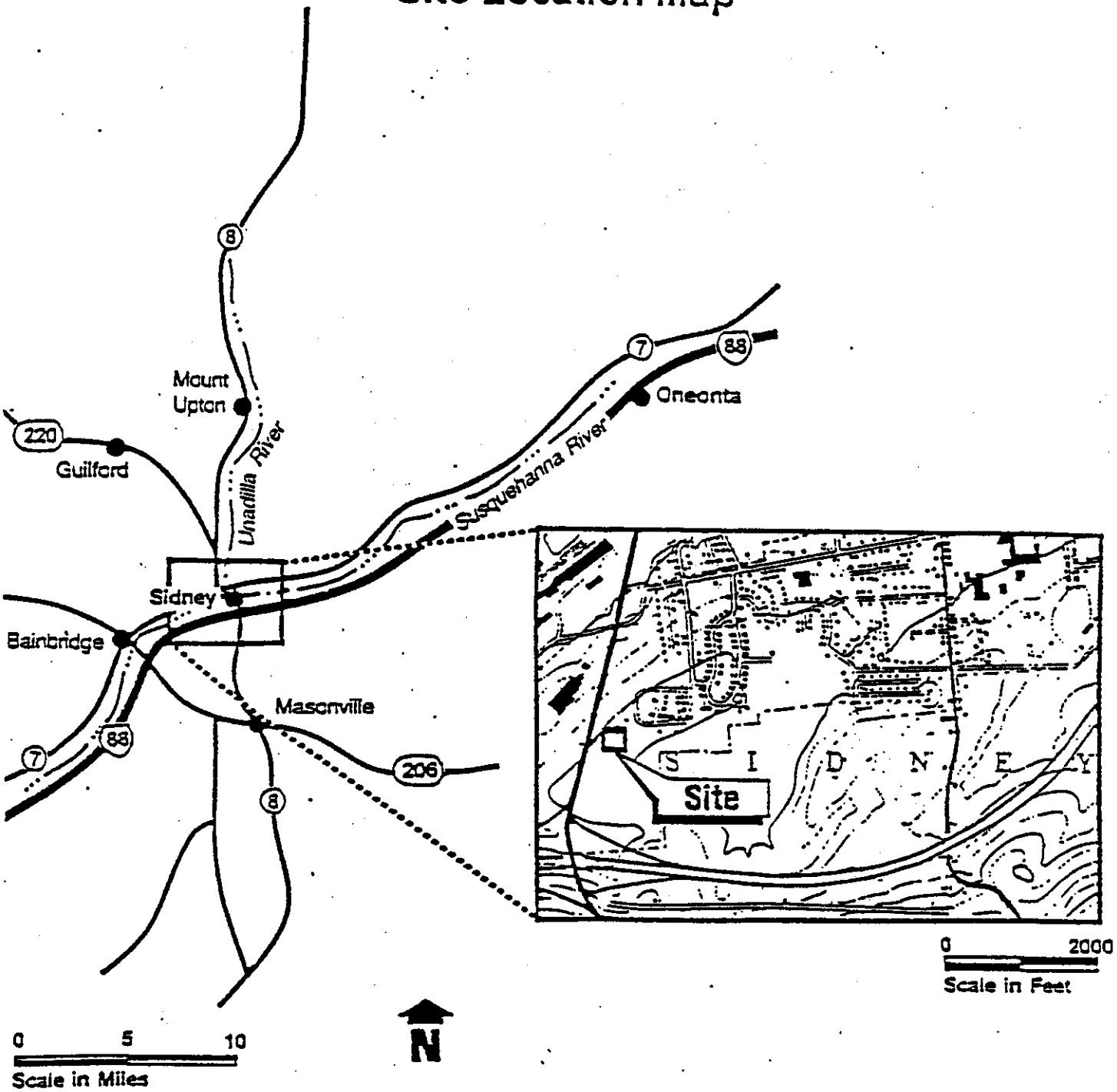

Figure 1
Monitoring Locations

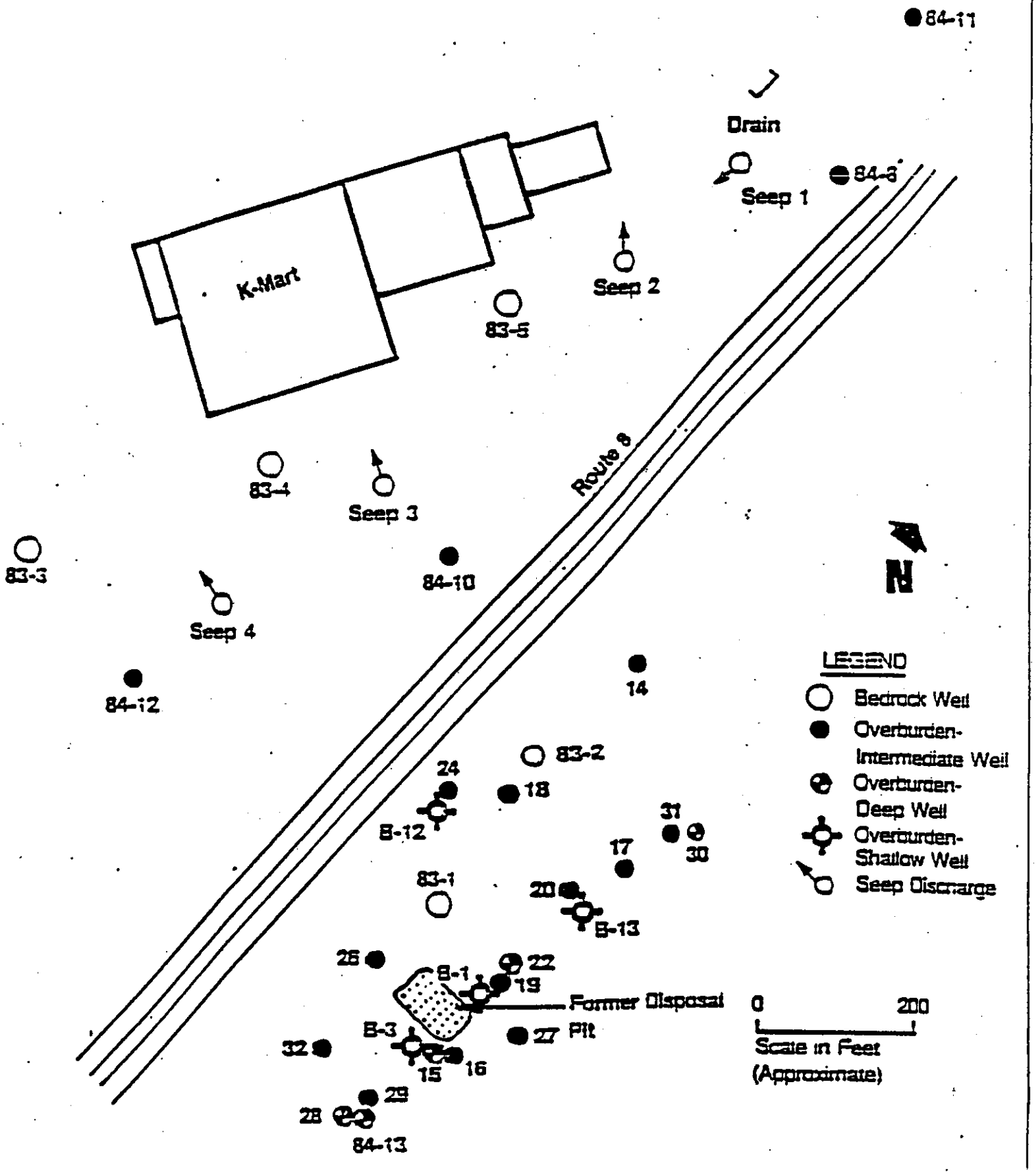

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Figure 2
Ground Water Contour Map
Intermediate Glacial Flow Component
17 September 1992

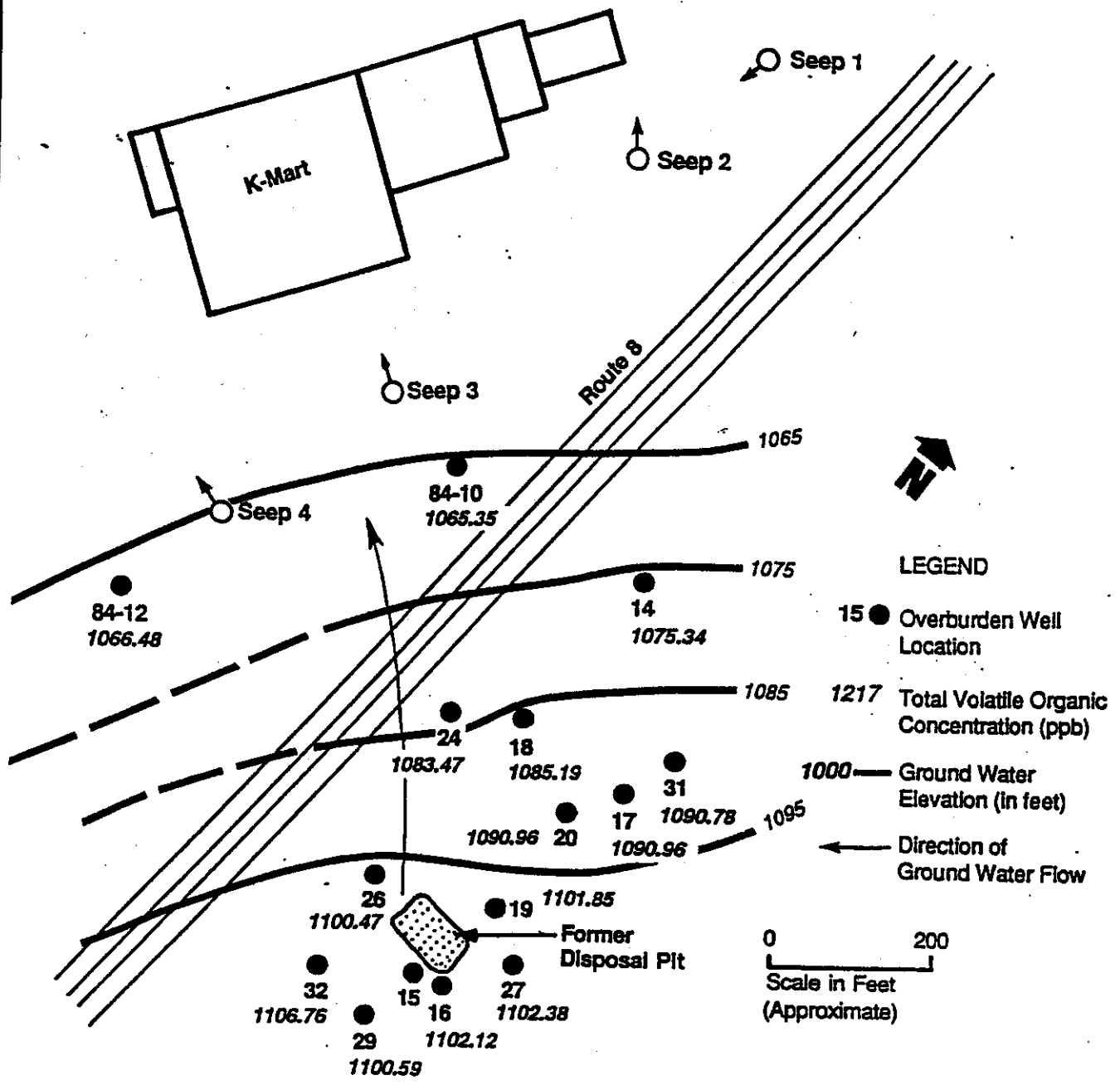
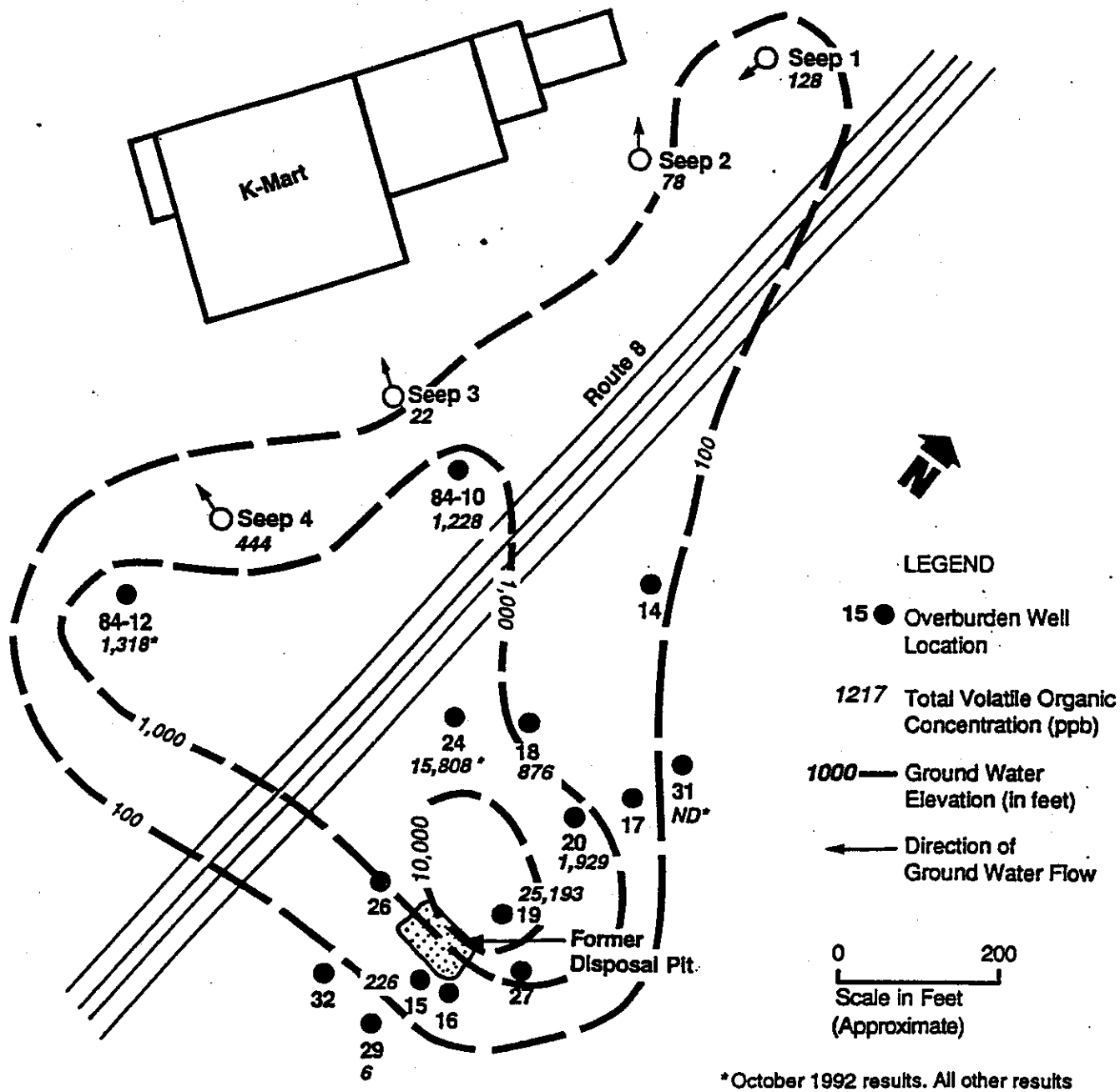


Figure 3
Isoconcentration Map
Intermediate Glacial Flow Component
September/October 1992



*October 1992 results. All other results are presented for September 1992 data.

APPENDIX C

Comparison Summary of Costs of the Various Alternatives

1. **NO FURTHER ACTION**

Capital Cost	$0
30-year Present Worth O&M Cost	$1,080,000
Total Cost (Capital plus Present Worth O&M)	$1,080,000

2. **COLLECTION VIA RECOVERY WELLS**

Capital Cost	$300,000
30-year Present Worth O&M Cost	$1,980,000
Total Cost (Capital plus Present Worth O&M)	$2,280,000

3. **COLLECTION VIA INTERCEPTOR TRENCH EAST OF RT. 8**

Capital Cost	$100,000
30-year Present Worth O&M Cost	$1,680,000
Total Cost (Capital plus Present Worth O&M)	$1,780,000

4. **COLLECTION VIA INTERCEPTOR TRENCH WEST OF RT. 8**

Capital Cost	$200,000
30-year Present Worth O&M Cost	$2,280,000
Total Cost (Capital plus Present Worth O&M)	$2,480,000

5. **CONSTRUCTION OF SLURRY WALL**

Capital Cost	$500,000
30-year Present Worth O&M Cost	$2,280,000
Total Cost (Capital plus Present Worth O&M)	$2,780,000

TABLE 1
AMPHENOL CORPORATION - HILL SITE
GROUND WATER ELEVATIONS
17 September 1992

WELL NO.	TOP OF CASING (ELEVATION- FT ABOVE MSL)	DEPTH TO WATER (FT) *	WATER LEVEL (ELEVATION- FT ABOVE MSL)
B-1	1117.74	11.22	1106.52
B-12	1102.99	9.14	1093.85
B-13	1111.60	13.51	1098.09
14	1100.33	24.99	1075.34
15	1123.72	37.60	1086.12
16	1124.32	22.20	1102.12
17	1108.97	18.01	1090.96
18	1101.91	16.72	1085.19
19	1116.44	14.59	1101.85
20	1110.25	19.29	1090.96
22	1116.54	34.70	1081.84
24	1101.31	17.84	1083.47
26	1115.78	15.31	1100.47
27	1123.53	21.15	1102.38
28	1124.05	37.71	1086.34
29	1124.26	23.67	1100.59
30	1109.26	23.70	1085.56
31	1109.40	18.62	1090.78
32	1119.88	13.12	1106.76
83-1	1118.38	34.38	1084.00
83-2	1105.24	53.96	1051.28
83-3	1038.31	11.94	1026.37
83-4	1038.13	20.92	1017.21
83-5	1027.54	21.94	1005.60
84-10	1080.97	15.62	1065.35
84-12	1073.44	6.96	1066.48
84-13	1125.88	39.46	1086.42

* SOURCE: FLI Environmental Services, Inc.

TABLE 2

RESULTS OF THIRD-QUARTER 1992 MONITORING AT THE HILL SITE

(all results in ppb)

SAMPLING POINT	B3-1	B3-2	B3-3	B3-3 *	B3-4	B3-4 *	B3-5	B4-10	B4-12	B4-12 *
Sampling Date	17-Sep-92	17-Sep-92	17-Sep-92	30-Oct-92	17-Sep-92	30-Oct-92	17-Sep-92	17-Sep-92	17-Sep-92	30-Oct-92
Total volatiles (ppb)	710	526	27	ND	103	68	20	1,228	334	1,318
Trichloroethene	361	323			12	10	3	8	96	155
Trichlorofluoromethane										
1,1,1-Trichloroethane	86	44	7		9	11	7	308		604
1,1,2-Trichloroethane										
1,1-Dichloroethene	37	30			6				10	37
cis 1,2-Dichloroethene	31	31	7		38	25	3	865	186	464
trans 1,2-Dichloroethene										
1,1-Dichloroethane	36	34			11	17	7	36	11	58
1,2-Dichloroethane	35				7				7	
trans-1,3-Dichloropropene								9		
1,2-Dichloropropane										
1,1,2,2-Tetrachloroethane						5				
Dichlorodifluoromethane	66	66	13		13				13	
Vinyl Chloride										
Methylene Chloride	36				7				7	
Chloroform	22								4	
Toluene										
Ethylbenzene										
Xylene (total)										
Bromodichloromethane										
Dibromomethane										

SAMPLING POINT	B-1	B-1 *	B-12	B-13	WELL 15	WELL 18	WELL 19	WELL 20	WELL 22
Sampling Date	17-Sep-92	30-Oct-92	17-Sep-92	17-Sep-92	17-Sep-92	17-Sep-92	17-Sep-92	17-Sep-92	17-Sep-92
Total volatiles (ppb)	13,357	19,539	9,586	4,395	226	876	25,193	1,929	27,496
Trichloroethene	322		7	2	105		4,440	52	6,180
Trichlorofluoromethane			4						
1,1,1-Trichloroethane	696	6,040		112				92	
1,1,2-Trichloroethane				8					
1,1-Dichloroethene	147	444		11		58			
cis 1,2-Dichloroethene	11,200	8,200	9110	4100		510		1,753	
trans 1,2-Dichloroethene				12					
1,1-Dichloroethane	476	724		55		73		32	
1,2-Dichloroethane				8					
trans-1,3-Dichloropropene									
1,2-Dichloropropane						60			
1,1,2,2-Tetrachloroethane									
Dichlorodifluoromethane					121	175			
Vinyl Chloride			47				99		
Methylene chloride		751		7			6,620		1,050
Chloroform	257		2	5					570
Toluene		2,810	73	3			8,860		15,200
Ethylbenzene	71	225	59	2			644		546
Xylene (total)	188	345	284	60			4,530		3,950
Bromodichloromethane									
Dibromomethane				10					

SAMPLING POINT	WELL 24	WELL 24 *	WELL 29	WELL 31	WELL 31 *	SEEP 1	SEEP 2	SEEP 3	SEEP 4
Sampling Date	17-Sep-92	30-Oct-92	17-Sep-92	17-Sep-92	30-Oct-92	17-Sep-92	17-Sep-92	17-Sep-92	17-Sep-92
Total volatiles (ppb)	4,464	15,803	6	27	ND	128	78	22	444
Trichloroethene	338	7,070				56	18		13
Trichlorofluoromethane									
1,1,1-Trichloroethane	1,030	4,960	2	7		15	9	7	
1,1,2-Trichloroethane	186								
1,1-Dichloroethene	476	349				6	6		6
cis 1,2-Dichloroethene	1,920	3,060	4	7		32	9	8	274
trans 1,2-Dichloroethene									12
1,1-Dichloroethane	232	368				8	7		109
1,2-Dichloroethane						7	7	7	7
trans-1,3-Dichloropropene									
1,2-Dichloropropane							9		
1,1,2,2-Tetrachloroethane									
Dichlorodifluoromethane	152			13			13		
Vinyl Chloride									
Methylene Chloride									
Chloroform	130					4			5
Toluene									3
Ethylbenzene									
Xylene (total)									
Bromodichloromethane									15
Dibromomethane									

NOTES: Blank spaces or ND Blank Space or ND = not detected

* - Resampled due to (1) suspected laboratory cross-contamination in the September samples and (2) initial September results appeared out of the normal historical VOC range.

TABLE 3

Summary of Remedial Alternatives Evaluated
for the Hill Site Remediation

Remedial Plan	Environment & Human Health Protected	Compliance with clean up levels	Reduction of Toxicity, Mobility and Volume	Implementa-bility	Efficiency	Cost
1. No Further Action	Y	N	-	Easy	N/A	Capital 0 O&M 1.08M
2. Collection via Recovery Wells	Y	Y	M,V	Moderate	Moderate	Capital .3M O&M 1.98M
3. Collection via shallow intercep-tor trench East of Rt.8	Y	Y	M,V	Moderate	Moderate	Capital .1M O&M 1.68M
4. Collection via Shallow Intercep-tor Trench West of Route 8	Y	Y	M,V	Difficult	Low	Capital .2M O&M 2.28M
5. Construc-tion of Slurry Wall	Y	Y	M,V	Difficult	High	Capital .5M O&M 2.28M

All Capital Costs are in 1988 Dollars

All O&M [illegible]

APPENDIX D

RESPONSIVENESS SUMMARY

Several questions were raised at the public meeting on February 17, 1993. These are summarized here along with the responses provided at the meeting.

1. How long will the liner last that was used to cover the site after the source of the contamination was removed?

   Response: High density polyethylene (HDPE) is a proven technology used in both hazardous waste situations and in municipal landfills to provide a barrier to water percolation through soil. With the clay cap on top the material should last indefinitely.

   The actual design of the cap includes the placement of a geotextile liner over the regraded site; followed by placement of 1 foot of clay; 30 mil HDPE liner; 1 foot of sand; 1 to 6 feet of fill to insure proper surface drainage; and 6 inches of topsoil.

2. a. There was a spring at the end of Camp Street that was contaminated and dug up many years ago?
   b. Has a study been made of the wet land to the east of the site, but north of Interstate 88 as shown on the USGS map?
   c. There is a 200+foot deep well at the rectangle shown in the middle of the village on the USGS map. Would contamination be anticipated here?

   Response: Referring to figure 2 in the proposed remedial action plan (PRAP) one can see that groundwater flows in a north northwesterly (NNW) direction. This is not in the direction of the Camp Road Spring, the wetland, or the well in the middle of the Village. Speculation is that the Camp Road spring may have been abandoned because of bacterial concerns. The Gifford Road spring to the NNW is being addressed in the Route 8 Landfill remediation. This will be intercepted and treated.

3. Couldn't contamination move in the opposite direction once it gets into the bedrock?

   Response: Contamination in the groundwater will move with the groundwater in the direction of the groundwater gradient. Below the site, in the shale bedrock, groundwater moves in this predictable pattern. If the bedrock were of limestone it is possible to have solution channels which could collect the groundwater and deviate its direction to a minor degree.

4. What was the level of risk before the removal actions?

   Response: It is very difficult to determine what was your past exposure - environmental, industrial - or what the risks were associated with any single exposure. Toxics in the environment are a concern. Once we find out about possible exposures we work to eliminate them.

5. Could we initiate a cancer study?

   Response: Yes, we could initiate a cancer study here, but it is unlikely that we would find anything significant as the site is now, or historically.

6. How long do volatile organic compounds (VOCs) last in the environment? [with a follow up:] Couldn't you vent the soil?

Response: VOCs volatilize readily and move quickly through the environment. However, soil venting isn't effective here because soils are too tight.

7. What about PCBs in the environment?

Response: PCBs stay around a long time and don't change. These compounds have an affinity for soil and very low solubility. PCBs will move if they're with oil, but the source of the oil has been removed.

The biggest problem with PCB contaminated soil occurs if the soil can erode and the contamination move with the eroded soil. We no longer have PCB contaminated soil at the surface.

8. Has there been any appreciable change over the past years of monitoring?

Response: The amounts of contaminants in the seeps have varied, but there has not been any significant change in contamination.

9. One person attending lives in the area just to the east of the site and had questions about PCB contamination in his garden and associated risks.

Response: Even though PCBs are not taken up by plants, one possible route of exposure is by eating a fresh vegetable - particularly a root - that has been in contact with contaminated soil. There is no evidence that contamination moved in this direction, the area in question is some distance away, and surficial contamination has all been removed.

10. Do the seeps act as an aeration system?

Response: There is little possibility of exposure from the seeps. The seeps are located behind K-Mart behind the delivery area - few people would have a reason to go back there. The volume of water is small, and the concentrations are relatively low. Air will strip out the contaminants well before the water joins drainage from the parking lot and enters intermittent streams in the area.

11. There was a question about monitoring. Will it continue?

Response: Monitoring will continue for at least thirty years. The actual sampling required and frequency may change, but will always be protective of public health and the environment.

12. Do you have any wells outside the area of contamination?

Response: Referring to the map showing well locations, well 31 and well 84-8 are clean; well 29 is clean, because all constituents are below drinking water standards.

13. One participant in the discussion noted that we are fortunate to have a company as cooperative as Amphenol is. They are responsive to concerns.

14. Is it your experience that property values will improve?

Response: Perceptions have the biggest impact on property values. Negative publicity impacts property values more than anything.

15. Do we have a local health department?

Response: John Sheehan described how public health concerns are handled from the local public health official (a local physician) to the services available though the Oneonta District Office.

16. Where are all the documents on the hazardous waste sites in the area?

Response: All public records on sites handled by the NYSDEC where Amphenol has taken responsibility are available in the Village Clerk's office. Walt Wintsch is the project manager for these projects. Richardson Hill Road and Sidney Center Landfills are Federal lead projects. The Federal project manager uses the Sidney Library as a document repository.

In addition to the comments raised at the meeting one letter was received which raised three concerns that are summarized here. A letter was returned to the commentor and a summary of the response is as follows:

17. Would not the mapping of the contaminant plumes for all of the hazardous waste sites in the Village of Sidney be a good idea? A long term projection of the plumes' travels may also be valuable.

Response: All Amphenol sites within the Village of Sidney are monitored by routine quarterly sampling events. Data for most of these sites goes back several years so the movement of the contaminant plumes is well established. Each of these plumes have been mapped and appear in the respective remedial investigation reports. Three of the four sites are currently being remediated so their contamination levels can only be reduced. The fourth, the Boiler Room, is still under study. A new monitoring well is being installed in March 1993, to detect contamination should it approach the Sidney Municipal Wells. Hopefully, a remedial investigation can be completed there in late spring. Then the Boiler Room can go from a study status to a remediation status.

18. How many private wells are there in the Village of Sidney? Have they been tested?

Response: The Village of Sidney Engineer states that are currently two wells in the Village that are not on municipal water and are used for potable sources. These wells have been previously sampled during a well survey in 1984. Further these wells are outside the area effected by any of the sites. (See comment # 2 above)

19. During the presentation of the proposed remedial action plan, it appeared that the site manager was promoting the "no further action" alternative, which will not achieve compliance with state clean up guidelines. Couldn't Amphenol's consultants have designed better remediation systems?

Response: In fact, all of the options that were proposed in the feasibility study and proposed remedial action plan are viable. They all, if implemented, could reduce the toxicity, mobility and volume of the remaining contaminants on the Hill Site. If it appeared that the project manager was "promoting" the no further action alternative, it was because that was the proposal selected for the Hill Site. He was trying to explain the reasoning behind the decision. A "no further action" alternative is perhaps a poor choice of words that comes from our program's guidelines. NYSDEC and Amphenol are, by no means closing the books and walking away from the site. The site will continue to be monitored and the Department will re-evaluate this decision in five years to determine if the contamination has moved or if any new technologies

develop that may be applicable to the Hill Site. The so called "no further action alternative" was proposed for the Hill Site for several reasons; very low health or environmental risk, no impact on water supply, high cost but low efficiency of other options, etc. The two most important reasons for a no further action alternative, however, are that the source of the contamination has been removed through the three construction events over the last 10 years and that the geology of the Hill Site makes attempts at remediating the residual contamination very expensive and of questionable effectiveness.

Amphenol - BCO Hill Site

Remedial Investigation/Feasibility Study

Public Meeting

Sidney Civic Center

February 17, 1993

Name	Address	Representing
Eileen & John Latta	Unadilla, NY	self
Paul Kohler	Sidney, NY	self
Joel Blinco	Sidney, NY	self
Rob Ray	Sidney, NY	WCDO Radio
Ted Wilklow	Sidney, NY	self
Gary Johnson, Sr.	Sidney, NY	self
Art Weed	Sidney, NY	self
Jesse Johnson	Sidney, NY	self
Ebert Johnson	Sidney, NY	self
Henry Mitchell	Sidney, NY	Amphenol Corp
Edward Wessel	Sidney, NY	self
Mark Boshnack	Franklin, NY	Walton Reporter
Kate Wheeler	Sidney Center, NY	self
Susan VanPatten	Albany, NY	NYSDOH
John Sheehan	Albany, NY	NYSDOH
Eric Hamilton	Schenectady, NY	NYSDEC
Walter Wintsch	Schenectady, NY	NYSDEC