SITE ASSESSMENT

FOR THE

CHESNUTIS SITE

BEACON FALLS, CONNECTICUT

Prepared For:

United States Environmental Protection Agency
Region I
60 Westview Street
Lexington, MA 02173

CONTRACT NO. 68-01-7367

TAT-01-N-00331

TDD NO. 01-8811-13D

Prepared By:

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Technical Assistance Team
Region I

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1.0 SITE DESCRIPTION

The site is comprised of approximately 0.5 acres of land and is located on Lopus Road in Beacon Falls, Connecticut (Figure 1). The site encompasses two properties defined as lots 3B and 2A on the Beacon Falls Tax Map #3 (Figure 2) and is owned by two individuals: Mr. Bruce Harnden and Mr. Steven Posick, respectively. The area is characterized by high relief and the site is approximately 15-20 feet above street level with a steep embankment on the western edge. The site is bounded to the north by Mr. Harnden's auto restoration shop, to the east by Lopus Road, to the south by a paved driveway and to the west by a dirt road leading to Mr. Posicks property (Figure 3).

A blue steel building containing Mr. Harnden's auto restoration shop occupies the north end of the site. A gravel parking lot is contained within the site on the north side of the wooden fence. On the opposite side of the fence, a dirt area and a paved driveway are located. The paved driveway continues to the west of the site and leads to the property owned by Mr. Steven Posick (lot 2A). Mr. James Maher owns the property (lot 3A) directly south of the paved driveway.

A surface spring, located on the western edge of lot 3B, discharges surface and groundwater into a culvert that passes below the parking lot and the driveway. This culvert discharges into a storm drain which passes below Lopus Road. A sewage treatment plant is located across the street from the site. A bedrock well, approximately 400+ feet deep, is located on the Harnden property directly behind the garage facility. Mr. Harnden had this well water tested in the spring of 1988 and has stated that chemical contaminants were not detected at that time; however, high levels of bacteria were detected.[1] Mr. Harnden uses the well water for non-drinking purposes only. A perimeter survey of the site revealed a rusted intact drum and a few crushed and rusted drums.

2.0 SITE BACKGROUND

Site background information in this report was obtained from a Preliminary Site Assessment Report written by Margret Hanley, Ecology and Environment, Inc. (US EPA FIT Contract) in 1981, and through interviews with different parties familiar with the site history.

In response to a series of contaminated wells in Beacon Falls discovered in the Fall of 1979, Preliminary Site Assessments were generated (from 1980 - 1981) under the EPA FIT Contract for five sites in Beacon Falls, CT.

1 A copy of the analysis results has been requested from Mr. Harnden.

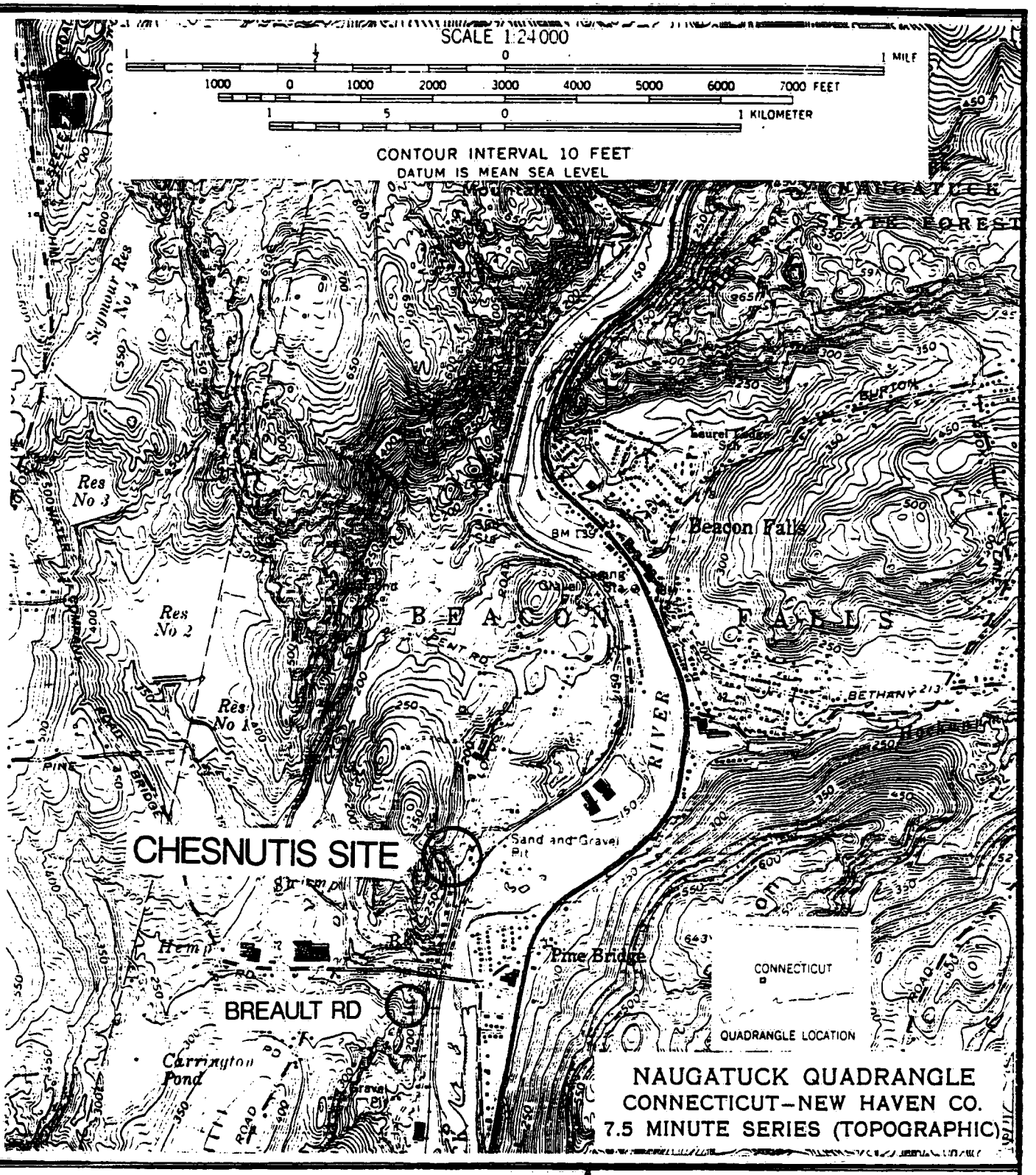


FIGURE 1

SITE LOCATION MAP
CHESNUTIS SITE
BEACON FALLS, CONNECTICUT

WESTON MANAGERS ENGINEERS/CONSULTANTS

DRAWN MARY KURPIEL	DATE 12/88	PCS # 2063
APPROVED	DATE 12/88	TDD # 01-8811-13A

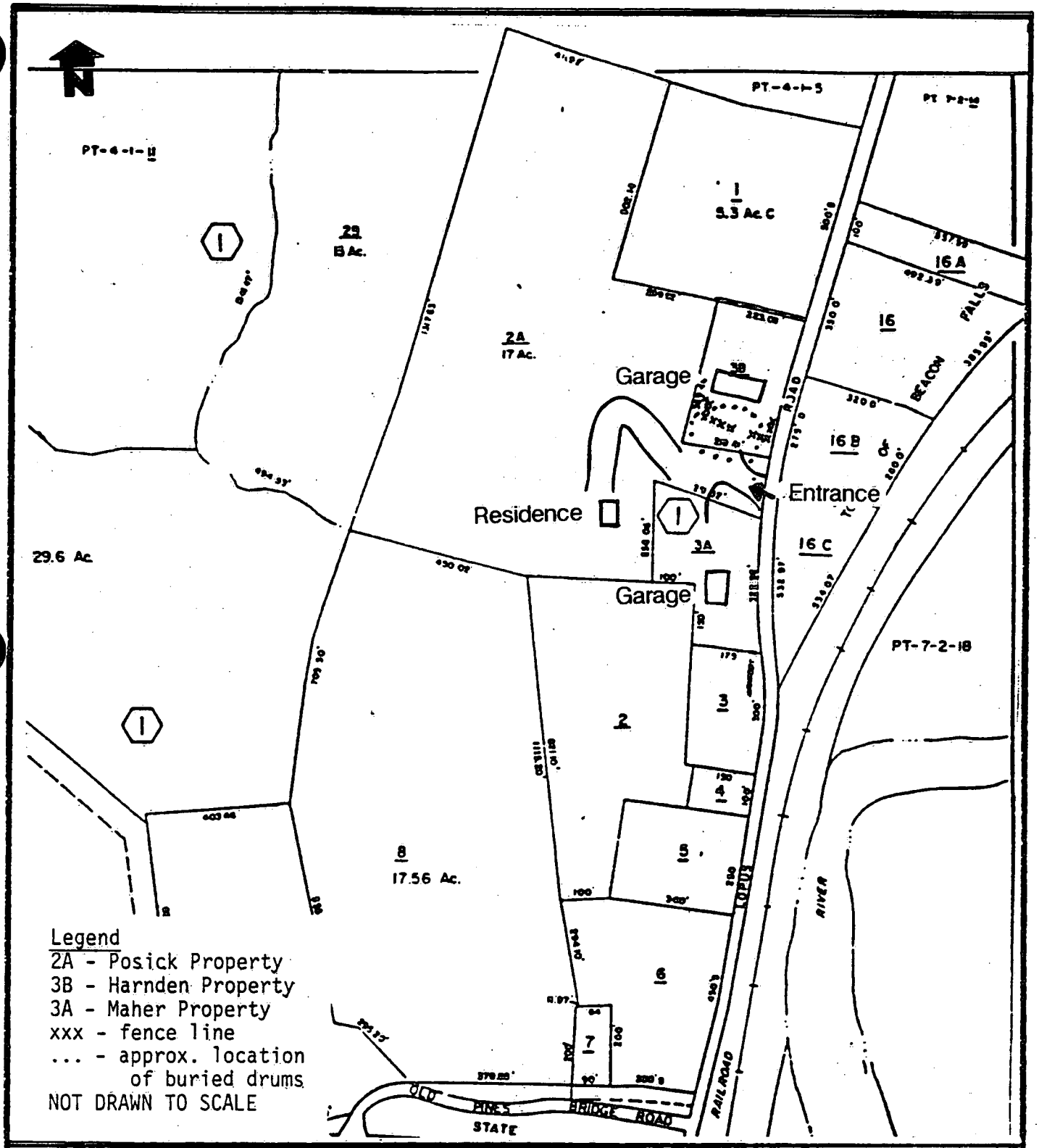


FIGURE 2

TAX MAP
CHESNUTIS SITE
BEACON FALLS, CONNECTICUT

WESTON MANAGERS / ENGINEERS / CONSULTANTS

DRAWN	DATE	PCS #
MARY KURPIEL	12/88	2063
APPROVED	DATE	TDD #
	12/88	01-8811-13A

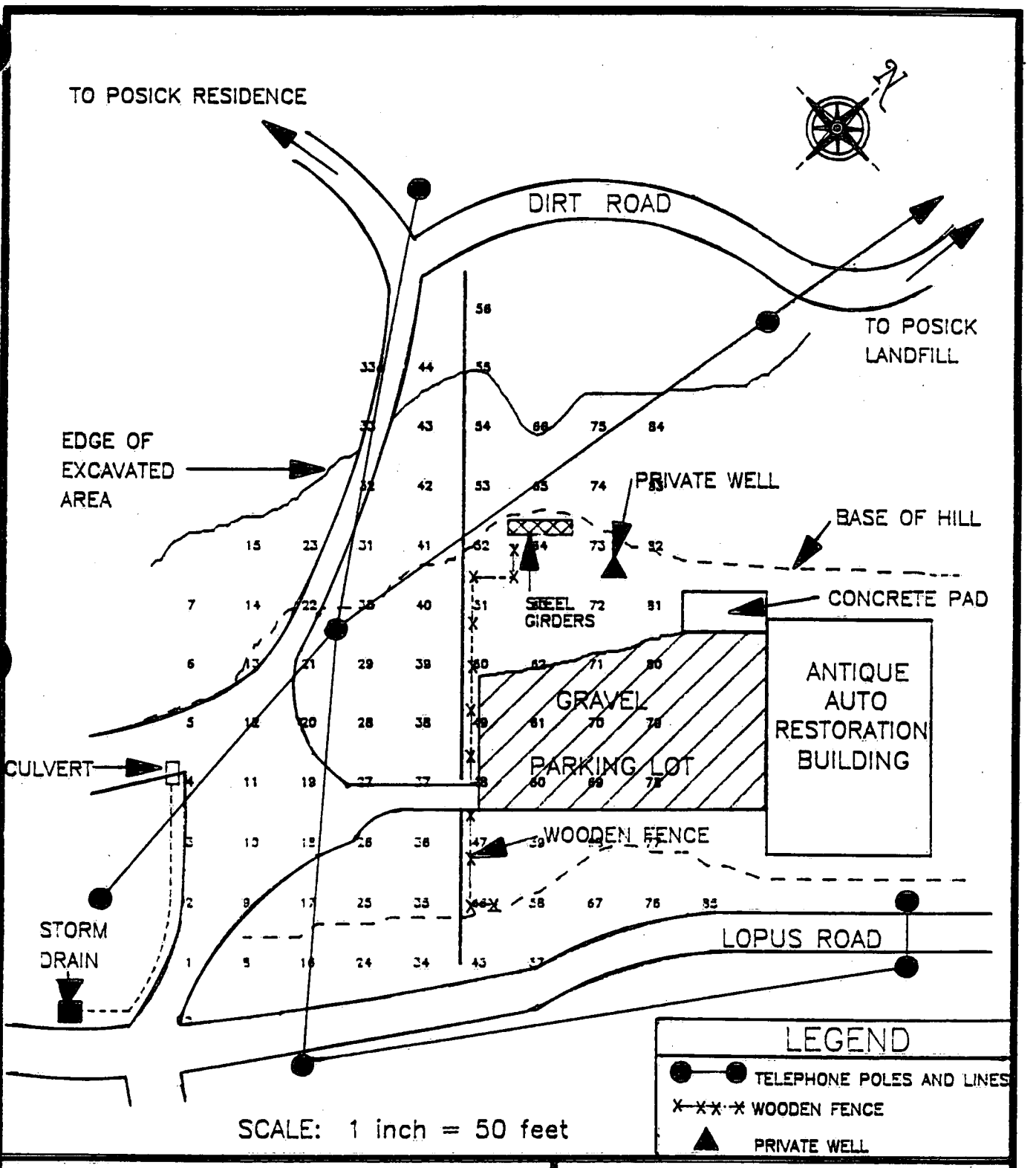


FIGURE 3

SITE SKETCH MAP CHESNUTIS SITE BEACON FALLS, CT

WESTON MANAGERS DESIGNERS/CONSULTANTS

DRAWN WECHSLER	DATE 12/88	PCS # 2063
APPROVED	DATE 12/88	TDD # 01-8811-13A

Although not directly associated with the Chesnutis Site, groundwater contamination has been confirmed in the area of the Nutmeg Bakery Site, located on Breault Road in Beacon Falls (Figure 1). Mr. Lou Debarber of the Bridgeport Hydraulic Company, which supplies water to some residents of Beacon Falls, reported that groundwater contamination has existed in the Breault Road area for approximately ten years. Nutmeg Bakery, MIR Rigging, and a model house for the Barret Construction Company are also located on Breault Road. Approximately one year ago, these locations were connected to a city water supply. Prior to the city connection, water was delivered to the above locations because of the groundwater contamination. There still remain a few residents in the area of Breault Road (Quarry Road) who have not been connected to the city water supply.

Roy F. Weston's Technical Assistance Team (TAT) member Mary Kurpiel and U.S. EPA Site Investigator (SI) Alex Sherrin visited the site on Wednesday, November 16, 1988 and interviewed Bruce Harnden and Steven Posick (site property owners), James Maher (adjacent property owner), and Eva Mis (Beacon Falls Assessors Office). Mr. Ed Goux and Mr. John Purdy (local citizens) were interviewed on a subsequent visit to the site on Thursday and Friday, December 1 and 2, 1988.

The Harnden property (lot 3B) was owned by Mr. Edward Chesnutis from 1966 to 1970. The property was sold to Steven Posick in 1970. Mrs. Margaret Esposito purchased the property in 1982 and then sold it to Bruce Harnden in 1985.

The Posick property (lot 2A) was owned by Edward and Constance Gondola from 1944 until 1976 when it was sold to Steven Posick.

Edward Chesnutis operated a barrel manufacturing company at 100 Railroad Avenue in Beacon Falls during the 1960's. Edward Chesnutis' brother, Albert, operated the Reliable Industrial Waste Disposal Company at an adjacent lot on Railroad Avenue. It is alleged by the citzens interviewed that Edward Chesnutis transported barrels containing wastes to various disposal locations in Beacon Falls, including Lopus Road, for his brother during the mid 1960's.

A 1973 Hazardous Waste Generator Permit Application obtained from Connecticut Department of Environmental Protection (CT DEP) files indicates that chemical wastes from Borden Chemical Company, American Cyanamid, General Electric, Monsanto Company, Pfizer Company, and Raybestos Company were accepted by the Reliable Industrial Waste Disposal Company.

Aerial photographs of Beacon Falls taken in 1965, exhibit a cluster of approximately 50 barrels at the Chesnutis Site (referred to by CT DEP as Lopus Road Site).

The CT DEP obtained two surface water samples (#9787 and #9788) and one leachate sample (#9789) from a drainage culvert on the Lopus Road Site in March 1980. The results indicated the following contaminants:

TABLE 1

CT DEP SURFACE WATER AND LEACHATE SAMPLE RESULTS

	Sample 9787 (ppb)	Sample 9788 (ppb)	Sample 9789 (ppb)
Benzene	5,100	2,600	
Chlorobenzene	4,500	3,200	NA
Methylcyclohexane	3,200	ND	NA
Methylcyclopentan	580	130	NA
Pentane	1,600	640	NA
Tetrachloroethylene	320	190	NA
Toluene	6,400	6,400	NA
1,1,1 Trichloroethane	360	420	NA
Cyclohexane	530	ND	NA
Hexane	2,600	ND	NA
Arsenic	NA	NA	39
Cadmium	NA	NA	0.400
Chromium	NA	NA	16
Cyanide	NA	NA	ND
Copper	NA	NA	11
Iron	NA	NA	6,800
Lead	NA	NA	48
Mercury	NA	NA	0.003
Zinc	NA	NA	26

ND - Not detected
NA - Not analyzed

Mr. Posick stated that when he purchased the property in 1970, up to 100 drums were located in a bay area hidden from the road. In 1970 Mr. Posick hired G & L Excavating, Naugatuck, CT, to excavate the side of the hill on the western edge of the property. Large quantities of fill and some bedrock were excavated to facilitate the placement of a parking area. Mr. Posick stated that the exposed drums were crushed and buried as the site was filled in. The FIT Preliminary Site Assessment reported that while the site was being graded, 5-6 full steel drums allegedly ruptured and released very strong vapors. The area roughly defined by Stations 21, 51, 70, 59, and 27 on the base grid represents Mr. Posick's description of the drum locations (Figure 3).

Mr. Ed Goux, a friend of Mr. Posick, was present at the time of the excavation in 1970 and stated that he saw hundreds of drums at the site before it was filled. The drums were crushed by G&L Excavating prior to filling the area and a viscous substance was released. Mr. Goux observed a dog walking in the spilled substance. According to Mr. Goux, the dog's feet became swollen and irritated and had to be treated by a veterinarian. Mr. Goux's description of the drum location matched the above description by Mr. Posick.

Mr. John Purdy, a local resident who had observed the property at the time of Mr. Posick's purchase, stated that up to 100 drums were located within the whole grid area.

Mr. Harnden stated that while he and his neighbor, James Maher, were excavating for fence post holes in March 1988, he discovered a cluster of 4 to 5 steel drums located 20-30 inches below the surface, near stations 49 and 50. Mr. Harnden also stated that he observed black stained soil which emitted strong solvent (carburetor cleaner) vapors near stations 49, 50 and 51.

A solid waste landfill, operated by Steven Posick, is located on a topographically high area approximately 2500 feet northwest of the site. Mr. Posick began operation of the landfill in 1976 after he obtained a solid waste landfill permit from the CT DEP. In 1982, Mr. Posick applied for and received a permit for a six acre expansion of the original landfill. According to Harry Cooper, CT DEP Solid Waste Section, the landfill has been closed since late 1986 and the CT DEP has had no problems with the landfill. The CT DEP is taking no action against Mr. Posick.

In November 1988, NUS, under the direction of Mike Nalipinski, US EPA Remedial Section, obtained soil samples from the Harnden-Posick property. At the time of this report, the results of the laboratory analyses were not available. In November 1988, the EPA Remedial Section referred the Chesnutis Site to the EPA Oil and Hazardous Materials Section.

3.0 PRELIMINARY RECOMMENDATIONS

Based on the site background and the previously mentioned interviews with present and past property owners and local citizens, it is recommended that further site investigations be conducted. A magnetometer survey should provide an approximate indication of any subsurface anomalies that may exist at the site resulting from buried metal objects. A soil gas survey will also assist in determining if a source of volatile organic contamination exists at the site, i.e. buried wastes. As indicated by the magnetometer and soil gas surveys, soil samples should be collected and analyzed for volatile organic compounds and base, neutral and acid extractable compounds.

4.0 SITE ASSESSMENT

TAT members Mary Kurpiel, George Mavris, and Peter Vernon, and SI Alex Sherrin visited the site on Thursday and Friday December 1 and 2, 1988. The purpose of the trip was: 1) to conduct a magnetometer survey, 2) to conduct a soil gas survey 3) to screen soil gas sample locations for volatile organic compounds on the Photovac 10S50, and 4) to collect soil samples based upon the preliminary findings of the on-site screening procedures.

A square grid was established with eighty-six points located at twenty foot intervals (Figure 3). The grid was oriented along the southern boundary of the Harnden property line. These points were used as stations from which the magnetometer survey, the soil gas survey, and sampling activities were performed.

The magnetometer data was compiled and plotted on a grid format in the field and a final version of the magnetic survey contour map was later constructed. A strong positive magnetic anomaly was identified at station #48 and a strong negative anomaly was identified at station #49 (Figure 4). Interference caused by telephone lines, metal objects, cables, and exposed bedrock had a major impact on the magnetometer data. Although it was not possible to eliminate this interference, the two major magnetic anomalies, one positive and one negative, were mapped (Figure 4 and Appendix D). These anomalies may represent concentrated subsurface ferrous metal objects.

These anomalies exist along the wooden fence on Bruce Harnden's property and coincide with high soil gas Organic Vapor Analyzer (OVA) readings as well as locations where eyewitnesses claimed the drums were buried.

Soil gas locations that were to be screened with the OVA were selected based on the results of the magnetometer survey and conversations with different parties familiar with the history of the site. The soil gas stations with OVA readings greater than 50 ppm above background were 37, 48, 51, 60 and 28 (Figure 5 and Appendix E). The soil gas results and the magnetometer findings indicate that subsurface drums containing organic material could be located in the area along the fence (i.e. station 49 as the center point with a 40' radius). The eyewitness accounts also support the likelihood of drum burial in this area.

Selected soil gas samples were analyzed at the site using the Photovac 10S50 portable gas chromatograph. Soil gas samples were collected at stations 37, 48, 51, 60 and 28 and the following compounds were tentatively identified: benzene, chlorobenzene, toluene, perchloroethylene, trichloroethylene, m-xylene, and o-xylene (Appendix F).

Two soil samples were collected from locations where high (>1000 units) soil gas readings and magnetic anomalies were recorded. One sample was collected from station #51 at a depth of 2 feet 8

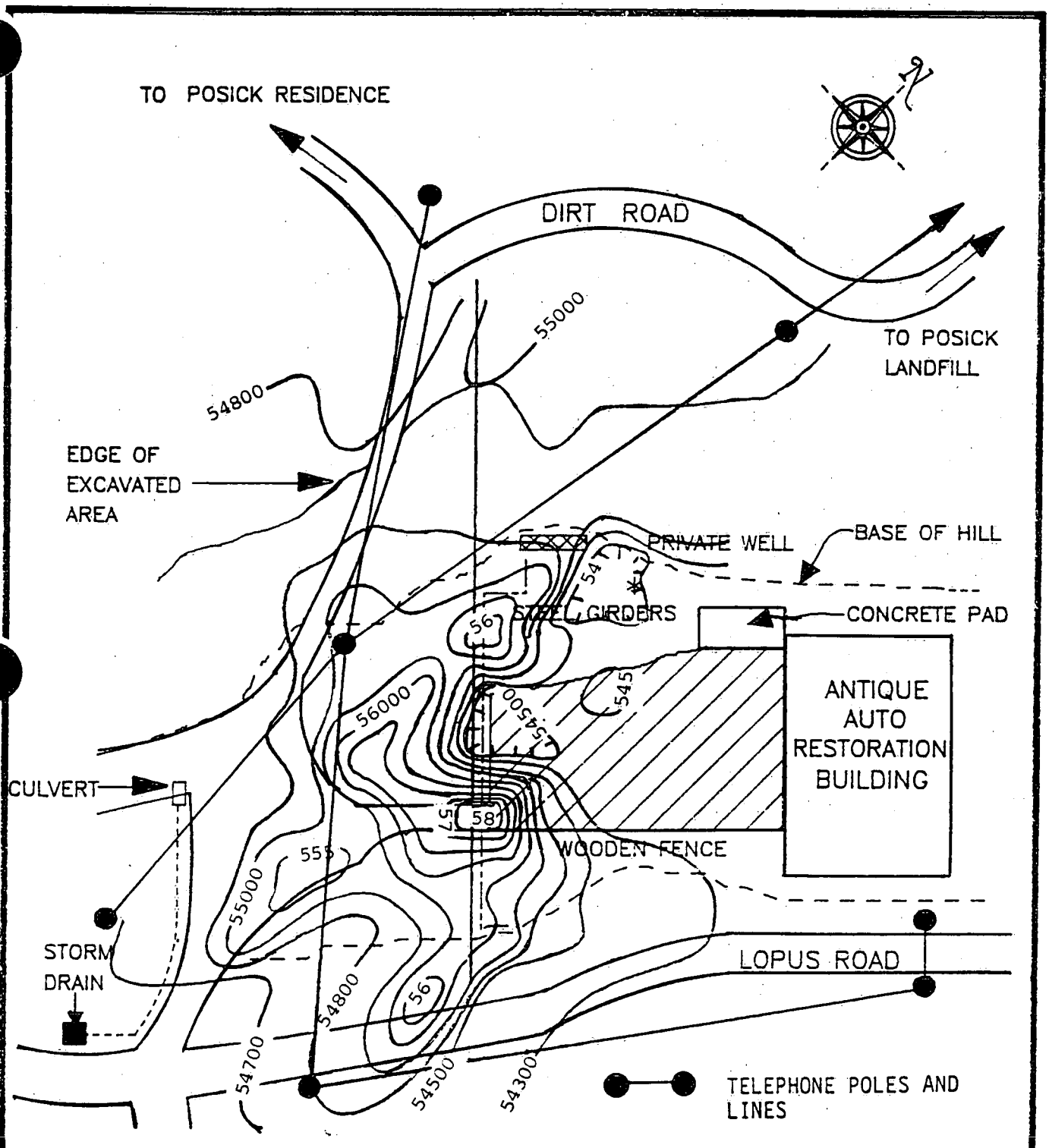


Figure 4
MAGNETOMETER SURVEY CONTOUR MAP
CHESNUTIS SITE
BEACON FALLS, CONNECTICUT

CONTOUR INTERVALS=100, 200, & 500 GAMMAS
SCALE: 1 inch=50 feet

WESTON MANAGERS DESIGNERS/CONSULTANTS

DRAWN C.E.W./G.M.	DATE 12/88	PCS # 2063
APPROVED	DATE 1/89	TDD # 01-8811-13A

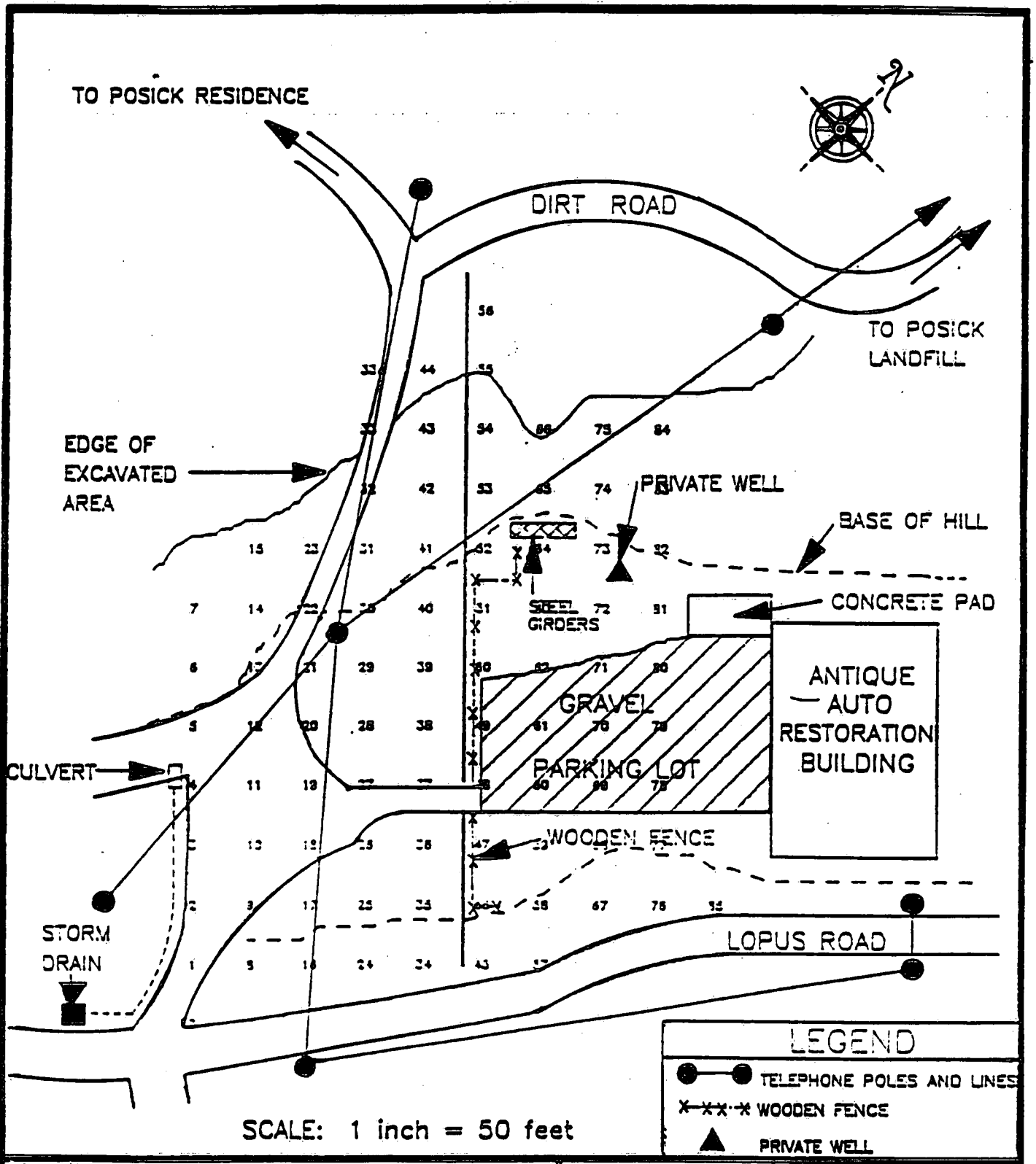


Figure 5

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN WECHSLER	DATE 12/88	PCS # 2063
APPROVED	DATE 12/88	TDD # 01-8811-13A

inches. The other soil sample was collected 4 inches below the surface at station #37. Refusal caused by the rocky nature of the soil at Station #37 prevented soil collection from depths greater than 4 inches. An attempt was made to collect a subsurface soil sample at station #48; however, these attempts were unsuccessful, again, due to refusal.

Volatile organic (VOA), and base, neutral and acid extractable (BNA) analyses of soil samples were conducted by the EPA New England Regional Laboratory (NERL) (Appendix H and Appendix I). VOA results from the NERL identified the following compounds: chlorobenzene, dichlorobenzene isomers, trichlorofluoromethane, and tetrachloroethylene. BNA results from the NERL identified the following compounds: bis (2-ethylhexyl) phthalate, di-n-butyl phthalate, dichlorobenzene isomers, and 1,2,4-trichlorobenzene. After returning from the site, x-ray fluorescence analysis was conducted on two soil samples and no metal concentrations above background levels were detected (Appendix G).

More detailed information on the procedures and the results of the magnetometer survey, soil gas survey, volatile organic analysis, sampling activities and x-ray fluorescence analysis is included in the appropriate appendix.

5.0 CONCLUSIONS

Results of the soil gas survey and magnetometer survey suggest that metal objects, such as drums, possibly containing volatile organic compounds, may be buried on the Chesnutis Site. The soil contamination may be a result of this drum burial. The magnetic anomalies (positive and negative) are on the order of thousands of gammas and coincide with stations where high readings of organic contaminants were recorded on the OVA during the soil gas survey. In addition, these areas coincide with the drum burial locations given in the previously discussed eyewitness accounts.

Photovac analyses of soil gas samples collected from stations with levels above background tentatively identified the compounds chlorobenzene, perchloroethylene, toluene, benzene, o-xylene, m-xylene, and ethylbenzene (Table 2). Other unidentified volatile organic compounds were also detected as evidenced by unknown peaks on the chromatograph.

A water sample was collected during the December 1988 trip from a well located between stations 73 and 82 on the Harnden property. This well is approximately 400 feet deep. Headspace analysis on this sample did not identify any volatile organic contaminants.

Toluene was identified in a sample collected from a surface spring that flows off of the ledge near stations 38 and 39 on the Harnden property (Figure 2). Water samples were not submitted to the laboratory for analysis because water sampling was not anticipated for the December site visit. However, results from

CT DEP surface water and leachate sampling in the spring of 1980 indicate the presence of volatile organic and metal contaminants (Table 1). These contaminants may or may not be originating from the Harnden-Posick properties.

Soil contamination is located at depths of up to 3 feet below the surface as indicated by the soil sample analytical results. Volatile organic analysis conducted by the NERL on two soil samples identified the presence of four organic compounds. Chlorobenzene (96 ppm) and dichlorobenzene isomers (380 ppm) were identified in sample #78068. Sample #78069 contained 1.3 ppm trichlorofluoromethane, 1.7 ppm tetrachloroethylene, and 3.8 ppm dichlorobenzene isomers. The results of the volatile organic analysis performed by the NERL correlated with the values obtained on-site during the soil gas survey using the Photovac G.C. (Table 2).

Base, neutral, and acid extractable analysis conducted by the NERL on two soil samples identified the presence of the following organic compounds: bis(2-ethylhexyl) phthalate (7.0 ppm), di-n-butyl phthalate (1.4 ppm), 1,3-dichlorobenzene (4.3 ppm), 1,2-dichlorobenzene (1100 ppm), 1,4-dichlorobenzene (21 ppm) and 1,2,4-trichlorobenzene (19 ppm) in sample #78068. Sample #78069 contained di-n-butylphthalate (2.4 ppm), 1,2-dichlorobenzene (8.6 ppm), and 1,2,4-trichlorobenzene.

The VOA and BNA laboratory results, the magnetometer survey, and the OVA and Photovac soil gas results, indicate that the area of subsurface contamination lies along the wooden fence on Mr. Harnden's property and extends 20 to 40 feet to the north and south of the fence.

Most of the residents along Lopus Road and Old Pinesbridge Road obtain their drinking water from private wells and are potentially threatened by any groundwater contamination that may exist in the area of the Chesnutis Site.

Sensitive environmental areas that are at a potential risk in proximity to the Chesnutis Site include the Naugatuck River, located approximately 1000 feet southwest of the site and a small brook which runs perpendicular to Lopus Road approximately 1500 feet south of the site.

TABLE 2

SUMMARY OF ORGANIC CHEMICAL ANALYSES

STATION	OVA SOIL GAS RESULTS*[1]	PHOTOVAC SOIL GAS RESULTS[2]	VOA LABORATORY RESULTS[3]	BNA LABORATORY RESULTS[4]
25	0	ND**	NA***	NA
37	>1000	benzene 6.3	trichloro-fluoromethane 1.3	benzo (b) fluoranthene < DL+
				di-n-butylphthalate 2.4
				1,3-dichlorobenzene < DL
				1,2-dichlorobenzene 8.6
		toluene 367		1,4-dichlorobenzene < DL
		tetrachloroethylene 10	TCE 1.7	pyrene < DL
		chlorobenzene 13.8	dichlorobenzene isomers 3.8	1,2,4-trichlorobenzene 1.6
48	>1000	benzene 434	NA	NA
		TCE 622		
		toluene 152		
		tetrachloroethylene 199		
		chlorobenzene 169		
		m-xylene 9.8		
51	>1000	chlorobenzene 51.1	chlorobenzene 96	bis(2-ethylhexyl)phthalate 7.0
		benzene .490		di-n-butyl phthalate 1.4
				1,3 dichlorobenzene 4.3
		toluene 26.5	dichlorobenzene	1,2 dichlorobenzene 1100
			isomers 380	1,4 dichlorobenzene 21
				1,2,4 trichlorobenzene 19
60	510	benzene 4.57	NA	NA
		toluene 110		
		chlorobenzene 164		
		m-xylene 3.1		
		o-xylene 14		

1 = units total organic vapor
2 = parts per million (ppm)
3 = ppm
4 = ppm
* - Includes only stations with OVA readings > 500 ppm total organic vapor
** ND - Not detected
*** NA - Sample not collected
+ DL = Detection Limit

A. PRELIMINARY SITE INVESTIGATION PLAN

REGION I

Preliminary Site Investigation Plan

Site Name/Address: Chesnutis Site

450 Lopus Road

Beacon Falls, Connecticut 06403

Tax Map # 3 **Lot(s)** 3B, 2A, 3A

OSC: Alex Sherrin (Site Investigator) **Date:** 12 /01 /88

1) List all sources of information. (e.g., reports, files, photographs, phone calls, personal interviews, literature search)

"Preliminary Assessment for the Steven Posick Property" - M.M.Hanley E&E,Inc.(02/06/81). USEPA Superfund Memo (08/81). USEPA Potential Hazardous Waste Site Preliminary Assessment(12/80). Conversations with Ken Leach (NUS), Patrick Bowe (CTDEP), Bruce Harnden (site owner), S.Posick (former site owner), James Maher (adjacent property owner), Eva Mis (assessor's office), Ed Goux & John Purdy (local residents).

2) List of the hazardous substances, pollutants, and/or contaminants on the site that are being released or for which there is a threat of release.

Substances	Media	Protection
SEE ATTACHED LIST		

3) Describe the source of the release or threat of release.

[ ] **Deliberate dumping*** [ ] **Lagoon** [ ] **Train**

[ ] **Drums** [ ] **Landfill** [ ] **Truck**

[ ] **Lab Pack** [ ] **Tank (s)** [ ] **Unknown**

[X] **Other** Buried drums

4) **Nature of the incident:** [ ] **Spill** [XX] **Long Term**

5) **Proximity of Population and/or sensitive environments potentially affected and pathways of exposure (e.g., air, groundwater wells, soil, etc.)**

Business

Sewage Treatment Plant directly across the road from the site.

Homes

½ mile north of the site

6) **Date of release or period of storage** 1965 - 1970

7) **List of potentially responsible party(ies) (PRP's), or describe efforts to determine PRPs. (e.g., phone calls, Tax maps.)**

Reason	Name	Address	Dates of Involvement
disposer/	Edward & Albert Cnesnutis	Florida	1965 - 1970
former property owner/	S.Posick	Lopus Rd. Beacon Falls,CT	1970 - 1980
present property owner/	B.Harnden	450 Lopus Rd. Beacon Falls	1980 - present
waste generators/	various companies		

8) **Person (and their authority) extending permission for EPA to take samples from the site or describe efforts to contact such person.**

Mr. Harnden (site owner) has granted permission for site access to perform sampling activities, magnetometer survey and soil gas survey.

9) **Site Map (see attachments)**

10) **Previous Analysis (see attachments)**

11) **Preliminary Sampling Plan** See Sampling Plan

analysis: **VOA (screen GC/MS); PCB; BNA; Metals;**

matrix/quantity:

PRELIMINARY SITE INVESTIGATION PLAN

ATTACHMENT #1

SUBSTANCE	MEDIA	PROTECTION
benzene	SW/L*, SOIL	Initial site entry-
chlorobenzene	SW/L, SOIL	Level B
toluene	SW/L, SOIL	
m-xylene	SW/L, SOIL	
o-xylene	SW/L, SOIL	
perchloroethylene	SW/L, SOIL	
trichloroethylene	SW/L, SOIL	
methylcyclopentane	SW/L	
pentane	SW/L	
tetrachloroethylene	SW/L	
1,1,1 trichloroethane	SW/L	
cylcohexane	SW/L	
hexane	SW/L	
arsenic	SW/L	
cadmium	SW/L	
lead	SW/L	
iron	SW/L	

* SW/L - Surface water/leachate

B. SAMPLING PLAN

SAMPLING PLAN
CHESNUTIS SITE
BEACON FALLS, CONNECTICUT

SITE BACKGROUND

The Chesnutis Site is comprised of approximately 0.5 acres and is located on Lopus Road in Beacon Falls, Connecticut. A soil gas, sampling, and magnetometer survey will be conducted on a section of the site measuring approximately 300 feet by 100 feet. It is suspected that buried drums, containing unknown contaminants may exist in this section of the site. The present owner of the main portion of the site, Bruce Harnden, operates an antique auto body shop. Mr. Steven Posick originally owned the entire site, which was previously owned by Edward Chesnutis, and was alledgedly used periodically for the disposal of drums containing chemical and industrial wastes.

PURPOSE

The purpose of this sampling plan is to outline the procedures which will be used to conduct soil gas, sampling, and magnetometer surveys at the Chesnutis Site. Sampling operations will be conducted at the site to evaluate if any hazardous materials are present on site as a result of previous drum disposal activities, and to assess the degree and extent of any contamination which may exist, both on and off the site.

SAMPLING PROCEDURES

Provisions outlined in the site safety plan will be strictly adhered to. Air monitoring will be conducted around and within the site using the Organic Vapor Analyzer (OVA), Combustible Gas Indicator (CGI), and Radiation Meter during the initial site entry. These tasks will be performed using Level "B" Personnel Protective Equipment (PPE). Levels of protection to be used for other site operations will be determined by site specific conditions.

Prior to conducting sampling operations, a grid system will be established using a compass and tape measure. A base line will be established and sample points measured every twenty feet along the line. A second line located twenty feet parallel to the baseline will then be established and sample points will be measured every twenty feet along this line. These procedures will be repeated until the entire site (300 ft. x 100 ft.) is covered. If possible, the base line will be tied into features which will allow it to be reproduced. The twenty square foot grid system has been selected because it provides optimum range investigation for the magnetometer survey. The soil gas survey

will be conducted on sample points selected in the field. Soil sample collection will be determined on site pending results from the soil gas survey, magnetometer survey, and Photovac Analysis.

The magnetometer survey will be conducted first, along the sample points established in the grid. Prior to conducting the magnetometer survey, the instrument will be tuned. Readings will be taken in areas adjacent to metal objects on the surface and in areas which appear to be free of any ferrous metal objects in order to check the instrument's response. The instrument will also be tested for repeatability in these areas.

The magnetometer will be operated in the survey mode. One person will operate the instrument and will be assisted by one other person, who will record the data. Magnetometer readings will be recorded by stopping at each sample point along the grid, taking a reading, and recording it. Randomly selected locations between sampling points will be checked to ensure that the entire area of the site has been evaluated. Repeatability of the instrument will also be checked to ensure the instrument is operating properly. This will be done by taking consecutive readings at the same sample point without moving the sensor head.

The soil gas survey will be conducted at selected sample points along the grid. The operating procedures during this survey will involve using a slam bar to bore a hole to the desired depth. Borehole depths will be determined in the field in order to collect the most representative sample. A copper tube with plastic tubing attached at the top will be inserted into the hole. The hole will be sealed by compressing clay around the tube. A hand held battery operated pump with a vacuum of 100 cc/min will be then attached to the plastic tubing and allowed to pump for three minutes. The OVA probe will then be inserted into the plastic tubing to obtain a reading. The copper tube and plastic tubing will be removed from the hole and purged prior to use at different depths and sample stations. Purging will be accomplished by allowing a flow of air from the hand held pump to run through the copper tube and plastic tubing. The OVA will be used to determine if volatile compounds remain in the tubing. Formal decontamination of the copper tubing is not anticipated between sampling locations.

If the soil vapor registers a response on the OVA, a vapor sample will be withdrawn from the sampling device and injected directly into a field chromatograph. The soil gas will be analyzed at the site using the 10S50 Photovac - Portable Photoionization Gas Chromatograph.

Soil samples will be collected from suspect locations on the site and analyzed for Volatile Organic Compounds (VOA), Base Neutral and Acid (BNA) extractable compounds, and Metals. Subsurface soil samples will be collected using a hand auger or similar device. Sampling depths will be determined in the field in order to obtain a representative sample. VOA samples will be collected

in 40 ml glass jars, while BNA and metal samples will be collected in 8 oz. glass jars. All samples will be collected using decontaminated equipment, including hand trowels and scoops. Up to five soil sample locations can be selected. Samples will be preserved on ice and delivered to the NERL for analysis. Proper chain-of-custody will be maintained throughout the sampling effort.

Samples will be classified as either environmental or hazardous materials samples and the proper procedures will be used for packing and shipping to the NERL. Contaminated clothing and other expendable equipment used during the sampling operations will be placed in plastic bags and sealed. All hazardous materials will be disposed of by the EPA, or through arrangements made by the EPA. All equipment used during site operations will be decontaminated prior to leaving the site.

Any deviations from this sampling plan will be in strict accordance with the site safety plan and will be recorded in TAT personnel logbooks.

GM/bps
2049.rpt(85)

C. CHAIN OF CUSTODY DOCUMENTATION

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

TO: → (NERL Lexington)

FROM: Roy F. Weston, Inc. REGION 1
JFK Federal Building
Boston, Massachusetts 02203

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
	Chesterfield Site / Beacon Falls, CT

SAMPLERS: (Signature)
George Mavrin

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	VOA analysis (soil)	BNA analysis (soil)	XRF analysis (soil)				REMARKS
BLANK	11/30/88	1500		X	BLANK	2	X	X	X				TRIP BLANK 78071
51	12/2/88	1430		X	Flag # 51 (near corner of...)	3	X	X	X				78068 (2'6")
37	12/2/88	1445		X	Flag # 37	3	X	X	X				78069 (4")

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	
			10/5/88 1:35 pm		

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

1— 2233

D. MAGNETOMETER SURVEY

MAGNETOMETER SURVEY

A reconnaissance magnetometer survey was conducted to locate steel drums suspected of being buried at the Chesnutis Site in Beacon Falls, CT. The survey was conducted on an established square grid with sample points located every twenty feet. The grid was oriented along the southern boundary of the Harnden Property Line (Figure 3).

A Geometric G-856 Proton Precession Magnetometer was the instrument used for this survey. This instrument allows discrete measurements of the total magnetic field strength in units of gammas. The presence of any buried steel drums will result in anomalous (positive or negative) deviations from the earth's magnetic field. Small, discrete objects (e.g. drums) at hazardous waste sites typically have anomalies ranging from one to several hundred gammas. Massive concentrations of buried drums or other large metal objects will produce anomalies ranging from one hundred to over one thousand gammas.

The G-856 magnetometer is sensitive to one gamma; however, its response may be affected by diurnal variations in the earth's magnetic field, spatial variations caused by magnetic minerals in the soil or bedrock, geologic structures, and manmade structures.

Prior to conducting the magnetic survey, the instrument was tuned. Readings were taken in areas adjacent to metal objects on the surface and in areas which appeared to be free of any ferrous metal objects in order to check the instrument's response. The instrument was also tested for repeatability in these areas. Due to the interference caused by telephone lines, cables, metal objects, and outcropping bedrock, repeated readings differed by as much as 120 gammas.

The magnetometer was operated in the survey mode and readings were taken at each sample point along the grid. Randomly selected locations between sampling points were checked to ensure that the entire area of the site would be evaluated. Repeatability of the instrument was also checked to ensure the instrument was operating properly. Repeatability was checked by taking consecutive readings at a sample point without moving the sensor head. Readings obtained by repeatability differed by several tens of gammas.

The magnetometer data (Table 3) was then compiled and plotted on a grid format in the field. A magnetic survey contour map, using a 100, 200, 300, 500, and 1000 gamma contour interval was constructed using a scale of 1 inch equals 45 feet. A strong positive magnetic anomaly was identified at sample location point #48. A strong negative anomaly was mapped around sample location #49 (Figure 4).

TABLE 3
MAGNETOMETER SURVEY DATA
CHESNUTIS SITE
BEACON FALLS, CONNECTICUT
DECEMBER 1, 1988

STATION NUMBER	MAGNETOMETER READINGS (GAMMAS)	COMMENTS
0	54,641	ON PAVED ROAD
1	54,698	ON PAVED ROAD
2	54,704	ON PAVED ROAD
3	54,742	ON PAVED ROAD
4	54,709	UNDER TELEPHONE LINES
5	54,751	ON PAVED ROAD
6	54,777	NC*
7	54,789	NC
8	54,692	NC
9	55,099	ON PAVED ROAD
10	55,014	ON PAVED ROAD
11	54,751	ON PAVED ROAD
12	54,752	ON PAVED ROAD UNDER TELEPHONE LINES
13	54,766	NC
14	54,774	NC
15	54,793	NC
16	54,737	NC
17	54,702	NC
18	55,934	ON PAVED ROAD
19	54,821	ON PAVED ROAD
20	54,922	NC
21	54,811	UNDER PHONE LINES & NEAR GRATE
22	54,819	ON PAVED ROAD
23	54,801	NC
24	54,927	NC
25	54,774	NC
26	55,084	NC
27	55,357	NC
28	56,930	NC
29	55,422	NEAR BURIED DRUM
30	55,260	UNDER TELEPHONE LINES
31	54,933	NC
32	54,790	UNDER TELEPHONE LINES ON PAVED ROADS
33	54,797	NEAR TELEPHONE LINES
33A	54,811	NEAR TELEPHONE LINES
34	56,059	NC
35	55,007	NC
36	56,036	NC
37	56,853	NC
38	55,537	NC

* NC - No comment

STATION NUMBER	MAGNETOMETER READINGS (GAMMAS)	COMMENTS
	(CONT'D)	
39	56,146	NC
40	55,296	NC
41	54,576	UNDER TELEPHONE LINES
42	54,768	NC
43	54,782	NC
44	54,796	NC
45	54,433	NC
46	55,642	NC
47	55,646	NC
48	58,410	NC
49	53,183	NC
50	53,778	NC
51	56,250	NC
52	54,761	NEAR DRUM ALONG CREEK
53	54,575	NC
54	54,691	MIDDLE OF CREEK
55	54,957	NC
56	55,061	NC
57	54,375	NEAR PAVED ROAD
58	54,625	NC
59	55,502	NC
60	54,625	ON GRAVEL PARKING LOT
61	53,957	ON GRAVEL PARKING LOT
62	54,165	NC
63	54,491	NC
64	55,289	ON STEEL GIRDERS
65	54,633	UNDER TELEPHONE LINES
66	54,707	NC
67	54,411	NC
68	54,331	NC
69	54,147	ON GRAVEL PARKING LOT
70	54,262	ON GRAVEL PARKING LOT
71	54,351	ON GRAVEL PARKING LOT
72	54,264	NC
73	53,161	NEAR PRIVATE WELL CASING
74	54,498	NC
75	54,705	UNDER TELEPHONE LINES
76	54,428	NC
77	54,349	NC
78	54,149	ON GRAVEL PARKING LOT
79	54,289	ON GRAVEL PARKING LOT
80	54,148	ON GRAVEL PARKING LOT
81	54,276	NC
82	54,269	NEAR PRIVATE WELL CASING
83	54,608	ON BEDROCK
84	54,725	NC
85	54,277	NC

Interference caused by telephone lines, metal objects, cables, and exposed bedrock had a major impact on the magnetometer data. Even though it was not possible to eliminate this interference, two major magnetic anomalies, one positive and one negative were mapped. These anomalies exist along the property line dividing the Harden and Posick lots.

E. SOIL GAS SURVEY

SOIL GAS SURVEY

A soil gas survey was conducted at the Chesnutis Site in Beacon Falls, Connecticut on Thursday and Friday, December 1 and 2, 1988.

A square grid was established on the site with eighty-six points located at twenty foot intervals. The soil gas survey was conducted at fifteen different stations on the grid. The soil gas stations were selected based on the results of the magnetometer survey and conversations with different parties familiar with the site history. Other stations were selected to cover a representative area of the site.

The following procedure was followed at each station. A hole was bored using a slam bar. The depth of the holes varied between two feet and five feet. A copper tube with tygon tubing attached at the top was inserted into each hole. The hole was sealed by compressing clay around the copper tube at the opening of the hole. A hand held battery operated pump with a vacuum of 100 cubic centimeters/minute was then attached to the plastic tubing and allowed to pump for approximately three minutes in order to establish proper equilibrum in the system.

The copper tube and plastic tubing were purged prior to use at each station. Purging was accomplished by allowing a flow of air from the hand held pump to run through the copper tube and plastic tubing. Next, the Organic Vapor Analyzer (OVA) probe was inserted into the plastic tubing to obtain a reading.

The OVA was used to screen for any volatile organic compounds remaining in the tubing. If the OVA indicated the presence of organic compounds in the tubing, the tubing was then washed with methanol and water.

The results of the fifteen stations surveyed are presented in the following table. The stations in the table can be directly correlated with the stations on the Soil Gas Survey Map (Figure 5).

TABLE 4

SOIL GAS SURVEY DATA
CHESNUTIS SITE, BEACON FALLS, CT

STATION	BACKGROUND READING (units*)	ACTUAL READING	NET RESULT (feet)	DEPTH
80	6	6	0*	3
81	6	7	1	3
63	Refusal	---	---	---
62	7.4	10	2.6	3.5
77	7.4	7.8	0.4	3
70	6.6	7.7	1.1	2
59	18	15	0	3
67	16	42	26	4
48	16	>1000	>1000	4
37	36	>1000	>1000	3
51	16	>1000	>1000	4
28	6.6	100	93.4	3.5
25	10.0	10.0	0	3
46	8	20	12	3
60	10	520	510	3.5

* - total organic vapor units

F. VOLATILE ORGANIC ANALYSIS OF SOIL GAS SAMPLES

VOLATILE ORGANIC ANALYSIS OF SOIL GAS SAMPLES

CHESNUTIS SITE

BEACON FALLS, CONNECTICUT

DECEMBER 1 AND 2, 1988

Soil gas samples were analyzed at the site utilizing a PHOTOVAC portable gas chromatograph model 10S50, equipped with a photoionization detector and a CP-Sil 5 CB capillary column. The column is 10 meters long, with an inner diameter of 0.53 millimeters and a 2 micron film thickness. The carrier gas used was ultra-zero grade, with a flow rate of approximately 6 milliliters per minute.

The PHOTOVAC was set up inside a heated vehicle, with the average temperature maintained at approximately 32°C. Samples were obtained from the soil gas apparatus using a 25 ul or 200 ul HAMILTON MICROLITER syringe. Prior to extracting the sample, the syringe was evacuated ten times.

The amount of sample injected into the GC was dependent on the readings obtained at the sample boring using the CENTURY OVA. Accordingly, the gain (sensitivity) of the PHOTOVAC was set at a value based on the OVA readings, to ensure that peaks recorded on the chromatogram were measureable.

Column blanks and syringe blanks were run routinely to assure no cross-contamination had occurred. A standard was run initially, and at approximately two hour intervals, or when a five degree temperature change had occurred.

Quantitation values for soil gas samples represent the concentration of the compound in the gas extracted from the soil boring, and do not necessarily represent the concentration of the compound in the soil itself. The results of the soil gas analysis can best be used as an identification and comparison of relative concentrations of compounds present in the soil surrounding the sampling point.

When interpreting the printout given by the PHOTOVAC, caution should be used in considering the compound name assigned to each peak by the PHOTOVAC's internal computer. Retention times for various compounds can shift from the original standard very quickly, thereby changing the position of the peak in relation to the window assigned to that particular compound name. Therefore, retention time must be considered when comparing an unknown injection chromatogram. In addition, the early eluting compounds such as the DCEs are often masked or appear as an aggregate with other early eluting compounds, making positive identification difficult. For this reason, three compounds present in the standard (1,1 - Dichloroethylene, Trans - 1,2 - Dichloroethylene, Cis - 1,2 - Dichloroethylene) have not been included in the

target compound table. If the presence of these compounds is possible, they will be tentatively identified in the area below the table.

The detection limits identified on the data sheets following are estimated values.

Photovac headspace analysis on a sample collected from the surface spring near Stations 39 and 38 identified the presence of toluene. However, there was no computer quantification because the retention time changed, moving the peak out of the calibrated library window. The approximate concentration of toluene is 10 parts per billion (ppb). This surface spring sample also had unidentified early eluting peaks indicating that other volatile organic compounds were present.

Photovac headspace analysis on a sample collected from the well on the site near Station 82 revealed unidentified early eluting peaks indicating that volatile organic compounds were present.

Photovac analysis on soil vapor obtained from Station 48 identified the following organic compounds at the concentrations listed: benzene - 434,000 ppb; trichloroethylene (TCE)-62,200 ppb; toluene 15,200 ppb; tetrachloroethylene-199,000 ppb; chlorobenzene 16,900 ppb and meta-xylene 9,840 ppb. Unidentified early eluting peaks and an unidentified peak between toluene and TCE were found.

Photovac analysis on soil vapor obtained from Station 37 identified the following organic compounds at the concentrations listed: benzene - 6,360 ppb; toluene - 367,000 ppb; tetrachloroethylene - 10,100 ppb and chlorobenzene - 13,800 ppb. Unidentified early eluting peaks were also present.

Photovac analysis on soil vapor obtained from Station 51 identified the following organic compounds at the concentrations listed: benzene - 490 ppb; toluene - 26,500 ppb; and chlorobenzene - 51,100 ppb. Unidentified early eluting peaks were also present.

Photovac analysis on soil vapor obtained from Station 25 revealed unidentified early eluting peaks indicating that volatile organic compounds were present.

Photovac analysis on soil vapor obtained from Station 60 identified the following organic compounds at the concentrations listed: benzene - 4,570 ppb; toluene - 110,000 ppb; chlorobenzene - 164,000 ppb; meta-xylene - 3,100 ppb and ortho-xylene - 14,000 ppb. Unidentified early eluting peaks and an unidentified peak between toluene and benzene were present.

ROY F. WESTON, INC.
TECHNICAL ASSISTANCE TEAM
REGION I
VOLATILE ORGANIC ANALYSIS - SOIL GAS

Site: Chesnutis Site
Sample Number: N/A
Sample Location: Surface Spring
Date of Collection: 12/1/88
Date of Analysis: 12/1/88

TENTATIVE IDENTIFICATION AND QUANTITATION

Target Compound	ppb Conc. (v/v)	Det. Limit (ppb)	Comments
Benzene	ND	20	
Trichloroethylene	ND	21	
Toluene	*	37	
Tetrachloroethylene	ND	38	
Chlorobenzene	ND	40	
Ethylbenzene	ND	56	
meta-Xylene	ND	30	
ortho-Xylene	ND	30	

*Additional Information: Toluene peak present; no computer quantification. Retention time changed, moving peak out of calibrated library window. (Approximate concentration of toluene: 10 ppb.) Unidentified early eluting peaks; probable injection peaks.

ND [=] Not Detected
BDL [=] Below Detection Limit

ROY F. WESTON, INC.
TECHNICAL ASSISTANCE TEAM
REGION I
VOLATILE ORGANIC ANALYSIS - SOIL GAS

Site: Chesnutis Site
Sample Number: N/A
Sample Location: Well Water
Date of Collection: 12/1/88
Date of Analysis: 12/1/88

TENTATIVE IDENTIFICATION AND QUANTITATION

Target Compound	ppb Conc. (v/v)	Det. Limit (ppb)	Comments
Benzene	ND	20	
Trichloroethylene	ND	21	
Toluene	ND	37	
Tetrachloroethylene	ND	38	
Chlorobenzene	ND	40	
Ethylbenzene	ND	56	
meta-Xylene	ND	30	
ortho-Xylene	ND	30	

*Additional Information: Unidentified early eluting peaks; probable injection peaks.

ND [=] Not Detected
BDL [=] Below Detection Limit

ROY F. WESTON, INC.
TECHNICAL ASSISTANCE TEAM
REGION I
VOLATILE ORGANIC ANALYSIS - SOIL GAS

Site: Chesnutis Site
Sample Number: N/A
Sample Location: Station 48
Date of Collection: 12/2/88
Date of Analysis: 12/2/88

TENTATIVE IDENTIFICATION AND QUANTITATION

Target Compound	ppb Conc. (v/v)	Det. Limit (ppb)	Comments
Benzene	434,000	20	
Trichloroethylene	62,200	21	
Toluene	15,200	37	
Tetrachloroethylene	199,000	38	
Chlorobenzene	16,900	40	
Ethylbenzene	ND	56	
meta-Xylene	9,840	30	
ortho-Xylene	ND	30	

*Additional Information: Unidentified early eluting peaks. Unidentified peak between toluene and TCE.

ND [=] Not Detected
BDL [=] Below Detection Limit

ROY F. WESTON, INC.
TECHNICAL ASSISTANCE TEAM
REGION I
VOLATILE ORGANIC ANALYSIS - SOIL GAS

Site: Chesnutis Site
Sample Number: N/A
Sample Location: Station 37
Date of Collection: 12/2/88
Date of Analysis: 12/2/88

TENTATIVE IDENTIFICATION AND QUANTITATION

Target Compound	ppb Conc. (v/v)	Det. Limit (ppb)	Comments
Benzene	6,360	20	
Trichloroethylene	ND	21	
Toluene	367,000	37	
Tetrachloroethylene	10,100	38	
Chlorobenzene	13,800	40	
Ethylbenzene	ND	56	
meta-Xylene	ND	30	
ortho-Xylene	ND	30	

*Additional Information: Unidentified early eluting peaks.

ND [=] Not Detected
BDL [=] Below Detection Limit

ROY F. WESTON, INC.
TECHNICAL ASSISTANCE TEAM
REGION I
VOLATILE ORGANIC ANALYSIS - SOIL GAS

Site: Chesnutis Site
Sample Number: N/A
Sample Location: Station 51
Date of Collection: 12/2/88
Date of Analysis: 12/2/88

TENTATIVE IDENTIFICATION AND QUANTITATION

Target Compound	ppb Conc. (v/v)	Det. Limit (ppb)	Comments
Benzene	490	20	
Trichloroethylene	ND	21	
Toluene	26,500	37	
Tetrachloroethylene	ND	38	
Chlorobenzene	51,100	40	
Ethylbenzene	ND	56	
meta-Xylene	ND	30	
ortho-Xylene	ND	30	

*Additional Information: Unidentified early eluting peaks.

ND [=] Not Detected
BDL [=] Below Detection Limit

ROY F. WESTON, INC.
TECHNICAL ASSISTANCE TEAM
REGION I
VOLATILE ORGANIC ANALYSIS - SOIL GAS

Site: Chesnutis Site
Sample Number: N/A
Sample Location: Station 25
Date of Collection: 12/2/88
Date of Analysis: 12/2/88

TENTATIVE IDENTIFICATION AND QUANTITATION

Target Compound	ppb Conc. (v/v)	Det. Limit (ppb)	Comments
Benzene	ND	20	
Trichloroethylene	ND	21	
Toluene	*	37	
Tetrachloroethylene	ND	38	
Chlorobenzene	ND	40	
Ethylbenzene	ND	56	
meta-Xylene	ND	30	
ortho-Xylene	ND	30	

*Additional Information: Unidentified early eluting peaks.

ND [=] Not Detected
BDL [=] Below Detection Limit

ROY F. WESTON, INC.
TECHNICAL ASSISTANCE TEAM
REGION I
VOLATILE ORGANIC ANALYSIS - SOIL GAS

Site: Chesnutis Site
Sample Number: N/A
Sample Location: Station 60
Date of Collection: 12/2/88
Date of Analysis: 12/2/88

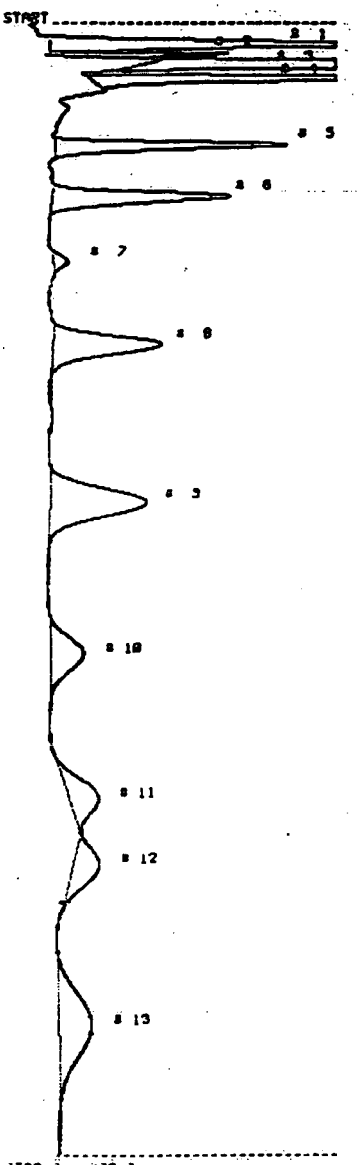
TENTATIVE IDENTIFICATION AND QUANTITATION

Target Compound	ppb Conc. (v/v)	Det. Limit (ppb)	Comments
Benzene	4,570	20	
Trichloroethylene	ND	21	
Toluene	110,000	37	
Tetrachloroethylene	ND	38	
Chlorobenzene	164,000	40	
Ethylbenzene	BDL	56	
meta-Xylene	3,100	30	
ortho-Xylene	14,000	30	

*Additional Information: Unidentified early eluting peaks. Unidentified peak between toluene and benzene

ND [=] Not Detected
BDL [=] Below Detection Limit

PHOTOVAC



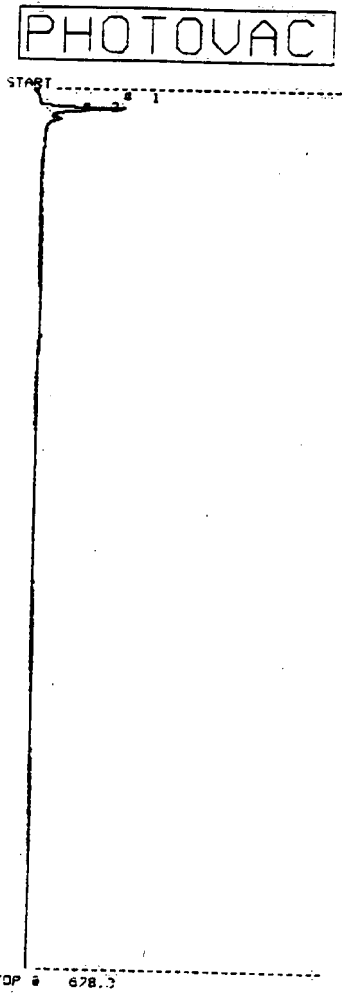
STOP @ 778.8
SAMPLE RUN DEC 2 1988 8:55
ANALYSIS # 4 10 PPB STD
TEMPERATURE 23 CHESTNUTIS SITE
GAIN 50 200 UL

COMPOUND NAME	PEAK	R.T.	AREA/PPM	
UNKNOWN	1	16.6	7.3	US
UNKNOWN	2	23.8	1.1	US
UNKNOWN	3	31.4	11.0	US
UNKNOWN	4	41.3	7.1	US
UNKNOWN	5	52.4	4.5	US
UNKNOWN	6	132.5	5.1	US
UNKNOWN	7	182.1	153.3	mUS
UNKNOWN	8	247.7	5.5	US
UNKNOWN	9	372.5	7.4	US
UNKNOWN	10	490.3	3.1	US
UNKNOWN	11	602.3	2.6	US
UNKNOWN	12	653.3	2.3	US
UNKNOWN	13	778.1	5.7	US

PHOTOVAC

	COMPOUND	ID #	R.T.	LIMIT
	O-XYLENE	1	778.1	1.000 PPM
	M-XYLENE	2	653.3	1.000 PPM
	ETHYLBENZENE	3	602.3	1.000 PPM
	CHLOROBENZENE	4	490.3	1.000 PPM
	PCE	5	372.5	1.000 PPM
	TOLUENE	6	247.7	1.000 PPM

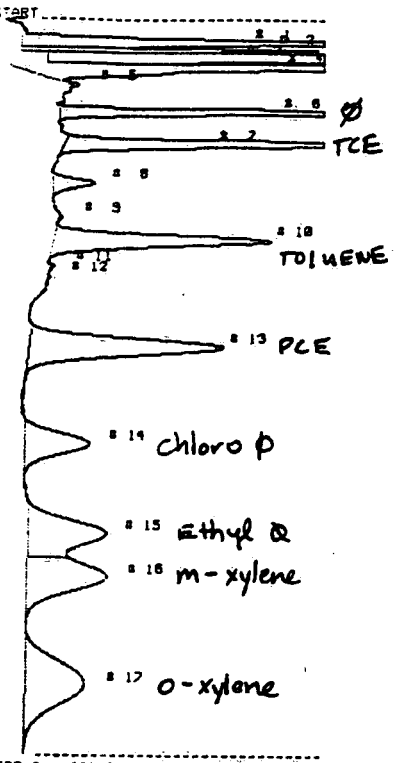
PHOTOVAC



STOP @ 678.3
SAMPLE RUN DEC 2 1988 9:16
ANALYSIS # 5 TUBING BLK
TEMPERATURE 28 CHESTNUTIS SITE
GAIN 20 200 UL

COMPOUND NAME	PEAK	R.T.	AREA/PPM
DCE	1	15.6	0.001 PPM
DCE	2	23.5	0.000 PPM

PHOTOVAC

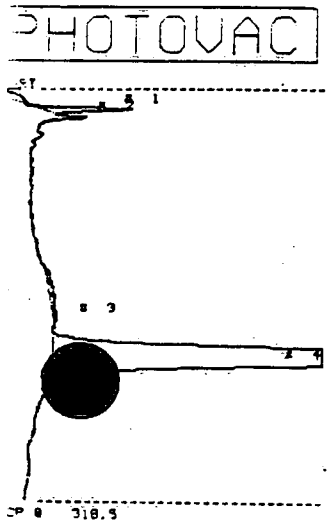


STOP @ 568.3
SAMPLE RUN DEC 2 1988 10: 1
ANALYSIS # 11 10 PPB STD
TEMPERATURE 33 CHESTNUTIS SITE
GAIN 50 200 UL

COMPOUND NAME	PEAK	R.T.	AREA/PPM	
UNKNOWN	1	16.8	8.3	US
UNKNOWN	2	23.6	2.5	US
UNKNOWN	3	33.4	12.2	US
UNKNOWN	4	36.8	3.2	US
UNKNOWN	5	51.3	42.2	mUS
UNKNOWN	6	71.5	6.1	US
UNKNOWN	7	92.2	6.9	US
UNKNOWN	8	120.5	384.2	mUS
UNKNOWN	9	155.5	30.2	mUS
UNKNOWN	10	173.2	6.2	US
UNKNOWN	11	183.3	28.4	mUS
UNKNOWN	12	255.6	3.3	US
UNKNOWN	13	330.8	3.6	US
UNKNOWN	14	401.3	5.3	US
UNKNOWN	15	434.1	6.2	US
UNKNOWN	16	517.8	8.3	US

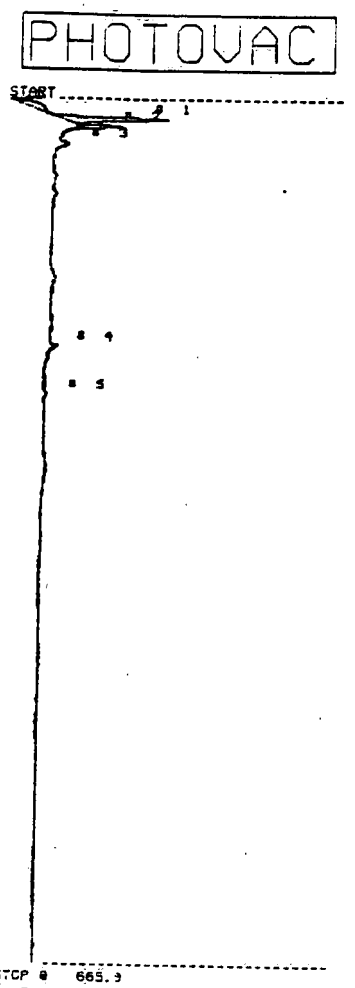
PHOTOVAC

	COMPOUND	ID #	R.T.	LIMIT
	O-XYLENE	1	517.8	1.000 PPM
	M-XYLENE	2	434.1	1.000 PPM
	ETHYLBENZENE	3	401.3	1.000 PPM
	CHLOROBENZENE	4	330.8	1.000 PPM
	PCE	5	255.8	1.000 PPM
	TOLUENE	6	173.3	1.000 PPM
	TCE	7	92.2	1.000 PPM
	BENZENE	8	71.5	1.000 PPM
	DCE	9	36.8	1.000 PPM
	DCE	10	23.4	1.000 PPM



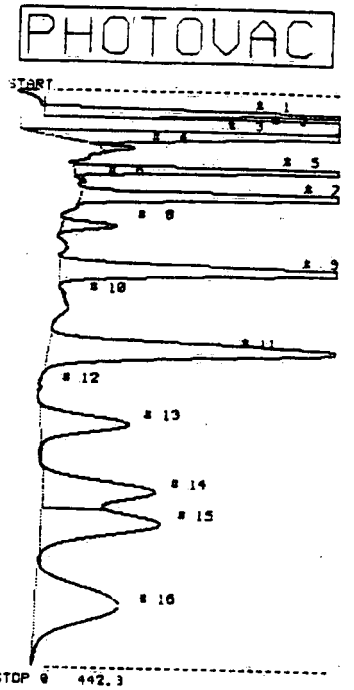
STOP @ 318.5
SAMPLE RUN DEC 1 1988 13:10
ANALYSIS # 1 SURFACE SPRING
TEMPERATURE 38 CHESTNUTIS SITE
GAIN 50 200 UL

COMPOUND NAME	PEAK	R.T.	AREA/PPM
	1	16.2	0.000 PPM
	2	22.6	0.000 PPM
ENE	3	128.5	0.000 PPM
NOWN	4	282.8	32.7 US



STOP @ 665.9
SAMPLE RUN DEC 1 1988 13:40
ANALYSIS # 3 WELL WATER
TEMPERATURE 37 CHESTNUTIS SITE
GAIN 50 200 UL

COMPOUND NAME	PEAK	R.T.	AREA/PPM
DCE	1	16.6	0.001 PPM
DCE	2	22.3	0.000 PPM
TOLUENE	4	132.1	0.000 PPM



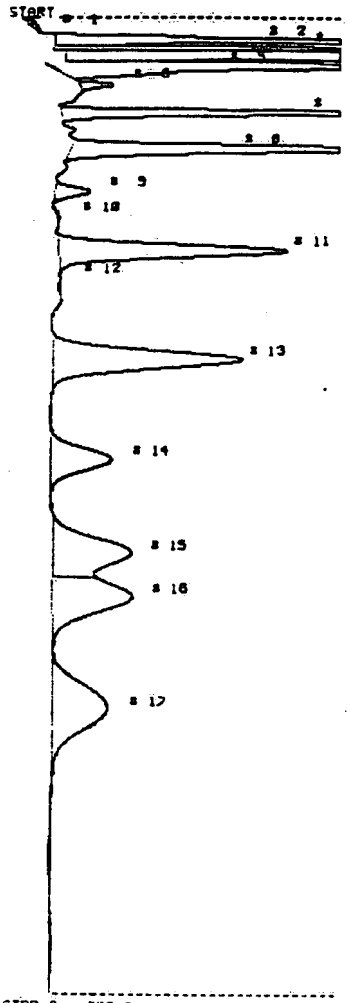
STOP @ 442.3
SAMPLE RUN DEC 1 1988 13:48
ANALYSIS # 4 10 PPB STD
TEMPERATURE 38 CHESTNUTIS SITE
GAIN 50 200 UL

COMPOUND NAME	PEAK	R.T.	AREA/PPM
DCE	1	17.2	0.006 PPM
DCE	2	25.3	0.021 PPM
DCE	3	32.8	0.006 PPM
DCE	4	43.8	0.008 PPM
BENZENE	5	60.0	0.010 PPM
BENZENE	7	73.3	0.013 PPM
TCE	8	103.6	0.001 PPM
UNKNOWN	9	132.2	3.5 US
UNKNOWN	10	153.5	23.4 US
TOLUENE	11	200.0	0.0[illegible] PPM
PCE	12	258.5	0.004 PPM
UNKNOWN	13	318.1	6.3 US
CHLOROBENZENE	14	339.3	0.000 PPM
ETHYLBENZENE	15	339.3	0.012 PPM

PHOTOVAC

#	COMPOUND ID	R.T.	LIMIT
1	O-XYLENE	393.3	1.000 PPM
2	M-XYLENE	395.3	1.000 PPM
3	ETHYLBENZENE	413.4	1.000 PPM
4	CHLOROBENZENE	259.5	1.000 PPM
5	PCE	200.0	1.000 PPM
6	TOLUENE	132.2	1.000 PPM
7	TCE	73.3	1.000 PPM
8	BENZENE	60.0	1.000 PPM
9	DCE	32.8	1.000 PPM
10	DCE	25.3	1.000 PPM

PHOTOVAC



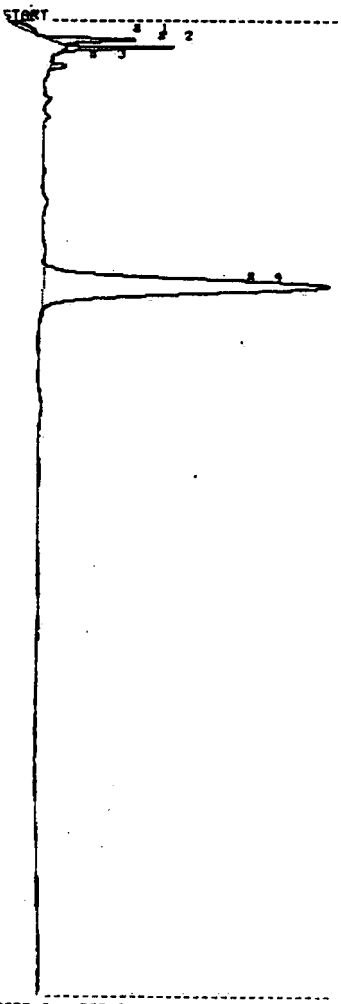
STOP @ 750.0
SAMPLE RUN DEC 1 1988 11:46
ANALYSIS # 3 10 PPB STD
TEMPERATURE 31 CHESTNUTIS SITE
GAIN 50 200 UL

COMPOUND NAME	PEAK	R.T.	AREA/PPM
DCE	1	10.2	0.000 PPM
DCE	2	17.8	0.004 PPM
DCE	3	23.2	0.001 PPM
DCE	4	29.3	0.007 PPM
DCEE	5	36.3	0.014 PPM
DCEE	6	42.4	0.000 PPM
BENZENE	7	73.2	0.008 PPM
TCE	8	100.2	0.003 PPM
UNKNOWN	9	134.1	817.8 mVS
UNKNOWN	10	153.7	26.5 mVS
TOLUENE	11	180.1	0.011 PPM
PCE	13	265.1	0.006 PPM
CHLOROBENZENE	14	341.9	0.008 PPM
ETHYLBENZENE	15	414.9	0.009 PPM
M-XYLENE	16	448.9	0.010 PPM
O-XYLENE	17	535.3	0.009 PPM

PHOTOVAC

#	COMPOUND	ID #	R.T.	LIMIT
	O-XYLENE	2	535.3	1.000 PPM
	M-XYLENE	3	448.9	1.000 PPM
	ETHYLBENZINE	4	414.9	1.000 PPM
	CHLOROBENZENE	5	341.9	1.000 PPM
	PCE	6	265.1	1.000 PPM
	TOLUENE	7	180.1	1.000 PPM
	TCE	8	100.2	1.000 PPM
	BENZENE	9	73.2	1.000 PPM
	DCE	10	36.3	1.000 PPM
	DCE	11	29.3	1.000 PPM

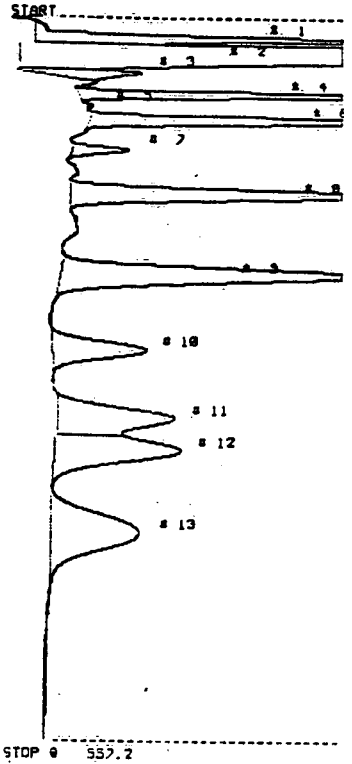
PHOTOVAC



STOP @ 750.0
SAMPLE RUN DEC 1 1988 12:52
ANALYSIS # 10 SURFACE SPRING
TEMPERATURE 35 CHESTNUTIS SITE
GAIN 50 200 UL

COMPOUND NAME	PEAK	R.T.	AREA/PPM
DCE	1	15.9	0.000 PPM
DCE	2	21.7	0.000 PPM
DCE	3	36.1	0.000 PPM
UNKNOWN	4	207.1	11.3 VS

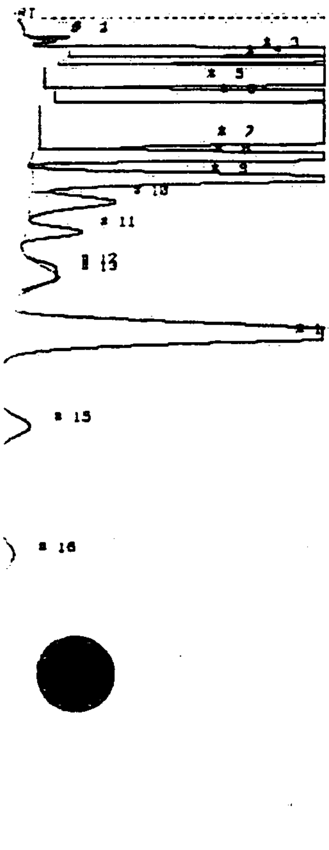
PHOTOVAC



STOP @ 557.2
SAMPLE RUN DEC 1 1988 13:?
ANALYSIS # 11 10 PPB STD
TEMPERATURE 30 CHESTNUTIS SITE
GAIN 50 200 UL

COMPOUND NAME	PEAK	R.T.	AREA/PPM
DCE	1	17.0	0.306 PPM
DCE	2	[illegible]	[illegible]
DCE	3	[illegible]	[illegible]
BENZENE	4	80.2	0.011 PPM
BENZENE	5	89.0	0.000 PPM
BENZENE	6	98.6	0.014 PPM
TCE	7	133.4	0.001 PPM
UNKNOWN	8	137.7	10.5 VS
TOLUENE	9	220.1	0.015 PPM
PCE	10	253.1	0.004 PPM
UNKNOWN	11	311.4	6.2 VS
CHLOROBENZENE	12	336.8	0.022 PPM
ETHYLBENZINE	13	401.3	0.012 PPM

PHOTOVAC

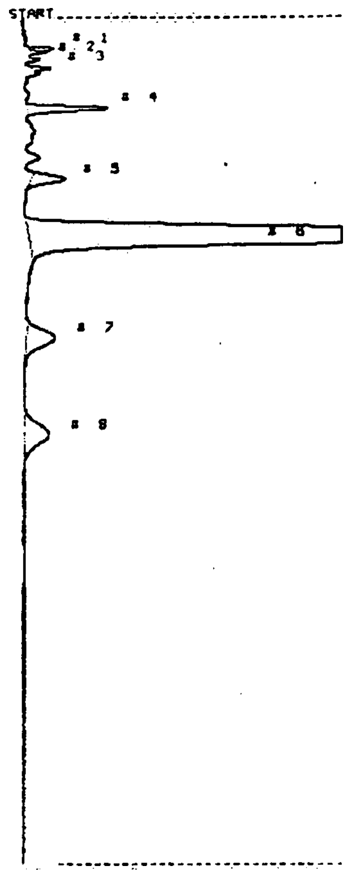


F @ 650.0
PLE RUN DEC 2 1988 10:21
LYSIS # 12 STA 98
PERATURE 33 CHESTNUTIS SITE
N 2 25 UL

FSET	0.0	mU
RT SPEED	1	cm/Min
PE SENS.	15	mU/Sec
DOW +/-	20	Sec
IMUM AREA	20	mUSec
TTER DELAY	10.0	Sec
LYSIS TIME	650.0	Sec
LE TIME	0	Min

ND NAME	PEAK	R.T.	AREA/PPM
		15.7	0.001 PPM
	3	26.0	0.208 PPM
	4	32.6	0.114 PPM
	5	44.5	1.312 PPM
ENE	6	60.3	0.708 PPM
ENE	7	81.6	2.633 PPM
	8	107.2	0.374 PPM
NOWN	9	124.4	10.8 US
NOWN	10	143.3	2.7 US
UENE	11	166.7	0.051 PPM
NOWN	12	135.7	148.3 mUS
	14	245.3	0.646 PPM
LOROBENZENE	15	318.2	0.106 PPM
LENE	16	[illegible]	[illegible] PPM

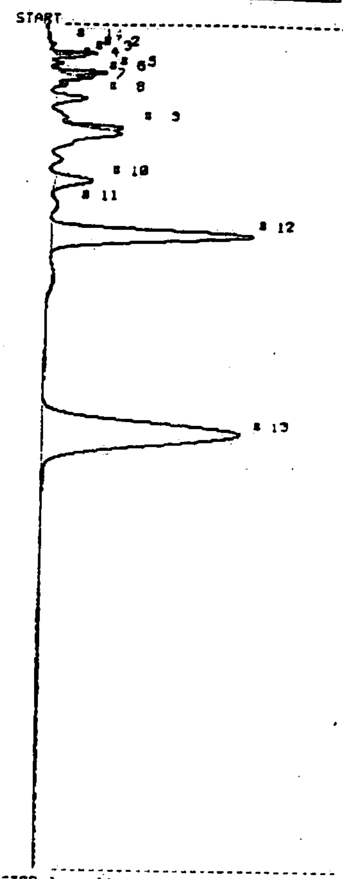
PHOTOVAC



STOP @ 650.0
SAMPLE RUN DEC 2 1988 10:48
ANALYSIS # 14 STA 37
TEMPERATURE 32 CHESTNUTIS SITE
GAIN 2 25 UL

COMPOUND NAME	PEAK	R.T.	AREA/PPM
DCE	1	24.2	0.001 PPM
DCE	2	32.7	0.001 PPM
DCE	3	53.8	0.003 PPM
BENZENE	4	70.6	0.033 PPM
UNKNOWN	5	125.5	733.3 mUS
TOLUENE	6	169.1	1.234 PPM
PCE	7	248.3	0.033 PPM
CHLOROBENZENE	8	322.7	0.088 PPM

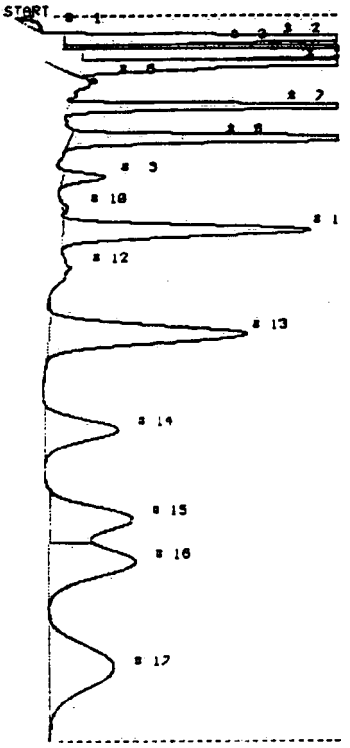
PHOTOVAC



STOP @ 650.0
SAMPLE RUN DEC 2 1988 11:20
ANALYSIS # 17 STA 51
TEMPERATURE 33 CHESTNUTIS SITE
GAIN 5 25 UL

COMPOUND NAME	PEAK	R.T.	AREA/PPM
DCE	2	23.2	0.002 PPM
DCE	3	26.0	0.001 PPM
DCE	4	31.1	0.002 PPM
DCE	5	32.4	0.007 PPM
DCE	6	42.2	0.001 PPM
DCE	7	47.5	0.000 PPM
BENZENE	8	57.7	0.002 PPM
BENZENE	9	80.7	0.203 PPM
UNKNOWN	10	122.5	810.9 mUS
TOLUENE	12	169.7	0.090 PPM
CHLOROBENZENE	13	317.3	0.326 PPM

PHOTOVAC



STOP @ 556.1
SAMPLE RUN DEC 2 1988 11:30
ANALYSIS # 18 10 PPB STD
TEMPERATURE 33 CHESTNUTIS SITE
GAIN 50 200 UL

COMPOUND NAME	PEAK	R.T.	AREA/PPM
DCE	1	19.5	0.000 PPM
DCE	2	17.5	0.006 PPM
DCE	3	22.3	0.002 PPM
DCE	4	28.3	0.006 PPM
DCE	5	35.4	0.008 PPM
DCE	6	48.9	0.000 PPM
BENZENE	7	68.2	0.010 PPM
TCE	8	92.4	0.010 PPM
UNKNOWN	9	123.1	351.6 mVS
UNKNOWN	10	147.5	40.6 mVS
TOLUENE	11	164.5	0.011 PPM
TOLUENE	12	172.1	0.000 PPM
PCE	13	214.7	0.010 PPM
CHLOROBENZENE	14	338.8	0.010 PPM
ETHYLBENZENE	15	384.5	0.000 PPM
M-XYLENE	16	420.1	0.010 PPM
O-XYLENE	17	434.3	0.010 PPM

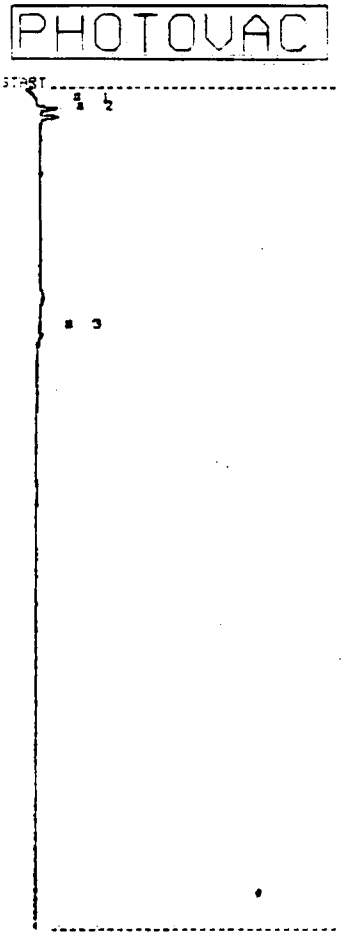
PHOTOVAC

CALIBRATED PEAK 13.PCE

SAMPLE RUN DEC 2 1988 11:37
ANALYSIS # 18 10 PPB STD
TEMPERATURE 32 CHESTNUTIS SITE
GAIN 50 200 UL

COMPOUND NAME	PEAK	R.T.	AREA/PPM
DCE	1	19.5	0.000 PPM
DCE	2	17.5	0.006 PPM
DCE	3	22.3	0.002 PPM
DCE	4	28.3	0.006 PPM
DCE	5	35.4	0.008 PPM
DCE	6	48.9	0.000 PPM
BENZENE	7	68.2	0.010 PPM
TCE	8	92.4	0.010 PPM
UNKNOWN	9	123.1	351.6 mVS
TOLUENE	10	147.5	0.000 PPM
TOLUENE	11	164.5	0.010 PPM
UNKNOWN	12	171.1	25.4 mVS
PCE	13	214.7	0.010 PPM
CHLOROBENZENE	14	338.8	0.010 PPM

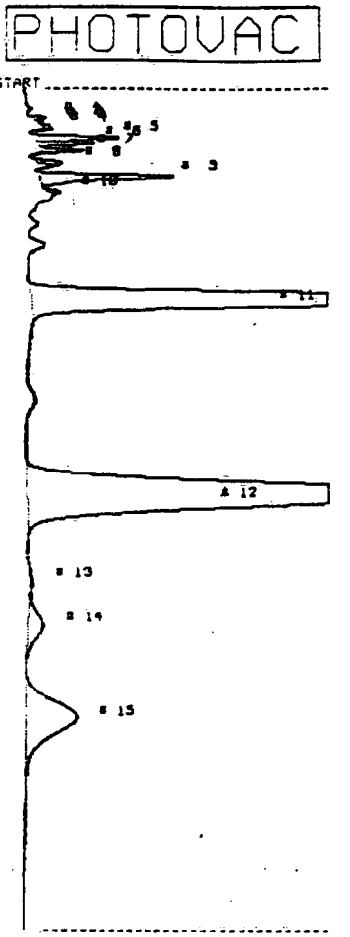
PHOTOVAC



STOP @ 650.0
SAMPLE RUN DEC 2 1988 12:4
ANALYSIS # 20 STA 25
TEMPERATURE 33 CHESTNUTIS SITE
GAIN 20 25 UL

COMPOUND NAME	PEAK	R.T.	AREA/PPM
DCE	1	23.5	0.000 PPM
DCE	2	28.5	0.000 PPM

PHOTOVAC



STOP @ 650.0
SAMPLE RUN DEC 2 1988 12:18
ANALYSIS # 21 STA 60
TEMPERATURE 33 CHESTNUTIS SITE
GAIN 5 25 UL

COMPOUND NAME	PEAK	R.T.	AREA/PPM
DCE	1	23.5	0.000 PPM
DCE	3	28.3	0.000 PPM
DCE	4	31.6	0.00 PPM
DCE	6	48.7	0.003 PPM
DCE	5	42.4	0.000 PPM
DCE	7	67.9	0.002 PPM
BENZENE	8	92.3	0.001 PPM
BENZENE	9	68.6	0.322 PPM
BENZENE	10	80.4	0.000 PPM
TOLUENE	11	163.1	0.021 PPM
CHLOROBENZENE	12	314.3	1.048 PPM
ETHYLBENZENE	13	384.5	0.000 PPM
M-XYLENE	14	418.1	0.013 PPM
O-XYLENE	15	489.3	0.063 PPM

G. X-RAY FLUORESCENCE SPECTROMETER RESULTS

X-RAY FLUORESCENCE SPECTROMETER RESULTS

CHESNUTIS SITE

MONDAY, DECEMBER 5, 1988 (ANALYSIS DATE)

Two soil samples from the Chesnutis Site, Beacon Falls, Connecticut were screened for metals using the Kevex 7000 x-ray fluorescence (XRF) spectrometer. The XRF procedure was used only as a preliminary screening procedure and all element quantification should be considered approximate.

All samples were prepared according to the following procedures. Approximately two grams of the soil sample were placed in a mylar film sample cup. The sample was labeled with an identification number and the number was entered into the XRF logbook.

After preparation, the sample cups were placed in the sample carousel, and then exposed to the x-ray source for approximately 60 seconds. The targets used for this project were gadolinium (Gd) and zirconium (Zr).

The XRF can simultaneously indicate the presence of the metals listed below. The table below indicates the XRF detection limits and normal abundance in the earth's crust for these heavy metals.

ELEMENT	DETECTION LIMIT (ppm)	NATURAL LEVEL RANGE (ppm)**
Chromium (Cr)*	50	1-1,000
Barium (Ba)*	25	100-3,000
Cobalt (Co)	40	1-40
Copper (Cu)	30	2-100
Nickel (Ni)	40	5-500
Manganese (Mn)	50	600-6000
Zinc (Zn)	30	10-300
Vanadium (V)	50	200-500
Silver (Ag)*	30	0.01-5
Arsenic (As)*	50	1-50
Antimony (Sb)	30	2-10
Selenium (Se)*	20	0.1-2
Thallium (Tl)	25	5
Mercury (Hg)*	25	0.01-0.3
Tin (Sn)	30	2-200
Cadmium (Cd)*	30	0.01-0.7
Lead (Pb)*	20	2-200

* Safe Drinking Water Act Metals

** Adapted From: Hazardous Waste Land Treatment, USEPA, SW-874 (April, 1983)

The following represents the XRF analysis results for the Chesnutis Site samples.

Sample Station	Element	Concentration (ppm)
51	Clean*	*
37	Clean	*

* Clean - The levels were not significantly greater than the natural levels listed previously.

The screening results on the two samples obtained from Stations 51 and 37 indicate metal concentrations consistent with naturally occurring levels found in soil.

H. VOLATILE ORGANIC ANALYSIS RESULTS

US ENVIRONMENTAL PROTECTION AGENCY
60 Westview Street
Lexington, MA. 02173

DATE: 12-22-88

SUBJECT: Ches nutis, Beacon Falls, CT--Purgeable Organic Analysis
Samples Received: 78068, 78069,78071
Samples Analyzed by GC/MS: Same

FROM: Mary Jane Cuzzupe and Scott Clifford, Chemists

TO: Don Berger, Chief O, H, and M

THRU: Dr. William Andrade
Chief, Chemistry Section WTA

PROJECT NUMBER: 890027

DATE(S) SAMPLES RECEIVED BY THE LABORATORY:12-5-88

ANALYTICAL PROCEDURE:

Soil: Approximately 4 grams (wet weight) of sample is tared in a 40 ml VOA vial. Ten mls of pesticide grade methanol is added to the sample and the vial is then sonicated for one minute.
One ml of extract is diluted to 50 mls or greater in organic free water and then analyzed as per SW-846 3rd revision, Method 8240.
Concentratration is based on dry weight analyzed.

QUALITY CONTROL:

1. A method blank is analyzed with every set of samples.

2. Each sample is spiked with four surrogate compounds at approximately 30 ppb concentration. The results for the surrogate recoveries are reported for each sample.

3. Sample 78069 was spiked in duplicate to determine laboratory precision and accuracy.

4. Additionally, fluorobenzene was spiked into each sample to determine extraction efficiency.

Alex Sherrin
Moira Lataille

US ENVIRONMENTAL PROTECTION AGENCY
REGION I LABORATORY
GC/MS PURGEABLE ORGANIC ANALYSIS -WATER

SAMPLE NO.: 78071- Trip Blank
Sample Results Continued:

CAS NO.	STORET NO.	Compound	ppm Conc. (ug/l)	Det. Limit (ug/l)	Comments
78-93-3	81595	2-Butanone	ND	24	
108-05-4	77057	Vinyl Acetate	ND	9	
591-10-6	77103	2-Hexanone	ND	5	
108-10-1	81596	4-Methyl-2-Pentanone	ND	3	
100-42-5	81708	Styrene	ND	1	
133-02-7	81551	Xylenes (total)	ND	2	
		1,2-Dibromoethane (EDB)	ND	1	
		Tetrahydrofuran	ND	14	
		Ethyl ether	ND	8	

Other Compounds Quantitated

Other Compounds Tentatively Identified

Sample Recoveries for Surrogate Compounds:	Observed Recoveries	95%Confidence Limits
1,2-Dichloroethane,d4	103	81-130
Benzene,d6	105	90-142
Toluene,d8	100	91-108
1,4-Bromofluorobenzene	95	86-118

Notes:
ND=none detected
~=approximate
<=less than
>=greater than

Matrix Spike Duplicate Analysis

Chestnutis

5. Sample 78069 - Accuracy

Compound	Average % Recovery	Acceptable Range *
Methylene Chloride	79	D-221
1,1-Dichloroethylene	123	D-234
1,1-Dichloroethane	80	59-155
Chloroform	80	51-138
Carbontetrachloride	91	70-140
1,2-Dichloropropane	84	D-210
Trichloroethylene	110	71-157
Dibromochloromethane	94	53-149
1,1,2-Trichloroethane	96	52-150
Tetrachloroethylene	108	64-148
Chlorobenzene	90	37-160

* Table 5. - Calibration and QC Acceptance Criteria- Method 624.

Sample: 78069 - Precision

Compound	#1 % Recovery	#2 % Recovery	RPD
Methylene Chloride	75	83	10
1,1-Dichloroethylene	119	126	6
1,1-Dichloroethane	75	85	12
Chloroform	76	85	11
Carbontetrachloride	88	94	6
1,2-Dichloropropane	80	89	11
Trichloroethylene	107	114	6
Dibromochloromethane	91	98	7
1,1,2-Trichloroethane	93	100	7
Tetrachloroethylene	101	114	12
Chlorobenzene	83	97	16

ANALYTICAL PARAMETERS
PURGEABLE ORGANIC ANALYSIS

INSTRUMENTS:	Tekmar ALS Tekmar LSC-2 Finnigan OWA 30B
PURGE CONDITIONS:	
Gas:	Helium
Purge Time and Flow:	11 min.,40 ml/min
Trap:	25 cm stainles steel (1/8 in.OD) packed with 15 cm 60/80 mesh Tenax-GC plus 8 cm 35/80 mesh Davison type 15 Silica Gel
Desorption Time,Flow, Temperature:	4 min, 20ml/min.,180C
Bake out cycle:	7 min.
CHROMATOGRAPHIC CONDITIONS:	
Column:	2 meter by 2 mm ID glass column packed with 1% SP-1000 on 60/80 mesh Carbopack B.
Program:	Isothermal at 45 C for 3 min the programmed at 8 C/min to 220 C and held for the total time of 38.5 min.
Injector, Separator,and Transfer Temperatures:	220 C,250 C,250 C
Carrier Gas and Flow:	Helium, 30 ml/min
MASS SPECTROMETER CONDITIONS:	
Electron Energy:	70 V
Mass Range:	35,260
Scan Rate:	3 seconds

FACILITY SAMPLED: Chestnutis

US ENVIRONMENTAL PROTECTION AGENCY
REGION I LABORATORY
GC/MS PURGEABLE ORGANIC ANALYSIS - SOIL

SAMPLE NO.: 78068
SAMPLE LOCATION:
DATE OF COLLECTION:
PERCENT DRY WEIGHT: 80%

DATE OF ANALYSIS: 12-7-88
REFERENCE BOOK: 103

SAMPLE RESULTS:

CAS NO.	STORET NO.	Compound	ppm Conc. (ug/gm)	Det. Limit (ug/gm)	Comments
		TARGET COMPOUNDS			
74-87-3	34418	Chloromethane	ND	133.9	
74-83-9	34413	Bromomethane	ND	30.9	
75-01-4	39175	Vinyl Chloride	ND	41.2	
75-00-3	34311	Chloroethane	ND	20.6	
75-09-2	34423	Methylene Chloride	ND	20.6	
75-69-4	34488	Trichlorofluoromethane	ND	20.6	
75-35-4	34501	1,1-Dichloroethylene	ND	20.6	
75-[illegible]-3	34496	1,1-Dichloroethane	ND	10.3	
1[illegible]0-5	34546	1,2-Dichloroethylene isomers	ND	20.6	
67-66-3	32106	Chloroform	ND	10.3	
107-06-2	34531	1,2-Dichloroethane	ND	10.3	
71-55-6	34506	1,1,1-Trichloroethane	ND	10.3	
56-23-5	32102	Carbon Tetrachloride	ND	10.3	
75-27-4	32101	Bromodichloromethane	ND	20.6	
78-87-5	34541	1,2-Dichloropropane	ND	10.3	
10061-02-6	34699	t-1,3-Dichloropropene	ND	10.3	
79-01-6	39180	Trichloroethylene	ND	10.3	
124-48-1	32105	Dibromochloromethane	ND	10.3	
10061-01-5	34704	c-1,3-Dichloropropene and/or 1,1-Dichloropropene	ND	10.3	
79-00-5	34511	1,1,2-Trichloroethane	ND	10.3	
71-43-2	34030	Benzene	ND	20.6	
110-75-8	34576	2-Chloroethylvinyl ether	ND	154.5	
75-25-2	32104	Bromoform	ND	10.3	
127-18-4	34475	Tetrachloroethylene	ND	10.3	
79-34-5	34516	1,1,2,2-Tetrachloroethane	ND	10.3	
108-88-3	34010	Toluene	12	10.3	
108-90-7	34301	Chlorobenzene	96	10.3	
100-41-4	34371	Ethylbenzene	ND	10.3	
107-02-8	34210	Acrolein	ND	515	
107-13-1	34215	Acrylonitrile	ND	206	
		Dichlorobenzene isomers	380	20.6	
		1,1,2-Trichloro-1,2,2-trifluoroethane	ND	51.5	
67-64-1	81552	Acetone	ND	892	
75[illegible]5-0	77041	Carbon Disulfide	ND	41.2	
		(con't)			

US ENVIRONMENTAL PROTECTION AGENCY
REGION I LABORATORY
GC/MS PURGEABLE ORGANIC ANALYSIS - SOIL

SAMPLE NO.: 78068
Sample Results Continued:

CAS NO.	STORET NO.	Compound	ppm Conc. (ug/gm)	Det. Limit (ug/gm)	Comments
78-93-3	81595	2-Butanone	ND	402	
108-05-4	77057	Vinyl Acetate	ND	92.7	
591-10-6	77103	2-Hexanone	ND	51.5	
108-10-1	81596	4-Methyl-2-Pentanone	ND	30.9	
100-42-5	81708	Styrene	ND	10.3	
133-02-7	81551	Xylenes (total)	ND	20.6	
		1,2-Dibromoethane (EDB)	ND	10.3	
		Tetrahydrofuran	ND	144.2	
		Ethyl Ether	ND	82.4	

Percent recovery of fluorobenzene 123%

Other Compounds Tentatively Identified

Other Compounds Quantitated

Sample Recoveries for Surrogate Compounds:	Observed Recoveries	95% Confidence Limits
1,2-Dichloroethane,d4	91	81-130
Benzene,d6	113	90-142
Toluene,d8	96	91-108
1,4-Bromofluorobenzene	96	86-118

Notes:
ND=none detected
~=approximate
<=less than
>=greater than

FACILITY SAMPLED: Ches nutis

US ENVIRONMENTAL PROTECTION AGENCY
REGION I LABORATORY
GC/MS PURGEABLE ORGANIC ANALYSIS -SOIL

SAMPLE NO.: 78069
SAMPLE LOCATION:
DATE OF COLLECTION:
PERCENT DRY WEIGHT: 88%

DATE OF ANALYSIS: 12-7-88
REFERENCE BOOK: 103

SAMPLE RESULTS:

CAS NO.	STORET NO.	Compound	ppm Conc. (ug/gm)	Det. Limit (ug/gm)	Comments
		TARGET COMPOUNDS			
74-87-3	34418	Chloromethane	ND	8.71	
74-83-9	34413	Bromomethane	ND	6.03	
75-01-4	39175	Vinyl Chloride	ND	2.68	
75-00-3	34311	Chloroethane	ND	1.34	
75-09-2	34423	Methylene Chloride	ND	1.34	
75-69-4	34488	Trichlorofluoromethane	1.3	1.34	
75-35-4	34501	1,1-Dichloroethylene	ND	1.34	
[illegible]-3	34496	1,1-Dichloroethane	ND	0.67	
[illegible]0-5	34546	1,2-Dichloroethylene isomers	ND	1.34	
67-66-3	32106	Chloroform	ND	0.67	
107-06-2	34531	1,2-Dichloroethane	ND	0.67	
71-55-6	34506	1,1,1-Trichloroethane	ND	0.67	
56-23-5	32102	Carbon Tetrachloride	ND	0.67	
75-27-4	32101	Bromodichloromethane	ND	1.34	
78-87-5	34541	1,2-Dichloropropane	ND	0.67	
10061-02-6	34699	t-1,3-Dichloropropene	ND	0.67	
79-01-6	39180	Trichloroethylene	ND	0.67	
124-48-1	32105	Dibromochloromethane	ND	0.67	
10061-01-5	34704	c-1,3-Dichloropropene and/or 1,1-Dichloropropene	ND	0.67	
79-00-5	34511	1,1,2-Trichloroethane	ND	0.67	
71-43-2	34030	Benzene	ND	0.67	
110-75-8	34576	2-Chloroethylvinyl ether	ND	10.05	
75-25-2	32104	Bromoform	ND	0.67	
127-18-4	34475	Tetrachloroethylene	1.7	0.67	
79-34-5	34516	1,1,2,2-Tetrachloroethane	ND	0.67	
108-88-3	34010	Toluene	ND	0.67	
108-90-7	34301	Chlorobenzene	ND	0.67	
100-41-4	34371	Ethylbenzene	ND	0.67	
107-02-8	34210	Acrolein	ND	33.5	
107-13-1	34215	Acrylonitrile	ND	13.4	
		Dichlorobenzene isomers	3.8	1.34	
		1,1,2-Trichloro-1,2,2-trifluoroethane	ND	3.35	
67-64-1	81552	Acetone	ND	58	
[illegible]5-0	77041	Carbon Disulfide	ND	2.68	
		(con't)			

US ENVIRONMENTAL PROTECTION AGENCY
REGION I LABORATORY
GC/MS PURGEABLE ORGANIC ANALYSIS -SOIL

SAMPLE NO.: 78069
Sample Results Continued:

CAS NO.	STORET NO.	Compound	ppm Conc. (ug/gm)	Det. Limit (ug/gm)	Comments
78-93-3	81595	2-Butanone	ND	26	
108-05-4	77057	Vinyl Acetate	ND	6.03	
591-10-6	77103	2-Hexanone	ND	3.35	
108-10-1	81596	4-Methyl-2-Pentanone	ND	2.01	
100-42-5	81708	Styrene	ND	0.67	
133-02-7	81551	Xylenes (total)	ND	1.34	
		1,2-Dibromoethane (EDB)	ND	0.67	
		Tetrahydrofuran	ND	9.38	
		Ethyl ether	ND	5.36	
		Percent recovery of fluorobenzene			105%

Other Compounds Tentatively Identified

Sample Recoveries for Surrogate Compounds:	Observed Recoveries	95% Confidence Limits
1,2-Dichloroethane,d4	100	81-130
Benzene,d6	106	90-142
Toluene,d8	97	91-108
1,4-Bromofluorobenzene	98	86-118

Notes:
ND=none detected
~=approximate
<=less than
>=greater than

FACILITY SAMPLED: Ches nutis, CT

US ENVIRONMENTAL PROTECTION AGENCY
REGION I LABORATORY
GC/MS PURGEABLE ORGANIC ANALYSIS - WATER

SAMPLE NO.: 78071- Trip Blank
SAMPLE LOCATION:
DATE OF COLLECTION:
PERCENT DRY WEIGHT:

DATE OF ANALYSIS: 12-19-88
REFERENCE BOOK: 102

SAMPLE RESULTS:

CAS NO.	STORET NO.	Compound	ppm Conc. (ug/l)	Det. Limit (ug/l)	Comments
		TARGET COMPOUNDS			
74-87-3	34418	Chloromethane	ND	13	
74-83-9	34413	Bromomethane	ND	3	
75-01-4	39175	Vinyl Chloride	ND	4	
75-00-3	34311	Chloroethane	ND	2	
75-09-2	34423	Methylene Chloride	ND	1	
75-69-4	34488	Trichlorofluoromethane	ND	2	
75-35-4	34501	1,1-Dichloroethylene	ND	2	
75-34-3	34496	1,1-Dichloroethane	ND	1	
[illegible]0-5	34546	1,2-Dichloroethylene isomers	ND	2	
6[illegible]-3	32106	Chloroform	ND	1	
107-06-2	34531	1,2-Dichloroethane	ND	1	
71-55-6	34506	1,1,1-Trichloroethane	ND	1	
56-23-5	32102	Carbon Tetrachloride	ND	1	
75-27-4	32101	Bromodichloromethane	ND	2	
78-87-5	34541	1,2-Dichloropropane	ND	1	
10061-02-6	34699	t-1,3-Dichloropropene	ND	1	
79-01-6	39180	Trichloroethylene	ND	1	
124-48-1	32105	Dibromochloromethane	ND	1	
10061-01-5	34704	c-1,3-Dichloropropene and/or 1,1-Dichloropropene	ND	1	
79-00-5	34511	1,1,2-Trichloroethane	ND	1	
71-43-2	34030	Benzene	ND	1	
110-75-8	34576	2-Chloroethylvinyl ether	ND	15	
75-25-2	32104	Bromoform	ND	1	
127-18-4	34475	Tetrachloroethylene	ND	1	
79-34-5	34516	1,1,2,2-Tetrachloroethane	ND	1	
108-88-3	34010	Toluene	ND	1	
108-90-7	34301	Chlorobenzene	ND	1	
100-41-4	34371	Ethylbenzene	ND	1	
107-02-8	34210	Acrolein	ND	50	
107-13-1	34215	Acrylonitrile	ND	20	
		Dichlorobenzene isomers	ND	2	
		1,1,2-Trichloro-1,2,2 trifluoroethane	ND	5	
67-64-1	81552	Acetone	ND	61	
75-15-0	77041	Carbon Disulfide	ND	4	

(con't)

I. BASE NEUTRAL AND ACID EXTRACTABLE RESULTS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
60 WESTVIEW STREET, LEXINGTON, MASSACHUSETTS 02173

DATE: February 7, 1989

SUBJECT: Gas Chromatography-Mass Spectrometry Analysis of Extractable Organics in Soils and Sediments - CHESTNUTIS SURVEY

FROM: Suresh Srivastava, Nathan Raines III and Dick Siscanaw, Chemistry Section

TO: Alex Sherrin, Oil and Hazardous Section

THRU: Dr. William J. Andrade, Chief, Chemistry Section

PROJECT NUMBER: 890027

ANALYTICAL PROCEDURE:

EPA Consensus Protocol, Organic Analysis, Multi-Media, Multi-Concentration, Low Level Preparation for Screening and Analysis of Semivolatiles (BNA), 1/87,(IFB WA 84-A266). All samples were screened on a gas chromatograph prior to the gas chromatograph-mass spectrometer analysis. All values are reported out on a dry weight basis.

Date(s) Samples Received by the Laboratory: 12/5/88

Date Samples Analyzed: 12/15/88

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US ENVIRONMENTAL PROTECTION AGENCY
60 Westview Street
Lexington, MA 02173

QUALITY CONTROL:

1. A laboratory blank was analyzed before the sample analysis.

2. Each sample was spiked with several surrogate compounds at approximately 8 mg/kg concentration. The results for the surrogate recoveries are reported out for each sample.

3. Two samples, 78068 and 78069 were spiked twice as a matrix spike duplicate with the following compounds at approximately 12 mg/kg concentration.

Compound	Rec. 78068 (%)	Rec. 78069 (%)	QC Range	Comments
2-Chlorophenol	59	101	25-102	
Phenol	58	71	26-90	
1,4-Dichlorobenzene	NA	98	28-104	
N-Nitrosodipropylamine	92	89	41-126	
1,2,4-Trichlorobenzene	84	97	38-107	
4-Chloro-3-methylphenol	85	99	26-103	
Acenaphthene	78	94	31-137	
2,4-Dinitrotoluene	84	85	28-89	
4-Nitrophenol	129	117	11-114	
Pentachlorophenol	16	46	17-109	
Di-n-butylphthalate	124	NA	29-135	
Pyrene	80	106	35-142	

NA: Not-available because of sample interference.

Compounds not in the Spiking Solution:

Compounds	Conc. (mg/Kg)	Conc. (mg/Kg)
78068:		
Bis(2-ethylhexyl)phthalate	9.9	4.2
1,3-Dichlorobenzene	4.5	4.1
78069:		
Benzo(b)fluorobenzene	<0.7	<0.7
1,3-Dichlorobenzene	<0.7	<0.7
1,2-Dichlorobenzene	7.1	10
Benzoic Acid	<3.2	3.3

SAMPLES ANALYZED: 78068, 78069

US ENVIRONMENTAL PROTECTION AGENCY
60 Westview Street
Lexington, MA 02173

ANALYTICAL PARAMETERS

INSTRUMENTS:

Hewlett Packard 5880 Gas Chromatograph equipped with a Flame Ionionzation Detector

Hewlett Packard 5987 Gas Chromatograph-Mass Spectrometer

GC/FID Screening Conditions:

Gas:	Hydrogen
Capillary Column:	DB-5, 30m, 25mm ID, 0.25 micron film thickness
Injection Mode:	Splitless
Temperature Program:	Isothermal for 1 min at 40 C, programmed at 8 C/min to 320 C hold for 10 min

GC-MS Conditions:

Gas:	Helium
Capillary Column:	DB-5, 60m, 25mm ID, 0.25 micron film thickness
Injection Mode:	Splitless
Temperature Program:	Isothermal for 4 min at 40 C, programmed at 7 C/min to 320 C hold for 11 min
Injector, Transfer Temperatures:	300 C, 300 C
Electron Energy:	70 V
Mass Range:	35-550

FACILITY SAMPLED: CHESTNUTS SITE, BEACON FALLS, CT
US ENVIRONMENTAL PROTECTION AGENCY
REGION I LABORATORY
GC/MS EXTRACTABLE ORGANIC ANALYSIS

SAMPLE NO.: 78068
SAMPLE LOCATION:
DATE OF COLLECTION:
TIME OF COLLECTION:
SAMPLE RESULTS:

Percent Moisture: 20 %

CAS NO.	STORET NO.	Compound	Conc. (mg/kg)	Det. Limit (mg/kg)	Comments
		Priority Pollutants			
83-32-9	34205	Acenaphthene	ND	0.66	
208-96-8	34200	Acenaphthylene	ND	0.66	
120-12-7	34220	Anthracene	NA*	0.66	
309-00-2	39330	Aldrin	ND	0.66	
56-55-3	34526	Benzo(a)anthracene	ND	0.66	
205-99-2	34230	Benzo(b)fluoranthene	ND	0.66	
207-08-9	34242	Benzo(k)fluoranthene	ND	0.66	
50-32-8	34247	Benzo(a)pyrene	ND	0.66	
191-24-2	34521	Benzo(ghi)perylene	ND	0.66	
85-68-7	34292	Benzyl butyl phthalate	ND	0.66	
319-85-7	39338	beta-BHC	ND	0.66	
[redacted]86-8	34259	delta-BHC	ND	0.66	
[redacted]44-4	34273	Bis(2-chloroethyl)ether	ND	0.66	
111-91-1	34278	Bis(2-chloroethoxy)methane	ND	0.66	
117-81-7	**39100**	**Bis(2-ethylhexyl)phthalate**	**7.0**	**0.66**	**average**
108-60-1	34283	Bis(2-chloroisopropyl)ether	ND	0.66	
101-55-3	34636	4-Bromophenylphenyl ether	ND	0.66	
59-50-7	34452	4-Chloro-3-methylphenol	ND	0.66	
91-58-7	34581	2-Chloronaphthalene	ND	0.66	
95-57-8	34586	2-Chlorophenol	ND	0.66	
7005-72-3	34641	4-Chlorophenylphenyl ether	ND	0.66	
218-01-9	34320	Chrysene	ND	0.66	
72-54-8	39310	4,4'-DDD	ND	0.66	
72-55-9	39320	4,4'-DDE	ND	0.66	
50-29-3	39300	4,4'-DDT	ND	0.66	
53-70-3	34556	Dibenzo(a,h)anthracene	ND	0.66	
84-74-2	**39110**	**Di-n-butylphtalate**	**1.4**	**0.66**	
541-73-1	**34566**	**1,3-Dichlorobenzene**	**4.3**	**0.66**	**average**
95-50-1	**34536**	**1,2-Dichlorobenzene**	**1100**	**0.66**	
106-46-7	**34571**	**1,4-Dichlorobenzene**	**21**	**0.66**	
91-94-1	34631	3,3'-Dichlorobenzidine	ND	1.32	
120-83-2	34601	2,4-Dichlorophenol	ND	0.66	
60-57-1	39380	Dieldrin	ND	0.66	
84-66-2	34336	Diethylphtalate	ND	0.66	
105-67-9	34606	2-4-Dimethylphenol	ND	0.66	
131-11-3	34341	Dimethylphthalate	ND	0.66	
51[redacted]28-5	34616	2,4-Dinitrophenol	ND	3.2	
[redacted]4-2	34611	2,4-Dinitrotoluene	ND	0.66	
[redacted]20-2	34626	2,6-Dinitrotoluene	ND	0.66	
		(con't)			

US ENVIRONMENTAL PROTECTION AGENCY
REGION I LABORATORY
GC/MS EXTRACTABLE ORGANIC ANALYSIS

SAMPLE NO.: 78068
Sample Results Continued:

CAS NO.	STORET NO.	Compound	Conc. (mg/kg)	Det. Limit (mg/kg)	Comments
117-84-0	34596	Di-n-octylphthalate	ND	0.66	
206-44-0	34376	Fluoranthene	ND	0.66	
86-73-7	34381	Fluorene	ND	0.66	
76-44-8	39410	Heptachlor	ND	0.66	
1024-57-3	39420	Heptachlor epoxide	ND	0.66	
118-74-1	39700	Hexachlorobenzene	ND	0.66	
87-68-3	34391	Hexachlorobutadiene	ND	0.66	
77-47-4	34386	Hexachlorocyclopentadiene	ND	0.66	
67-72-1	34396	Hexachloroethane	ND	0.66	
193-39-5	34403	Indeno(1,2,3-cd)pyrene	ND	0.66	
78-59-1	34408	Isophorone	ND	0.66	
534-52-1	34657	2-methyl-4,6-dinitrophenol	ND	3.2	
91-20-3	34696	Naphthalene	ND	0.66	
98-95-3	34447	Nitrobenzene	ND	0.66	
88-75-5	34591	2-Nitrophenol	ND	0.66	
[illegible]02-7	34646	4-Nitrophenol	ND	3.2	
[illegible]0-3	34433	N-nitrosodiphenylamine	ND	0.66	
621-64-7	34428	N-Nitrosodi-n-propylamine	ND	0.66	
87-86-5	39032	Pentachlorophenol	ND	3.2	
85-01-8	34461	Phenanthrene	NA*	0.66	
108-95-2	34694	Phenol	ND	0.66	
129-00-0	34469	Pyrene	ND	0.66	
120-82-1	**34551**	**1,2,4--Trichlorobenzene**	**19**	**0.66**	
88-06-2	34621	2,4,6-Trichlorophenol	ND	0.66	
		Hazardous Substances			
65-53-3	77089	Aniline	ND	0.66	
65-85-0	77247	Benzoic Acid	ND	3.2	
100-51-6	77147	Benzyl Alcohol	ND	0.66	
106-47-8		4-Chloroaniline	ND	0.66	
132-64-9	81302	Dibenzofuran	ND	0.66	
534-52-1		4,6-Dinitro-2-methylphenol	ND	3.2	
91-57-6		2-Methylnaphthalene	ND	0.66	
95-48-7		2-Methylphenol	ND	0.66	
106-44-5		4-Methylphenol	ND	0.66	
88-74-4		2-Nitroaniline	ND	3.2	
99-09-2		3-Nitroaniline	ND	3.2	
100-01-6		4-Nitroaniline	ND	3.2	
95-95-4	34621	2,4,5-Trichlorophenol	ND	3.2	

[illegible]OTE:* Sample interference due to Benzene-1,1'-ethyldiene bischloro

(con't)

US ENVIRONMENTAL PROTECTION AGENCY
REGION I LABORATORY
GC/MS EXTRACTABLE ORGANIC ANALYSIS

SAMPLE NO.: 78068
Sample Results Continued:

Other Compounds Quantitated	Conc. (mg/kg)	Det. Limit (mg/kg)
Diphenylhydrazine	ND	0.66

Tentatively Identified Compounds	Est. Conc. (ug/l)
Ethanedione,diphenyl-(9CI)	9
Benzene,1,1'-(1-chloro-1,2-ethenediyl)bis	2
Benzene,1,1',1'',1'''-(1,2-ethanediylidene)tetrakis	5
Naphthalene,1-phenyl-(8CI9)	2
1H-Indene,1-phenyl-(9CI)	2
Unknown	12
Disulfide,bis(4-methylphenyl)	2
Hydrocarbon	3
[illegible]ene 1-chloro 2(2,2-diphenylethenyl)	2
[illegible]wn	7
Unknown	6
Unknown	3
Unknown	3
Unknown	6
Cyclohexane	62
Caprolactam	20
Octadecane	40
Benzene,1,1'-methylenebis	2000
Benzophenone	200
Thiazoloquinoline Derivative	800
Benzene,1,1'-(chloroethenylidene)bis	300
2-Mercaptobenzothiazole	100
Benzeneacetamide,N,N-dimethyl phenyl	200

Surrogate Compounds;	(%)	QC Range (%)
Phenol,d5	104	24-113 average
Nitrobenzene,d5	108	23-120 average
Fluorobiphenyl	105	30-115 average
2,4,6-Tribromophenol	102	19-122 average
p-Terphenyl,d14	98	18-137 average

Notes:

ND=none detected
~=approximate
<=less than
>=greater than
NA=not available, due to sample dilution or interference

FACILITY SAMPLED:
US ENVIRONMENTAL PROTECTION AGENCY
REGION I LABORATORY
GC/MS EXTRACTABLE ORGANIC ANALYSIS

SAMPLE NO.: 78069
SAMPLE LOCATION:
DATE OF COLLECTION:
TIME OF COLLECTION:
SAMPLE RESULTS:

Percent Moisture: 14 %

CAS NO.	STORET NO.	Compound	Conc. (mg/kg)	Limit (mg/kg)	Comments
		Priority Pollutants			
83-32-9	34205	Acenaphthene	ND	0.66	
208-96-8	34200	Acenaphthylene	ND	0.66	
120-12-7	34220	Anthracene	ND	0.66	
309-00-2	39330	Aldrin	ND	0.66	
56-55-3	34526	Benzo(a)anthracene	ND	0.66	
205-99-2	34230	Benzo(b)fluoranthene	<.66	0.66	average
207-08-9	34242	Benzo(k)fluoranthene	ND	0.66	
50-32-8	34247	Benzo(a)pyrene	ND	0.66	
191-24-2	34521	Benzo(ghi)perylene	ND	0.66	
85-68-7	34292	Benzyl butyl phthalate	ND	0.66	
[redacted]85-7	39338	beta-BHC	ND	0.66	
[redacted]86-8	34259	delta-BHC	ND	0.66	
111-44-4	34273	Bis(2-chloroethyl)ether	ND	0.66	
111-91-1	34278	Bis(2-chloroethoxy)methane	ND	0.66	
117-81-7	39100	Bis(2-ethylhexyl)phthalate	70	0.66	
108-60-1	34283	Bis(2-chloroisopropyl)ether	ND	0.66	
101-55-3	34636	4-Bromophenylphenyl ether	ND	0.66	
59-50-7	34452	4-Chloro-3-methylphenol	ND	0.66	
91-58-7	34581	2-Chloronaphthalene	ND	0.66	
95-57-8	34586	2-Chlorophenol	ND	0.66	
7005-72-3	34641	4-Chlorophenylphenyl ether	ND	0.66	
218-01-9	34320	Chrysene	ND	0.66	
72-54-8	39310	4,4'-DDD	ND	0.66	
72-55-9	39320	4,4'-DDE	ND	0.66	
50-29-3	39300	4,4'-DDT	ND	0.66	
53-70-3	34556	Dibenzo(a,h)anthracene	ND	0.66	
84-74-2	39110	Di-n-butylphtalate	2.4	0.66	
541-73-1	34566	1,3-Dichlorobenzene	<.66	0.66	average
95-50-1	34536	1,2-Dichlorobenzene	8.6	0.66	average
106-46-7	34571	1,4-Dichlorobenzene	<.66	0.66	
91-94-1	34631	3,3'-Dichlorobenzidine	ND	1.32	
120-83-2	34601	2,4-Dichlorophenol	ND	0.66	
60-57-1	39380	Dieldrin	ND	0.66	
84-66-2	34336	Diethylphtalate	ND	0.66	
105-67-9	34606	2-4-Dimethylphenol	ND	0.66	
131-11-3	34341	Dimethylphthalate	ND	0.66	
[redacted]28-5	34616	2,4-Dinitrophenol	ND	3.2	
[redacted]-14-2	34611	2,4-Dinitrotoluene	ND	0.66	
606-20-2	34626	2,6-Dinitrotoluene	ND	0.66	

(con't)

US ENVIRONMENTAL PROTECTION AGENCY
REGION I LABORATORY
GC/MS EXTRACTABLE ORGANIC ANALYSIS

SAMPLE NO.: 78069
Sample Results Continued:

CAS NO.	STORET NO.	Compound	Conc. (mg/kg)	Det. Limit (mg/kg)	Comments
117-84-0	34596	Di-n-octylphthalate	ND	0.66	
206-44-0	34376	Fluoranthene	ND	0.66	
86-73-7	34381	Fluorene	ND	0.66	
76-44-8	39410	Heptachlor	ND	0.66	
1024-57-3	39420	Heptachlor epoxide	ND	0.66	
118-74-1	39700	Hexachlorobenzene	ND	0.66	
87-68-3	34391	Hexachlorobutadiene	ND	0.66	
77-47-4	34386	Hexachlorocyclopentadiene	ND	0.66	
67-72-1	34396	Hexachloroethane	ND	0.66	
193-39-5	34403	Indeno(1,2,3-cd)pyrene	ND	0.66	
78-59-1	34408	Isophorone	ND	0.66	
534-52-1	34657	2-methyl-4,6-dinitrophenol	ND	3.2	
91-20-3	34696	Naphthalene	ND	0.66	
98-95-3	34447	Nitrobenzene	ND	0.66	
88-75-5	34591	2-Nitrophenol	ND	0.66	
100-02-7	34646	4-Nitrophenol	ND	3.2	
[illegible]-3	34433	N-nitrosodiphenylamine	ND	0.66	
[illegible]4-7	34428	N-Nitrosodi-n-propylamine	ND	0.66	
87-86-5	39032	Pentachlorophenol	ND	3.2	
85-01-8	34461	Phenanthrene	ND	0.66	
108-95-2	34694	Phenol	ND	0.66	
129-00-0	34469	Pyrene	<.66	0.66	
120-82-1	34551	1,2,4--Trichlorobenzene	1.6	0.66	
88-06-2	34621	2,4,6-Trichlorophenol	ND	0.66	
		Hazardous Substances			
65-53-3	77089	Aniline	ND	0.66	
65-85-0	77247	Benzoic Acid	<3.2	3.2	average
100-51-6	77147	Benzyl Alcohol	ND	0.66	
106-47-8		4-Chloroaniline	ND	0.66	
132-64-9	81302	Dibenzofuran	ND	0.66	
534-52-1		4,6-Dinitro-2-methylphenol	ND	3.2	
91-57-6		2-Methylnaphthalene	ND	0.66	
95-48-7		2-Methylphenol	ND	0.66	
106-44-5		4-Methylphenol	ND	0.66	
88-74-4		2-Nitroaniline	ND	3.2	
99-09-2		3-Nitroaniline	ND	3.2	
100-01-6		4-Nitroaniline	ND	3.2	
95-95-4	34621	2,4,5-Trichlorophenol (con't)	ND	3.2	

US ENVIRONMENTAL PROTECTION AGENCY
REGION I LABORATORY
GC/MS EXTRACTABLE ORGANIC ANALYSIS

SAMPLE NO.: 78069
Sample Results Continued:

Other Compounds Quantitated	Conc. (mg/kg)	Det. Limit (mg/kg)
Diphenylhydrazine	ND	0.66

Tentatively Identified Compounds	Est. Conc. (ug/l)
thiazoloquinoline	5
Benzene,1,1'-(chloroethenylidene)bis	2
Benzene,1,1'-ethenylidenebis[4-chloro	40
Benzene,1,1'-(1-chloro-1,2-ethyldiyl)bis	3
Unknown	2
Benzeneacetamide,N,N-dimethyl-phenyl	20
Unknown	5
Unknown	3
Unknown	4
[illegible]ene,1,1'-methylenebis-	30
[illegible]ophenone (8CI)	20

Sample Recoveries For Surrogate Compounds;	Recoveries (%)	QC Range (%)
Phenol,d5	126	24-113 average
Nitrobenzene,d5	110	23-120 average
Fluorobiphenyl	110	30-115 average
2,4,6-Tribromophenol	106	19-122 average
p-Terphenyl,d14	112	18-137 average

Notes:

ND=none detected
~=approximate
<=less than
>=greater than
NA=not available, due to sample dilution or interference

J. SAFETY PLAN

WESTON SPER DIVISION
HAZARDOUS WASTE SITE INVESTIGATION AND EMERGENCY RESPONSE
HEALTH AND SAFETY PLAN

U.S. EPA CONTACT: Alex Sherrin
Date of Inspection: 12/1/88 Time: 0900 TDD No. 01-8811-13A
Original Safety Plan: / Yes X No PCS No. 2063
Admendment/Modification No. _____

SITE SAFETY COORDINATOR: M. Kurpiel

Site Name: Chesnutis Site

Site Address: Street No. 450 Lopus Rd.
City Beacon Falls, C
County New Haven
State Connecticut Zip Code 06403

Site Contact: Mr. Bruce Harnden Phone (203) 723-8335
Mr. James Maher (Rt. 90) (203) 729-6815

Directions to Site: (Attach Map) V Mass. Pike west to route 84 (86) (at Sturbri... west (south). Take 84 south to ~~to~~ (MR) exit 24, which is route 8 south. Take exit 24 off of route 8. Go under route 8 and turn right onto Main St, take right at the green bridge, after bridge turn right, left and left. Follow Lopus Rd. to 450. (on ri...

SITE HISTORY:
Edward Chesnutis owned the property from 1966 - 1970 and allegedly periodically disposed of drums of chemical and industrial waste. Steve Pasick owned the property from 1970 to the early 1980's and operated an autobody shop. The present owners of the site operates an antique auto shop.

INCIDENT DESCRIPTION

TYPE: A) Spill ____ Air Release ____ Fire ____ HW Site ____ Other X Buried drums
B) Assessment ____ Sampling X Emergency Response ____
Clean-up/Removal ____ Other (specify) ____
C) Urban/Residential ____ Commercial ____ Industrial ____
Rural X Remote ____

PERSONNEL PHYSICAL SAFETY HAZARDS:

Heat ____ Cold X Noise ____ Underground Utilities X
Overhead Utilities X Heavy Equipment ____ Slip, Trip, Fall X
Confined Spaces ____ Pressurized Airlines ____ Explosive ____
Ladders ____ Scaffolds ____ Unguarded Openings-Wall, Floor ____
Liquids in Open Containers, Ponds/Lagoons ____
Other ____

CHEMICAL CONTAMINANTS OF CONCERN

CONTAMINANT	TLV PEL	IDLH	PHYSICAL CHARACTERISTICS	ROUTE OF EXPOSURE	SYMPTOMS OF ACUTE EXPOSURE	FIRST AID	INSTRUMENTS TO DETECT
Unknown	—	—	—	—	—	—	① Radiation Meter ② MSA Combustible Gas Indicator ③ HNU / OVA organic detector

Description of Decontamination To Be Used: Disposable PPE will be used and properly discarded. All other equipment will be cleaned with soap wash and rinsed with water. Decon. also with methanol/water mixtures.

SPECIFY PPE TYPE

TASK TO BE PERFORMED	ANTIC. LEVEL OF PROTECT.	COVERALL	GLOVE IN/OUT.	AIR PURI RESPIRATC CART/CANN
Magnetometer survey	D			
Soil Gas analysis	D			
Surface/Subsurface soil sampling	C/B	TYVEK-BOOTIES	VINYL/SILVERSHIELD	GMH-C

Anticipated Monitoring — LEVEL B WILL BE DONNED IF VISIBLY CONTAMINATED SOIL IS ENCOUNTERED, DRUMS ARE LOCATED NEARBY, OR EXTENSIVE DEPTHS OF SOIL ARE REMOVED. MJM

Radiation Meter [✓] CGI [✓] HNU [ ] _____ eV Probe OVA [✓]

Detector Tube [ ] _____ Other _____

EMERGENCY PHONE NUMBERS:	LOCATION	PHONE	NOTIFIED
FIRE	35 North Main St. Beacon Falls	(203) 729-1470 (Volunteer)	
POLICE	" "	(203) 729-3313	
AMBULANCE	" "	(203) 729-3313	
HOSPITAL	Waterbury Hospital, 64 Robbins St. (06721)	(203) 573-6000	Yes

CHEMICAL TRAUMA CAPABILITY? Yes

DIRECTIONS TO HOSPITAL: (ATTACH MAP) RTE. VERIFIED BY MK DATE 11/29/88

Get back on route 8 north, take exit 32 and continue on Riverside St, beyond W. Main St and immediately exit at Watertown Ave. Bear left under rte. 8 and take the left fork (Robbins St.) Hospital will be on your right.

ADDITIONAL EMERGENCY PHONE CONTACTS:

CHEMTREC	(800) 424-9300
TSCA HOTLINE	(800) 424-9065, (202) 544-1404
ATSDR	(DAY) (404) 329-2888
	(NIGHT) (404) 566-7777
AT & F (EXPLOSIVES INFO.)	(800) 424-9555
NATIONAL RESPONSE CENTER	(800) 424-8802
WESTON MEDICAL EMERGENCY SERVICE	(513) 421-3063
WESTON 24 HOUR HOTLINE	(215) 524-1925, 1926
PESTICIDE INFORMATION SERVICE	(800) 845-7633
EPA ERT EMERGENCY	(201) 321-6660
RCRA HOTLINE	(800) 424-9346
CMA CHEMICAL REFERRAL CENTER	(800) 262-8200
NATIONAL POISON CONTROL CENTER	(800) 942-5969
U.S. DOT	(202) 366-0656 (Day only)

Prepared by: M. Kurpiel Date: 11/29/88

Pre-Response Approval by: Mark McGuffie Date: 11/30/88

TDD# 01-8811-13A PCS# 2063

OBSERVED CONDITIONS/ACTIVITIES

Describe Initial Conditions (Source/Type/Quantity): The ~~property~~ site is approximately 100' x 300' in size. The site is accessed by a paved driveway. The driveway leads to a gravel parking lot. The auto shop is adjacent to the lot. A wooden fence borders one side of the lot. The lot is ~15' above street level, and along the western side slopes upward to a ridge. A perimeter survey revealed 2 rusted drum. No other drums or contamination was observable.

DOCUMENTATION PERFORMED BY: M. Kurpiel and George Mavris

Type: Photo X Log Book X Recorder ____ Video ____

PHYSICAL DESCRIPTION

Size of Site: ~100' x 300' Topography Terrain: Site is excavated from w/ledge area. (Flat) Weather 35-45°F Clear

Distance to Nearest: Residence 100' School 1.5 miles Hospital 8 miles
Public Building ~~300~~ .2 miles (MK) Other ____

Evacuation: Yes ___ No X Number ___ By Whom ____

Nearest Waterway: Naugatuck River Distance: .3 miles

Condition	Observed	Potential	None
Surface Water Contamination	____	X	____
Ground Water Contamination	____	X	____
Drinking Water Contamination	____	X	____
Air Contamination	____	X	____
Soil Contamination	____	X	____
Stressed Vegetation	____	X	____
Dead Fish, Other Animals	____	____	X

ACTIONS TAKEN ON SITE: (Attach Map of Site Control Zones)

Was Entry Made by TAT: YES X NO ____

TASK CONDUCTED: Describe Specific PPE Used and Why

Preliminary air monitoring - Level D. Air monitoring prior to sampling - Level B. (Tyvek, Saranex, booties, vinyl gloves, silver shields). Soil sampling - Level B. ↑

Magnetometer survey - Level D.

AIR MONITORING LOG

OVA Calibration Yes 100 ppm CH_4 @ 300 span MK
HNU Calibration Not used
OGI Calibration Yes 50% LEL, 15% O_2 w/.75 pentane MK

Background O_2 (MK) ~~14.5%~~ 21%
Organics 1 ppm
Radiation 0.05 mR

(ATTACH CALIBRATION DATA TO LOG)

OGI 0% LEL 21% O_2

SITE NAME
Chestnutis Site, Beacon Falls

STATION/ LOCATION	DATE	TIME	NAME OF AIR MONITOR	TYPE OF EQUIPMENT (HNU(PROBE/SPAN), OGI, OVA, RAD MTR	READING	SUMMARY/COMMENTS
Perimeter of site. ↓	12/1/88	1000	M. Kurpiel	OVA	0 ppm	
				CGI	21% O_2	
					0% LEL	
				Rad. Mtr.	0.05 mR	
Site Scan (before sampling)	12/2/88	1415	G. Mavris	OVA	0 ppm	

SAMPLING: CONDUCTED? YES X NO ____

If Yes, Describe Sampling Method Two soil samples were collected at depths of 4" and 2'6". Holes were dug using a fence pole digger and shovel. One sample was collected using a hand auger. Other sample was collected by scraping far along the wall of the hole.

Has Lab Been Notified of Potential Hazard Level? Yes ✓ No ___ NA ___

Note: This Health and Safety Plan was prepared for work to be conducted under the Technical Assistance Team (TAT) Contract 68-01-7367 Zone 1. Use of this plan by WESTON and its subcontractors on the TAT contract is intended to fulfill the OSHA requirements found in 29 CFR 1910.120. Items not specifically covered in this plan are included by reference to 29 CFR 1910 and 1926.

I have read and understand this safety plan.

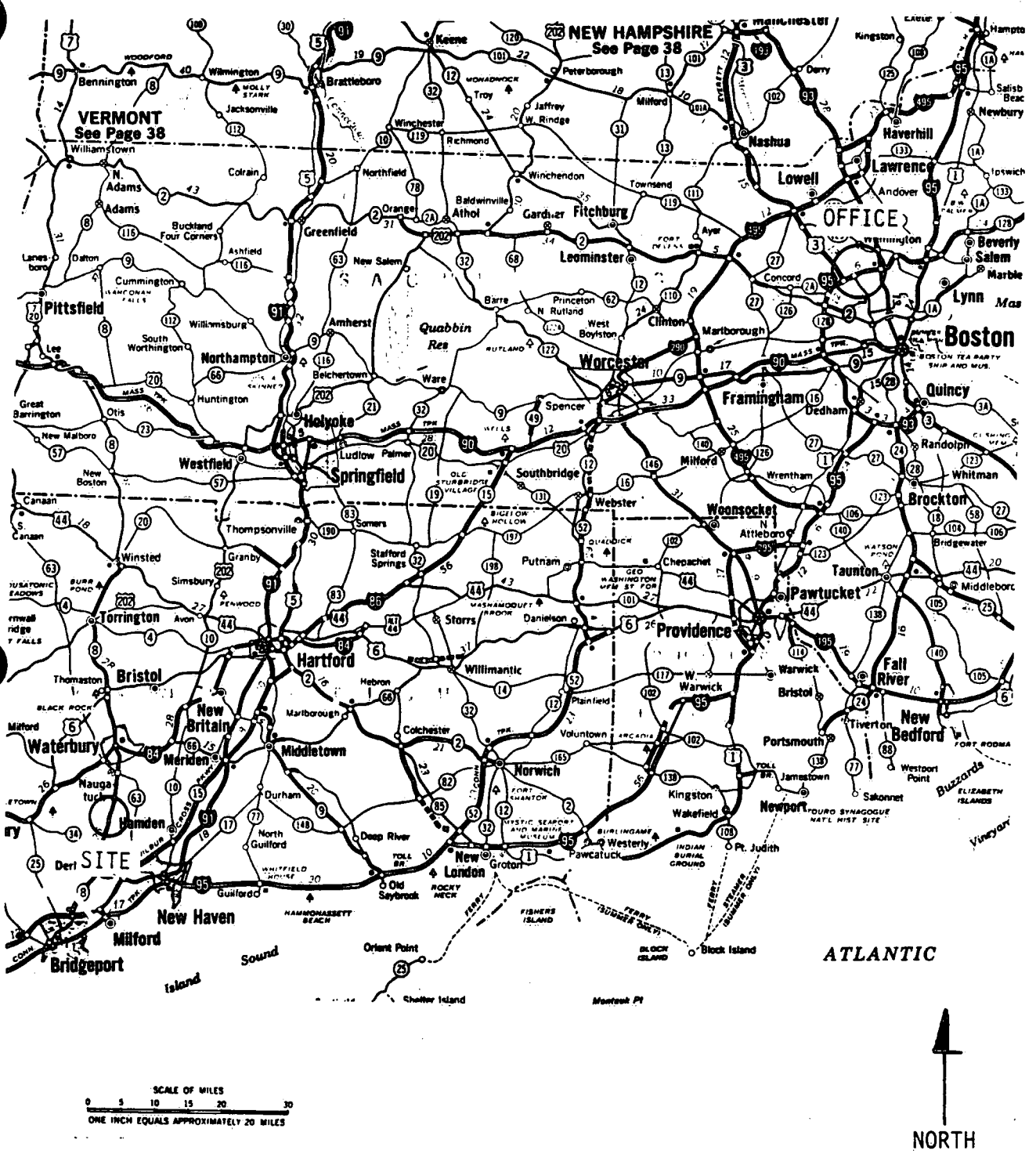
NAME (PRINTED)	SIGNATURE	AFFILIATION	DATE
Mary Kurpiel	Mary Kurpiel	WESTON/TAT	12/8/88
Peter Vernon	Peter Vernon	TAT	12/8/88
George Mavris	George Mavris	TAT	12/8/88

Final Submission of Plan by M. Kurpiel Date 12/8/88

Post Response Approval _____ Date 12/9/88

Copy to ZPMO _____ Date ____

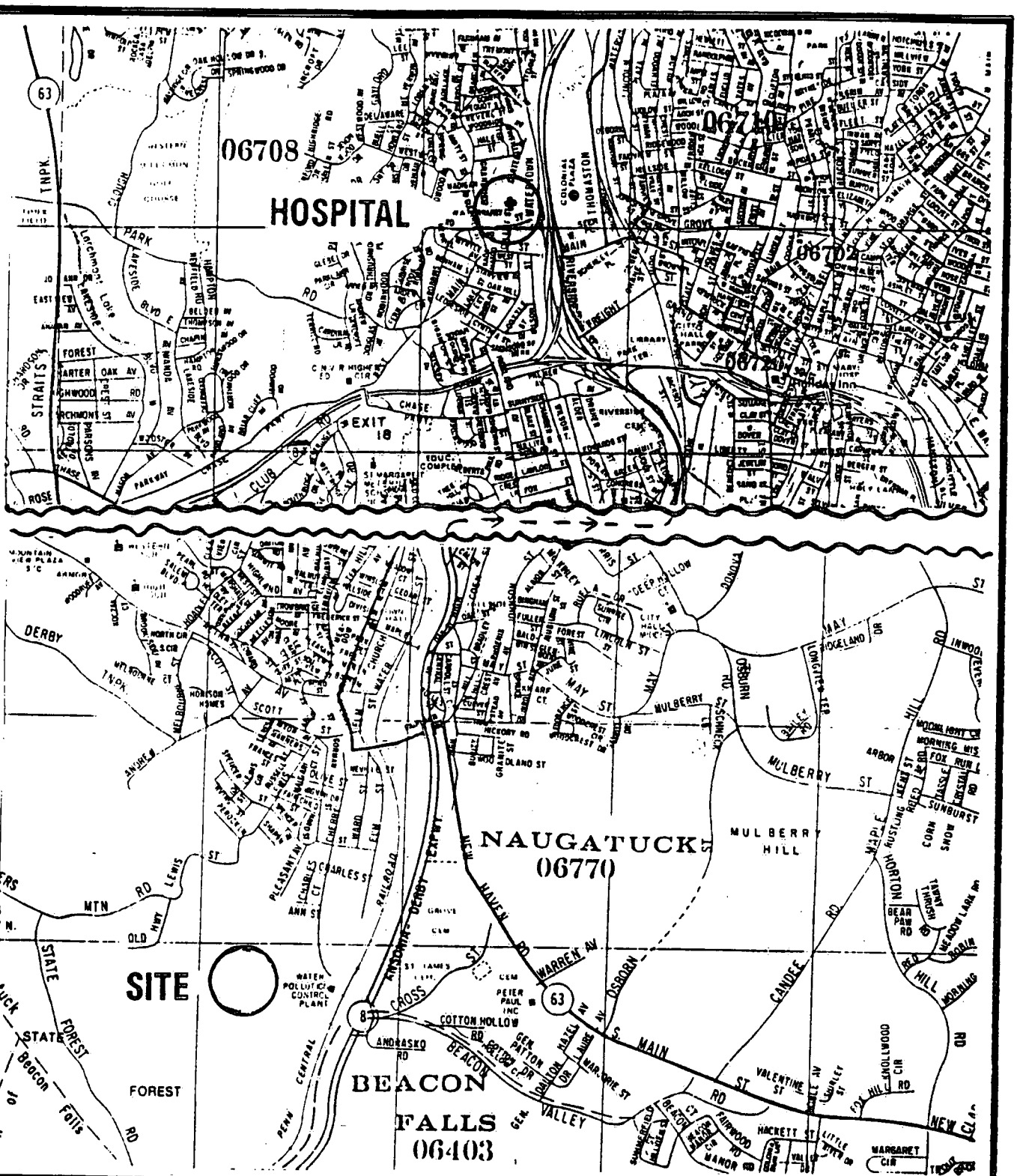
SPER HSO Reviewed by: _____ Date: _____
Followup Required: Yes ___ No ___
Followup Performed: Date: ____ With: _____
Comments: _____



DIRECTIONS TO SITE
CHESNUTIS SITE
BEACON FALLS, CONNECTICUT

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN	DATE	PCS #
M. KURPIEL	01/89	2139
APPROVED	DATE	TDD #
	01/89	01-8811-13D



HOSPITAL MAP
CHESNUTIS SITE
BEACON FALLS, CONNECTICUT

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN	DATE	PCS #
M. KURPIEL	01/89	2139
APPROVED	DATE	TDD #
	01/89	01-8811-13D

K. PHOTO-DOCUMENTATION LOG

Film Roll: 10078

LOG SHEET
PHOTOGRAPHY

Frame Number: 1 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:

Scene: PARTIALLY BURIED DRUM LOCATED ALONG SMALL CREEK RUNNING THROUGH THE SITE.

Photo By: GEORGE MAVRIS

Date/Time: 12-01-88:1004 hrs

Sky Conditions: SUNNY

Camera: OLYMPUS

Setting: ASA/100

Film Type: 35mm

Witnesses: MARY KURPIEL
ALEX SHERRIN

Frame Number: 2 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:

Scene: LOCATION OF WELLHEAD ON HARNDEN PROPERTY.

Photo By: GEORGE MAVRIS

Date/Time: 12-01-88:1006 hrs

Sky Conditions: SUNNY

Camera: OLYMPUS

Setting: ASA/100

Film Type: 35mm

Witnesses: MARY KURPIEL
ALEX SHERRIN

Film Roll: 10078

LOG SHEET
PHOTOGRAPHY

Frame Number: 3 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:

Scene: POSITION OF TELEPHONE LINES RUNNING ACROSS SITE. WOODEN FENCE SEPARATES HARNDEN- POSICK PROPERTIES.

Photo By: GEORGE MAVRIS

Date/Time: 12-01-88:1008 hrs

Sky Conditions: SUNNY

Camera: OLYMPUS

Setting: ASA/100

Film Type: 35mm

Witnesses: MARY KURPIEL
ALEX SHERRIN

Frame Number: 4 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:

Scene: PANORAMIC VIEW OF SITE(EAST SIDE OF AUTO RESTORATION BUILDING)

Photo By: GEORGE MAVRIS

Date/Time: 12-02-88:0811 hrs

Sky Conditions: SUNNY

Camera: OLYMPUS

Setting: ASA/100

Film Type: 35mm

Witnesses: MARY KURPIEL
ALEX SHERRIN

Film Roll: 10078

LOG SHEET
PHOTOGRAPHY

Frame Number: 5 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:

Scene: PANORAMIC VIEW OF SITE(NORTHEAST CORNER OF AUTO RESTORATION BUILDING)

Photo By: GEORGE MAVRIS

Date/Time: 12-02-88:0811 hrs

Sky Conditions: SUNNY

Camera: OLYMPUS

Setting: ASA/100

Film Type: 35mm

Witnesses: MARY KURPIEL
ALEX SHERRIN

Frame Number: 6 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:

Scene: PANORAMIC VIEW OF SITE(FRONT OF AUTO RESTORATION BUILDING).

Photo By: GEORGE MAVRIS

Date/Time: 12-02-88:0811 hrs

Sky Conditions: SUNNY

Camera: OLYMPUS

Setting: ASA/100

Film Type: 35mm

Witnesses: MARY KURPIEL
ALEX SHERRIN

Film Roll: 10078

LOG SHEET
PHOTOGRAPHY

Frame Number: 7 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:

Scene: PANORAMIC VIEW OF SITE(AREA OF BEDROCK ON HILL BEHIND HARNDEN PROPERTY).

Photo By: GEORGE MAVRIS

Date/Time: 12-02-88:0811 hrs

Sky Conditions: SUNNY

Camera: OLYMPUS

Setting: ASA/100

Film Type: 35mm

Witnesses: MARY KURPIEL
ALEX SHERRIN

Frame Number: 8 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:

Scene: PANORAMIC VIEW OF SITE(PARKING LOT AND HILL BEHIND HARNDEN PROPERTY).

Photo By: GEORGE MAVRIS

Date/Time: 12-02-88:0811 hrs

Sky Conditions: SUNNY

Camera: OLYMPUS

Setting: ASA/100

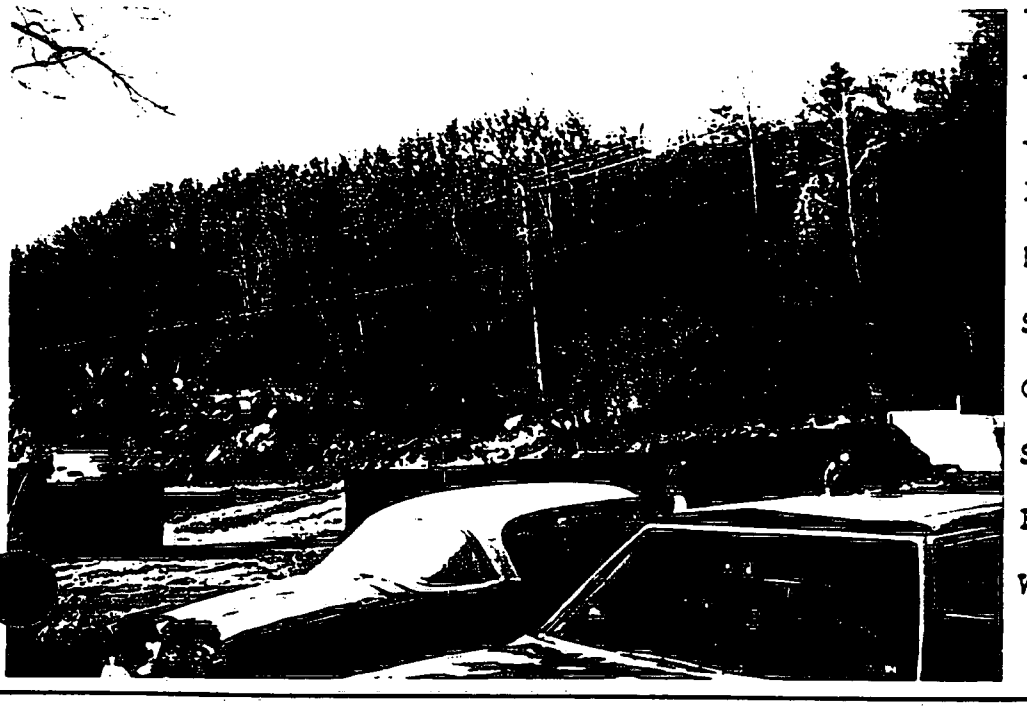
Film Type: 35mm

Witnesses: MARY KURPIEL
ALEX SHERRIN

Film Roll: 10078

LOG SHEET
PHOTOGRAPHY

Frame Number: 9 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:



Scene: PANORAMIC VIEW OF SITE(NOTE EXCAVATED AREA AND TELEPHONE LINES ON POSICK PROPERTY).

Photo By: GEORGE MAVRIS

Date/Time: 12-02-88:0811 hrs

Sky Conditions: SUNNY

Camera: OLYMPUS

Setting: ASA/100

Film Type: 35mm

Witnesses: MARY KURPIEL
ALEX SHERRIN

Frame Number: 10 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:

Scene: PANORAMIC VIEW OF SITE(NOTE TELEPHONE LINES AND AUTO BODY SHOP).

Photo By: GEORGE MAVRIS

Date/Time: 12-02-88:0811 hrs

Sky Conditions: SUNNY

Camera: OLYMPUS

Setting: ASA/100

Film Type: 35mm

Witnesses: MARY KURPIEL
ALEX SHERRIN

Film Roll: 10078

LOG SHEET
PHOTOGRAPHY

Frame Number: 11 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:

Scene: PANORAMIC VIEW OF SITE(LOOKING SOUTH TOWARDS LOPUS ROAD).

Photo By: GEORGE MAVRIS

Date/Time: 12-02-88:0811 hrs

Sky Conditions: SUNNY

Camera: OLYMPUS

Setting: ASA/100

Film Type: 35mm

Witnesses: MARY KURPIEL
ALEX SHERRIN

Frame Number: 12 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:

Scene: PANORAMIC VIEW OF SITE(FRONT OF AUTO RESTORATION BUILDING AND GRAVEL PARKING LOT).

Photo By: GEORGE MAVRIS

Date/Time: 12-02-88:0812 hrs

Sky Conditions: SUNNY

Camera: OLYMPUS

Setting: ASA/100

Film Type: 35mm

Witnesses: MARY KURPIEL
ALEX SHERRIN

Film Roll: 10078

LOG SHEET
PHOTOGRAPHY

Frame Number: 13 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:

Scene: PANORAMIC VIEW OF SITE(NORTHWEST CORNER OF BUILDING AND HILL BEHIND HARNDEN PROPERTY).

Photo By: GEORGE MAVRIS

Date/Time: 12-02-88:0812 hrs

Sky Conditions: SUNNY

Camera: OLYMPUS

Setting: ASA/100

Film Type: 35mm

Witnesses: MARY KURPIEL
ALEX SHERRIN

Frame Number: 14 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:

Scene: PANORAMIC VIEW OF SITE(AREA OF BEDROCK BEHIND HARNDEN PROPERTY).

Photo By: GEORGE MAVRIS

Date/Time: 12-02-88:0812 hrs

Sky Conditions: SUNNY

Camera: OLYMPUS

Setting: ASA/100

Film Type: 35mm

Witnesses: MARY KURPIEL
ALEX SHERRIN

Film Roll: 10078

LOG SHEET
PHOTOGRAPHY

Frame Number: 15 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:

Scene: PANORAMIC VIEW OF SITE(NOTE STEEL GIRDERS AT BASE OF HILL).

Photo By: GEORGE MAVRIS

Date/Time: 12-02-88:0812 hrs

Sky Conditions: SUNNY

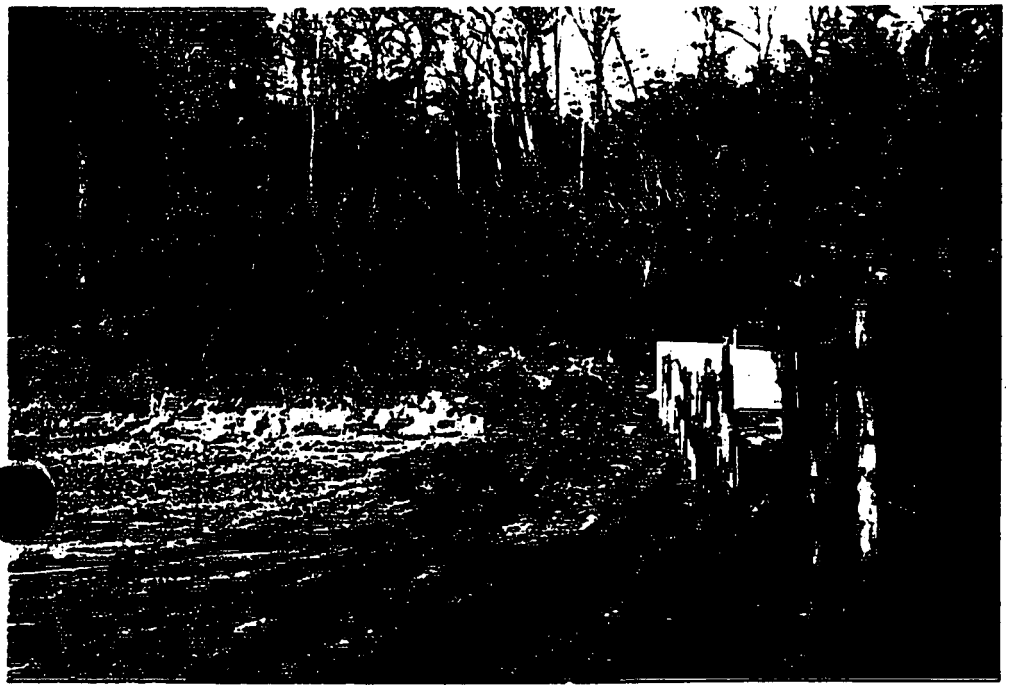
Camera: OLYMPUS

Setting: ASA/100

Film Type: 35mm

Witnesses: MARY KURPIEL
ALEX SHERRIN

Frame Number: 16 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:



Scene: PANORAMIC VIEW OF SITE(ALONG PROPERTY LINE BETWEEN HARNDEN AND POSICK LOTS).

Photo By: GEORGE MAVRIS

Date/Time: 12-02-88:0813 hrs

Sky Conditions: SUNNY

Camera: OLYMPUS

Setting: ASA/100

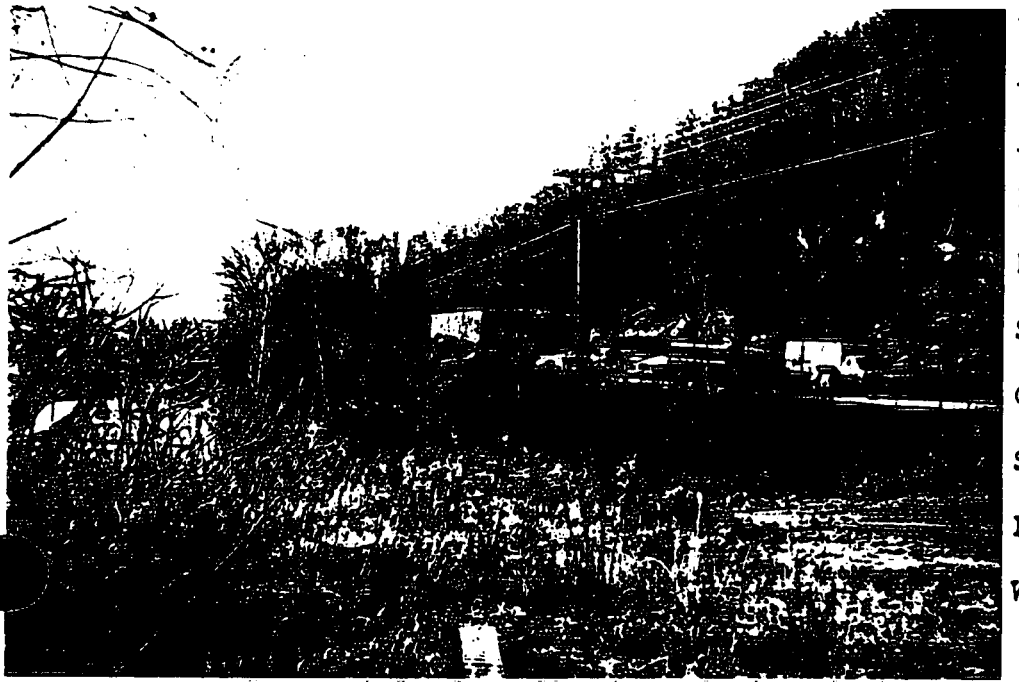
Film Type: 35mm

Witnesses: MARY KURPIEL
ALEX SHERRIN

Film Roll: 10078

LOG SHEET
PHOTOGRAPHY

Frame Number: 17 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:



Scene: PANORAMIC VIEW OF SITE(LOOKING SOUTHWARD ALONG LOPUS ROAD).

Photo By: GEORGE MAVRIS

Date/Time: 12-02-88:0813 hrs

Sky Conditions: SUNNY

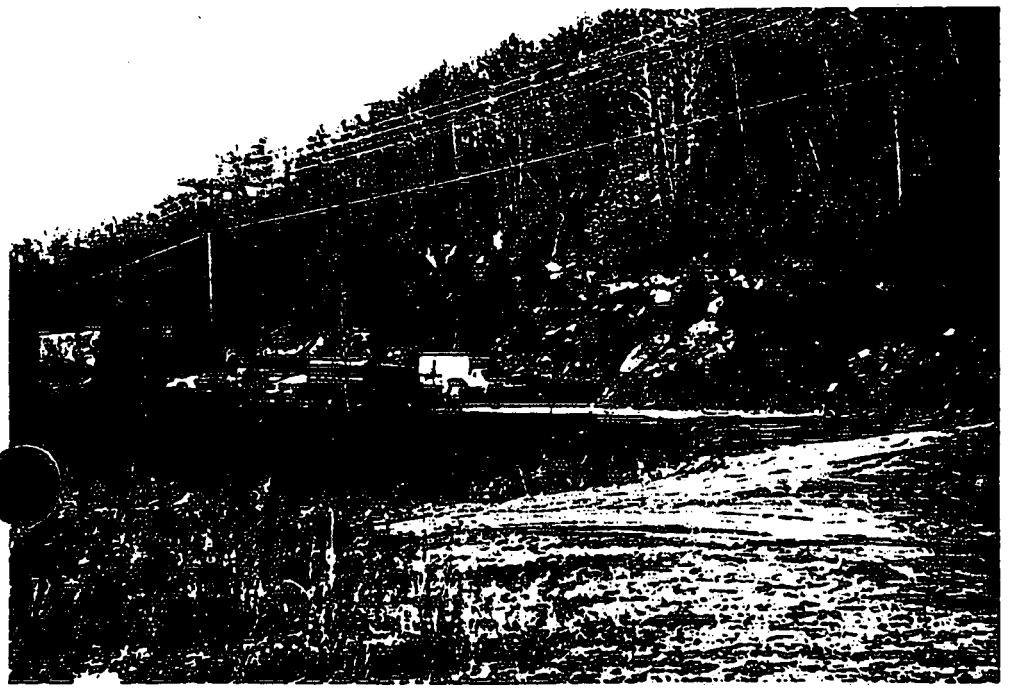
Camera: OLYMPUS

Setting: ASA/100

Film Type: 35mm

Witnesses: MARY KURPIEL
ALEX SHERRIN

Frame Number: 18 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:



Scene: PANORAMIC VIEW OF SITE(NOTE AREA OF EXCAVATION ALONG HILL).

Photo By: GEORGE MAVRIS

Date/Time: 12-02-88:0813 hrs

Sky Conditions: SUNNY

Camera: OLYMPUS

Setting: ASA/100

Film Type: 35mm

Witnesses: MARY KURPIEL
ALEX SHERRIN

Film Roll: 10078

LOG SHEET
PHOTOGRAPHY

Frame Number: 19 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:

Scene: PANORAMIC VIEW OF SITE(PAVED ROAD LEADS TO TOP OF HILL WHERE POSICK RESIDENCE IS LOCATED).

Photo By: GEORGE MAVRIS

Date/Time: 12-02-88:0813 hrs

Sky Conditions: SUNNY

Camera: OLYMPUS

Setting: ASA/100

Film Type: 35mm

Witnesses: MARY KURPIEL
ALEX SHERRIN

Frame Number: 20 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:

Scene: PARTIALLY BURIED DRUM LOCATED ALONG SMALL CREEK FLOWING THROUGH SITE.

Photo By: GEORGE MAVRIS

Date/Time: 12-02-88:0814 hrs

Sky Conditions: SUNNY

Camera: OLYMPUS

Setting: ASA/100

Film Type: 35mm

Witnesses: MARY KURPIEL
ALEX SHERRIN

Film Roll: 10078

LOG SHEET
PHOTOGRAPHY

Frame Number: 21 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:

Scene: PARTIALLY BURIED STEEL DRUM TOP LOCATED ALONG SMALL CREEK.

Photo By: GEORGE MAVRIS

Date/Time: 12-02-88:0814 hrs

Sky Conditions: SUNNY

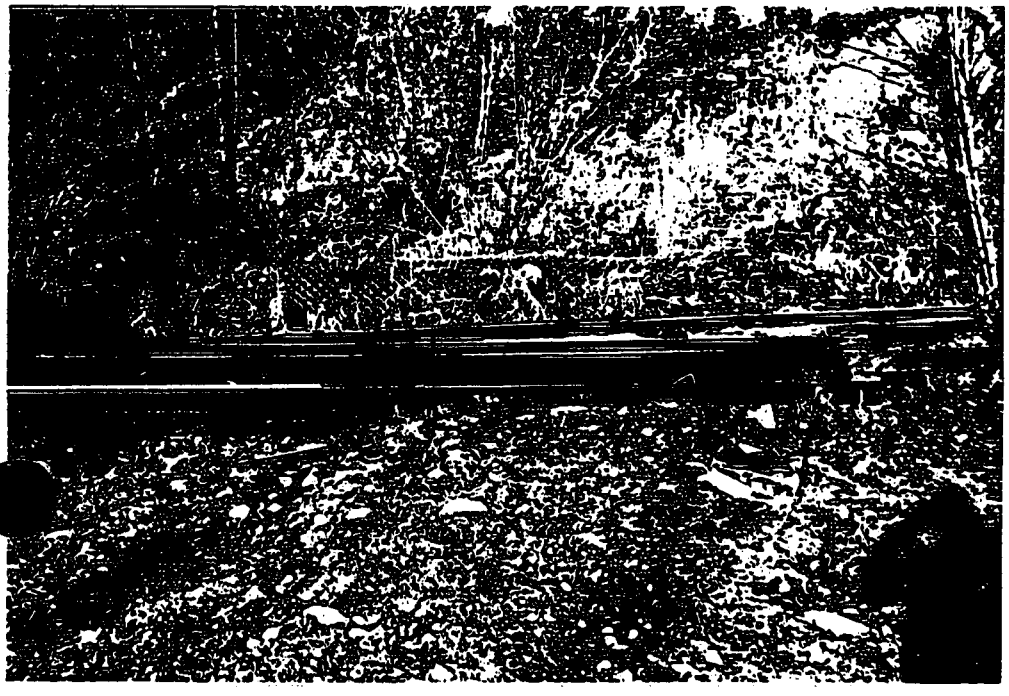
Camera: OLYMPUS

Setting: ASA/100

Film Type: 35mm

Witnesses: MARY KURPIEL
ALEX SHERRIN

Frame Number: 22 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:



Scene: CLOSE-UP OF STEEL GIRDERS AND ROLLED UP STEEL FENCE LOCATED AT BASE OF HILL ON HARNDEN PROPERTY.

Photo By: GEORGE MAVRIS

Date/Time: 12-02-88:0814 hrs

Sky Conditions: SUNNY

Camera: OLYMPUS

Setting: ASA/100

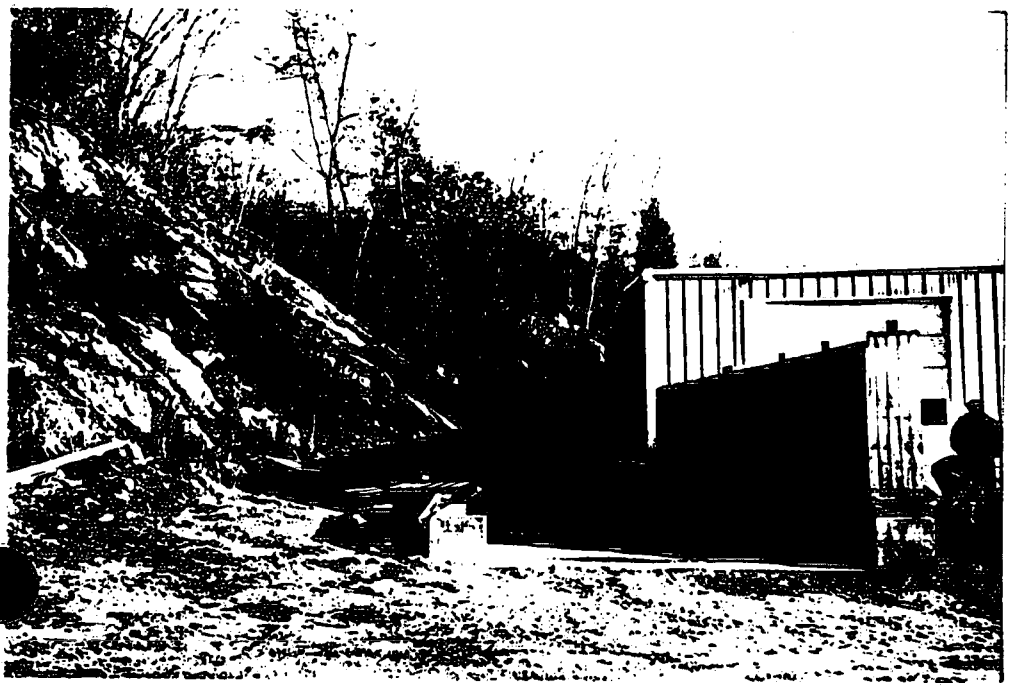
Film Type: 35mm

Witnesses: MARY KURPIEL
ALEX SHERRIN

Film Roll: 10078

LOG SHEET
PHOTOGRAPHY

Frame Number: 23 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:



Scene: PANORAMIC VIEW OF SITE(LOOKING NORTHWARD ALONG BASE OF HILL AND BUILDING BEHIND HARNDEN PROPERTY).

Photo By: GEORGE MAVRIS

Date/Time: 12-02-88:0815 hrs

Sky Conditions: SUNNY

Camera: OLYMPUS

Setting: ASA/100

Film Type: 35mm

Witnesses: MARY KURPIEL
ALEX SHERRIN

Frame Number: Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:

Scene:

ENCLOSED NEGATIVES FOR FILM ROLL # 10078

Negatives

DATE DECEMBER 1-2, 1988

SUBJECT CHES NUTIS SITE PHOTOS
BEACON FALLS, CONNECTICUT

Film Roll: 10077

LOG SHEET
PHOTOGRAPHY

Frame Number: 1 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:

Scene: PANORAMIC VIEW OF SITE(LOOKING SOUTHWARD ALONG LOPUS ROAD).

Photo By: MARY KURPIEL

Date/Time: 12-02-88:1353 hrs

Sky Conditions: OVERCAST

Camera: OLYMPUS

Setting: ASA/100

Film Type: 35mm

Witnesses: GEORGE MAVRIS
ALEX SHERRIN

Frame Number: 2 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:

Scene: PANORAMIC VIEW OF SITE(LOOKING EASTWARD TOWARDS NAUGATUCK RIVER).

Photo By: MARY KURPIEL

Date/Time: 12-02-88:1354 hrs

Sky Conditions: OVERCAST

Camera: OLYMPUS

Setting: ASA/100

Film Type: 35mm

Witnesses: GEORGE MAVRIS
ALEX SHERRIN

Film Roll: 10077

LOG SHEET
PHOTOGRAPHY

Frame Number: 3 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:

Scene: PANORAMIC VIEW OF SITE(LOOKING EASTWARD ACROSS LOPUS ROAD).

Photo By: MARY KURPIEL

Date/Time: 12-02-88:1355 hrs

Sky Conditions: OVERCAST

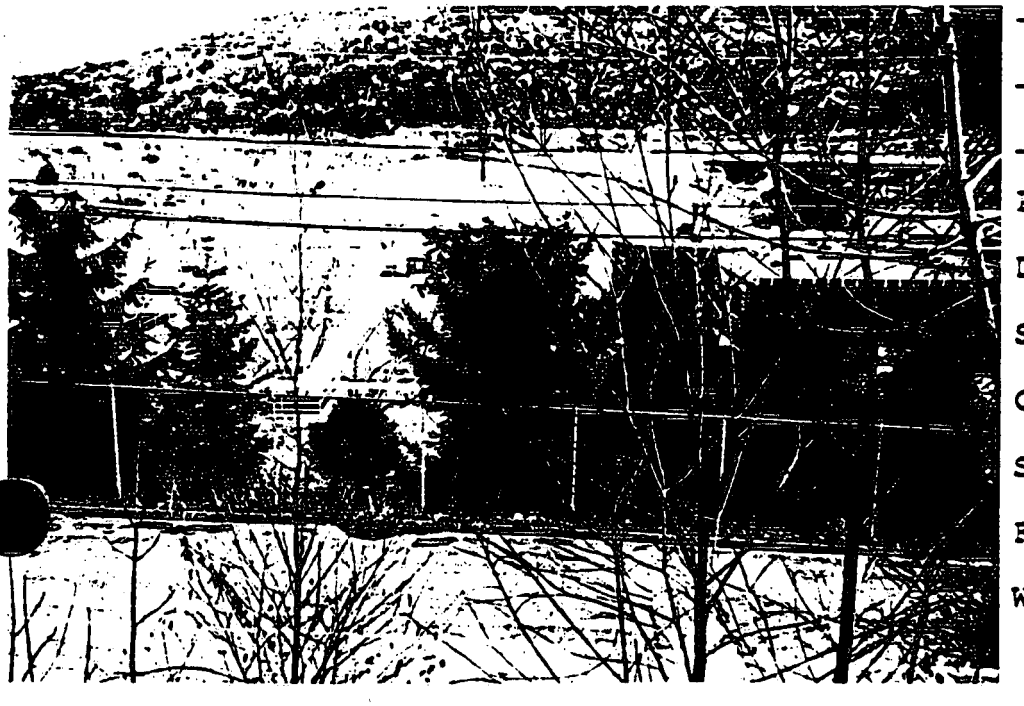
Camera: OLYMPUS

Setting: ASA/100

Film Type: 35mm

Witnesses: GEORGE MAVRIS
ALEX SHERRIN

Frame Number: 4 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:



Scene: PANORAMIC VIEW ACROSS LOPUS ROAD TOWARDS SAND AND GRAVEL PIT AREA.

Photo By: MARY KURPIEL

Date/Time: 12-02-88:1355 hrs

Sky Conditions: OVERCAST

Camera: OLYMPUS

Setting: ASA/100

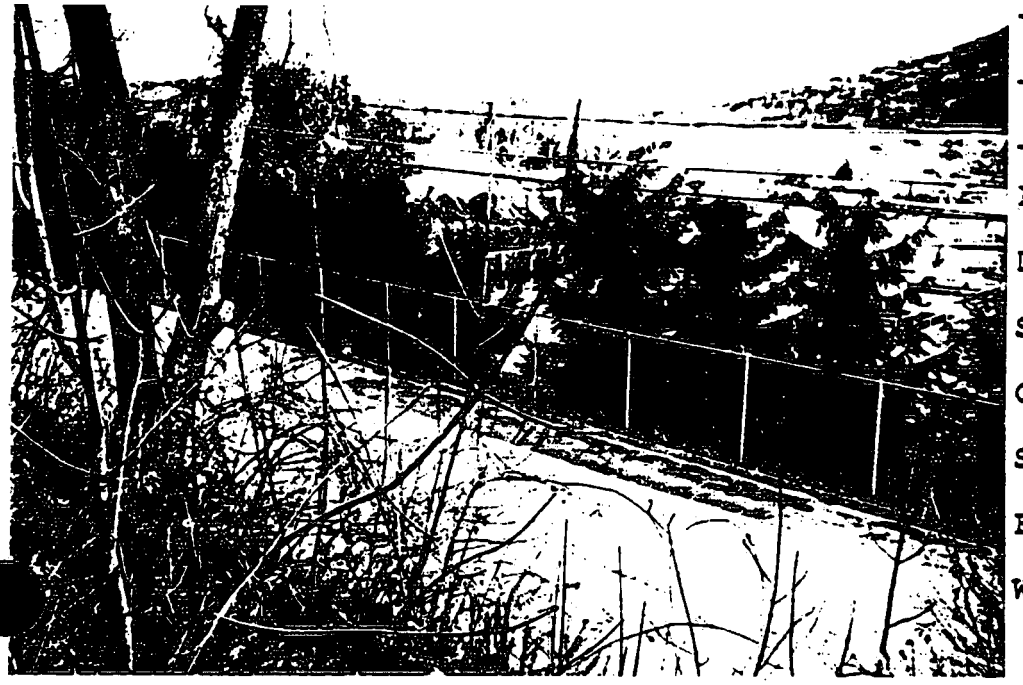
Film Type: 35mm

Witnesses: GEORGE MAVRIS
ALEX SHERRIN

Film Roll: 10077

LOG SHEET
PHOTOGRAPHY

Frame Number: 5 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:



Scene: PANORAMIC VIEW ACROSS LOPUS ROAD TOWARDS THE EAST.

Photo By: MARY KURPIEL

Date/Time: 12-02-88:1355 hrs

Sky Conditions: OVERCAST

Camera: OLYMPUS

Setting: ASA/100

Film Type: 35mm

Witnesses: GEORGE MAVRIS
ALEX SHERRIN

Frame Number: 6 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:

Scene: PANORAMIC VIEW OF SITE(LOOKING NORTHWARD ALONG LOPUS ROAD).

Photo By: MARY KURPIEL

Date/Time: 12-02-88:1355 hrs

Sky Conditions: OVERCAST

Camera: OLYMPUS

Setting: ASA/100

Film Type: 35mm

Witnesses: GEORGE MAVRIS
ALEX SHERRIN

Film Roll: 10077

LOG SHEET
PHOTOGRAPHY

Frame Number: 7 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:

Scene: PANORAMIC VIEW OF SITE(LOOKING WESTWARD TOWARDS POSICK RESIDENCE).

Photo By: MARY KURPIEL

Date/Time: 12-02-88:1356 hrs

Sky Conditions: OVERCAST

Camera: OLYMPUS

Setting: ASA/100

Film Type: 35mm

Witnesses: GEORGE MAVRIS
ALEX SHERRIN

Frame Number: 8 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:

Scene: PANORAMIC VIEW OF SITE(LOOKING WESTWARD TOWARDS POSICK PROPERTY-NOTE LIMIT OF EXCAVATED AREA ON HILL).

Photo By: MARY KURPIEL

Date/Time: 12-02-88:1356 hrs

Sky Conditions: OVERCAST

Camera: OLYMPUS

Setting: ASA/100

Film Type: 35mm

Witnesses: GEORGE MAVRIS
ALEX SHERRIN

Film Roll: 10077

LOG SHEET
PHOTOGRAPHY

Frame Number: 9
Site Name: CHES NUTIS SITE
Site Location: BEACON FALLS, CONNECTICUT
Amplifying Information:

Scene: PANORAMIC VIEW OF SITE(LOOKING SOUTHWARD ACROSS POSICK PROPERTY).

Photo By: MARY KURPIEL
Date/Time: 12-02-88:1356 hrs
Sky Conditions: OVERCAST
Camera: OLYMPUS
Setting: ASA/100
Film Type: 35mm
Witnesses: GEORGE MAVRIS
ALEX SHERRIN

Frame Number: 10
Site Name: CHES NUTIS SITE
Site Location: BEACON FALLS, CONNECTICUT
Amplifying Information:

Scene: EASTERN SIDE OF HARNDEN PROPERTY LOOKING TOWARDS THE NORTHWEST.

Photo By: MARY KURPIEL
Date/Time: 12-02-88:1357 hrs
Sky Conditions: OVERCAST
Camera: OLYMPUS
Setting: ASA/100
Film Type: 35mm
Witnesses: GEORGE MAVRIS
ALEX SHERRIN

Film Roll: 10077

LOG SHEET
PHOTOGRAPHY

Frame Number: 11 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:

Scene: VIEW OF HARNDEN PROPERTY LOOKING WESTWARD FROM BASE OF HILL ON LOPUS ROAD.

Photo By: MARY KURPIEL

Date/Time: 12-02-88:1357 hrs

Sky Conditions: OVERCAST

Camera: OLYMPUS

Setting: ASA/100

Film Type: 35mm

Witnesses: GEORGE MAVRIS
ALEX SHERRIN

Frame Number: 12 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:

Scene: VIEW OF SITE LOOKING TOWARDS THE SOUTHWEST FROM LOPUS ROAD.

Photo By: MARY KURPIEL

Date/Time: 12-02-88:1357 hrs

Sky Conditions: OVERCAST

Camera: OLYMPUS

Setting: ASA/100

Film Type: 35mm

Witnesses: GEORGE MAVRIS
ALEX SHERRIN

Film Roll: 10077

LOG SHEET
PHOTOGRAPHY

Frame Number: 13 Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:

Scene: VIEW OF SITE LOOKING TOWARDS THE SOUTHWEST FROM LOPUS ROAD.

Photo By: MARY KURPIEL
Date/Time: 12-02-88:1358 hrs
Sky Conditions: OVERCAST
Camera: OLYMPUS
Setting: ASA/100
Film Type: 35mm
Witnesses: GEORGE MAVRIS
ALEX SHERRIN

Frame Number: Site Name: CHES NUTIS SITE Site Location: BEACON FALLS, CONNECTICUT Amplifying Information:

Scene:

ENCLOSED NEGATIVES FROM FILM ROLL # 10077

Negatives

DATE DECEMBER 1, 1988

SUBJECT CHES NUTIS SITE PHOTOS
BEACON FALLS, CONNECTICUT

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AST

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