REMOVAL PROGRAM
PRELIMINARY ASSESSMENT
SITE INVESTIGATION
FOR
MARINO PROPERTY SITE
MIDDLETOWN, CONNECTICUT

Prepared For:

U.S. Environmental Protection Agency
Emergency Planning and Response Branch
60 Westview Street
Lexington, MA 02173

CONTRACT NO. 68-WO-0038

TAT - 01-N-00716

TDD NO. 01-9010-57B

Prepared By:

ROY F. WESTON, INC.
Technical Assistance Team
Region I

December 1990

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I. REMOVAL PROGRAM PRELIMINARY ASSESSMENT FOR THE MARINO PROPERTY SITE

EPA REGION I
REMOVAL PRELIMINARY ASSESSMENT

SITE NAME AND LOCATION

SITE NAME: MARINO PROPERTY

STREET,ROUTE NO. OR LOCATION IDENTIFIER: 50 WALNUT STREET | TOWN: MIDDLETOWN

COUNTY: MIDDLESEX | STATE: CONNECTICUT

[X] ATTACHED USGS MAP OF LOCATION

SITE STATUS: [ ] NPL [X] NON-NPL [ ] RCRA [ ] TSCA [X] ACTIVE [ ] ABANDON
[X] OTHER CT. DEP OIL AND CHEMICAL SPILL SECTION CASE # 2584

SITE ID #: EPA SITE ID # N.A.

REFERRAL

[X] CITIZEN [ ] CITY/TOWN [X] STATE [ ] PREREMEDIAL [ ] RCRA
[ ] OTHER N.A.

NAME OF REFERRING PARTY: EDWARD PARKER, CT DEP WASTE MANAGEMENT BUREAU

ADDRESS: 165 CAPITOL AVENUE HARTFORD, CT | PHONE #: (203) 566-7202

CONTACTS IDENTIFIED:

A. PAT BOWE, CT DEP PHONE #: (203) 566-8843

B. MICHAEL McDANIEL CT DEP PHONE #: (203) 566-7202

C. SALVATORE MARINO PHONE #: (203) 346-7400

D. NA PHONE #: ( ) NA

SOURCE OF INFORMATION

[X] VERBAL PHONE CONVERSATION BETWEEN S. STANTON AND MICHAEL McDANIEL CT. DEP

[X] REPORT CT DEP SITE INVESTIGATION 7-14-83; 9-16-83 ; SEE APPENDICES J AND K

[X] OTHER ANONYMOUS COMPLAINT REGISTERED AT CT DEP AUGUST 14 1990 ; SEE APPENDIX I

POTENTIAL RESPONSIBLE PARTIES

OWNER: SALVATORE MARINO	ADDRESS: 50 WALNUT STREET
PHONE #: (203) 346-7400	MIDDLETOWN, CONNECTICUT
OPERATOR: SALVATORE MARINO	ADDRESS: 50 WALNUT STREET
PHONE #: (203) 346-7400	MIDDLETOWN, CONNECTICUT

SOURCE: CT DEP REPORT COMPLAINT NO. SF 208 ; 8-14-90

EPA REGION I
REMOVAL PRELIMINARY ASSESSMENT

SITE ACCESS

[X] OBTAINED [X] VERBAL
[ ] NOT OBTAINED [ ] WRITTEN

DATE: 10-29-90
AUTHORIZING PERSON: SALVATORE MARINO
PHONE #: (203) 346-7400

PHYSICAL SITE CHARACTERIZATION

BACKGROUND INFORMATION (INCLUDE SITE DESCRIPTION, TOPOGRAPHY, AND PRIOR USES): THE SITE IS APPROXIMATELY 10 ACRES IN SIZE. A PORTION OF THE OLD TOWN LANDFILL WAS EXCAVATED FROM ITS ORIGINAL LOCATION AND REBURIED ON THIS SITE IN THE 1960'S TO ALLOW CONSTRUCTION OF A HIGHWAY THROUGH THE FORMER LANDFILL. THE MATERIAL MOVED FROM THE LANDFILL AND BURIED AT THE MARINO PROPERTY IS UNKNOWN. A RUBBER MANUFACTURING CO. OPERATED ON THE SITE FOR MORE THAN 50 YEARS AND DISPOSED OF UNKNOWN TYPES OF WASTE. THE FORMER FACTORY IS PRESENTLY OCCUPIED BY

DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN OR ALLEGED: SEVERAL SMALL BUSINESSES. THE FORMER LANDFILL MATERIAL WAS COVERED BY MR. MARINO IN THE MID 1950'S WITH APP. 2 FEET OF CLEAN FILL. UNKNOWN MUNICIPAL AND INDUSTRIAL WASTES DEPOSITED AT THIS SITE FOR MORE THAN 50 YEARS. WASTE OILS, PAINTS, AND BY PRODUCTS FROM THE RUBBER MANUFACTURING PROCESSES ARE KNOWN SUBSTANCES DEPOSITED THERE. A COMPLAINT RECEIVED BY CT DEP ALLEGES THAT A DRUM CONTAINING A DARK, THICK LIQUID WAS UNCOVERED DURING SOIL REMOVAL AT THE SITE, THE DRUM WAS

EXISTING ANALYTICAL DATA

IMMEDIATELY REBURIED.

IDENTIFY SOURCE, DATE AND METHODOLOGY. SEE APPENDICES I, J AND K

[X] REAL-TIME MONITORING DATA N.A.

[X] SAMPLING DATA CT DEPT OF HEALTH SERVICES ANALYZED SOIL AND WATER SAMPLES FOR VOC'S AND METALS. ENVIRONMENTAL MONITORING LABORATORY, INC. ANALYZED GROUNDWATER FROM WELLS FOR VOC'S IN DECEMBER 1985. SEE APPENDICES L, M, N AND O.

POTENTIAL THREAT

DESCRIPTION OF POTENTIAL HAZARDS TO ENVIRONMENT AND/OR POPULATION – IDENTIFY ANY OF THE CRITERIA FOR A REMOVAL ACTION (FROM NCP) THAT MAY BE MET BY THE SITE: REMOVAL ACTION 300.415 SUB SECTION (B)(ii) SENSITIVE ECOSYSTEMS/DRINKING WATER SUPPLIES. (iii) HAZARDOUS SUBSTANCES/POLLUTANTS, CONTAMINANTS STORED IN CONTAINERS (iv) HIGH LEVELS OF CONTAMINANTS IN SOILS AT OR NEAR THE SURFACE (v) WEATHER CONDITIONS WHICH MAY CAUSE MIGRATION.

EPA REGION I
REMOVAL PRELIMINARY ASSESSMENT

PRIOR RESPONSE ACTIVITIES

☐ PRP ☒ STATE ☐ FEDERAL ☐ OTHER

BRIEF DESCRIPTION: CT DEP SITE VISITS ON 7-14-83 AND 9-16-83 SAMPLING WAS CONDUCTED ON THE BANKS OF THE UNNAMED BROOK WHICH BORDERS THE SITE, FROM A FIVE GALLON PAINT CAN AND FROM THE FILL COVERING THE LANDFILL ELEVATED LEVELS OF LEAD, CHROMIUM, METHYL ETHYL KETONE, TOLUENE, AND XYLENE WERE DETECTED. SEE ATTACHED REPORT. EACH OF THE COMPANIES OPERATING OUT OF THE FORMER RUBBER COMPANIES BUILDING WERE ALSO INSPECTED BY THE CT DEP AT THIS TIME.
CT TEST BORINGS, INC. CONDUCTED SAMPLING OF SOILS USING A DRILL RIG/HOLLOW STEM AUGER TO OBTAIN DEPTHS OF 10 TO 30 FEET, FOR VOC ANALYSIS SEE ATTACHED 12-5-85.
CT DEPT OF HEALTH VISITED SEVERAL COMPANIES AT THE SITE AT THE REQUEST OF US DEPT OF LABOR TO INSPECT FOR OSHA VIOLATIONS.

PRIORITY FOR SITE INVESTIGATION

☒ HIGH ☐ MEDIUM ☐ LOW ☐ NONE

COMMENTS: EPA ESD WAS REQUESTED BY ED PARKER, CT DEP TO INVESTIGATE THIS SITE AS SOON AS POSSIBLE, IN A LETTER TO DAVE MC INTYRE DATED OCTOBER 2, 1990.
SEE APPENDIX I.

REPORT GENERATION

INITIATOR OF REPORT: JAMES KIRKPATRICK

DATE OF PREPARATION: DEC. 20, 1990

AFFILIATION: ROY F. WESTON, INC. TAT | PHONE #: (617) 229-6430

II. REMOVAL PROGRAM SITE INVESTIGATION FOR THE MARINO PROPERTY SITE

EPA REGION I
REMOVAL SITE INVESTIGATION

INSPECTION INFORMATION

SITE NAME: MARINO PROPERTY	ADDRESS: 50 WALNUT STREET
COUNTY: MIDDLESEX	TOWN: MIDDLETOWN / STATE: CT
DATE OF INSPECTION: 10-31-90/11-1-90	TIME OF INSPECTION: 0800-1600 HOURS
WEATHER CONDITIONS:	
SITE STATUS AT TIME OF INSPECTION: [X] ACTIVE [ ] INACTIVE	COMMENTS: PROPERTY CURRENTLY USED AS STAGING AND STORAGE AREA FOR CONSTRUCTION EQUIPMENT; TOWN LANDFILL MATERIALS KNOWN TO BE BURIED ON THE PROPERTY; ILLEGAL BURIAL OF DRUMS IS ALLEGED

AGENCIES PERFORMING INSPECTION:

[X] EPA	NAMES: MARY ELLEN STANTON, SITE INVESTIGATOR (SI)	PROGRAM: RESPONSE AND PREVENTION SECTION
[X] EPA CONTRACTOR SUPPORT	NAMES: ERIC FAHLE, MICHAEL LOMBARDI	FIRM: ROY F. WESTON, INC.
[X] STATE	NAMES: MIKE McDANIELS	PROGRAM: CT DEP WASTE MANAGEMENT BUREAU
[X] OTHER	NAMES: SALVATORE MARINO	ORGANIZATION: PROPERTY OWNER

CURRENT OWNER BASED ON DEED STATUS: NO DEED SEARCH WAS ENACTED.	BOOK # N.A. / PAGE # N.A.
CURRENT OWNER BASED ON FIELD INTERVIEW: SALVATORE MARINO	VERBAL CHECK AT DESK: N.A.

PHYSICAL SITE CHARACTERISTICS

PROVIDE SITE SCHEMATIC — SEE ATTACHMENT 1

	QUANTITIES/EXTENT		QUANTITIES/EXTENT
		[X] PILES	SUPPOSED FILL MATERIAL
[ ] CYLINDERS	N.A.	[ ] STAINED SOIL	N.A.
[X] DRUMS	POSSIBLY BURIED	[ ] SHEENS	N.A.
[ ] LAGOONS	N.A.	[ ] STRESSED VEGETATION	N.A.
[X] TANKS — [ ] ABOVE	N.A.	[X] LANDFILL	FORMER CAPPED
[X] TANKS — [X] BELOW	TWO OF UNKNOWN SIZE UNDERGROUND	[X] POPULATION WITHIN VICINITY OF SITE	
[ ] ASBESTOS	N.A.	[X] WELLS	MUNICIPAL DRINKING WATER WELL WITHIN 0.6 MILES
[ ] OTHER	N.A.	[ ] OTHER	N.A.

EPA REGION I
REMOVAL SITE INVESTIGATION

PHYSICAL SITE OBSERVATIONS

COMMENTS: THE SITE IS APPROXIMATELY 10 ACRES IN SIZE AND RAISED ABOVE THE NATURAL CONTOURS OF THE AREA. THERE IS NO GROUND COVER MOSTLY SAND AND GRAVEL, ONE LARGE SOIL PILE EXISTS ADJACENT TO RIVER ROAD.

CONTAINMENT OF MATERIALS: MATERIAL FROM THE TOWN LANDFILL WAS MOVED TO THE SITE AND BURIED DURING THE 1960'S. PRESENT PROPERTY OWNER ADDED APPROXIMATELY TWO FEET OF PROCESSED GRAVEL ON TOP OF LAND FILL MATERIAL.

RECEPTORS

[X] GROUND WATER/DRINKING WATER SOURCE	[ ] PRIVATE	N.A.
	[ ] MUNICIPAL	WELLS WITHIN 0.6 MILES
[X] UNRESTRICTED ACCESS TO SITE	NO FENCING ALONG THE WESTERN PROPERTY LINE.	
[X] POPULATION IN PROXIMITY TO SITE	APP 10,000 WITHIN A 1.0 MILE RADIUS	
[X] SENSITIVE ECOSYSTEM	UNNAMED BROOK, CONNECTICUT RIVER, TIDAL FLATS.	
[ ] OTHER		

FIELD SAMPLING AND ANALYSIS

		FIELD INSTRUMENTATION	ANALYTICAL PARAMETER
[X] SOIL		PHOTOVAC 10S50 PORTABLE GAS CHROMATOGRAPH *	SOIL GAS SAMPLING FOR VOC CONTAMINATION
[ ] GROUNDWATER		N.A.	
[ ] SURFACE WATER		N.A.	
[X] AIR SAMPLING		RADIATION METER, COMBUSTIBLE GAS METER, HNU PID	
[ ] STRUCTURES	[ ] TANKS	N.A.	
	[ ] DRUMS	N.A.	
	[ ] VATS	N.A.	
	[ ] LAGOONS	N.A.	
	[ ] OTHER	N.A.	
[ ] SPILLAGE		N.A.	
[ ] RUNOFF		N.A.	
[ ] PILES		N.A.	
[ ] SEDIMENTS		N.A.	

* A SUBSURFACE GEOPHYSICAL SURVEY WAS PERFORMED USING TWO INSTRUMENTS IN AN EFFORT TO DETERMINE THE PRESENCE OR LACK OF BURIED METAL OBJECTS.

EPA REGION I
REMOVAL SITE INVESTIGATION

ANALYTICAL RESULTS

SEE ATTACHED REPORT(S) CT DEP SITE VISIT / SAMPLING 7-14-83
CT TEST BORINGS, INC SAMPLING 12-5-85
US EPA PA/SI 10-31-90

FIELD QUALITY CONTROL PROCEDURES

☒ SOP FOLLOWED ☐ DEVIATION FROM SOP:

COMMENTS: SITE HEALTH AND SAFETY PLAN, SITE QA/QC PLAN, REGION 1 EPA SOIL GAS STANDARD OPERATING PROCEDURE

SEE APPENDICES C AND D

FURTHER ANALYSIS

ANALYTICAL PARAMETER	MEDIA	LABORATORY
☒ VOA	☐ AIR	☒ NERL
☐ PCB	☐ WATER	VOA'S → ☒ CLP LAB ☐ SAS ☐ SOW
☐ PESTICIDE	☒ SOIL	☐ NON-CLP LAB
☒ METALS	☐ SOURCE	
☐ CYANIDE	☐ SEDIMENT	
☒ SEMI VOA		
☐ TOXICITY		
☐ DIOXIN		
☐ ASBESTOS		
☒ OTHER ALL SAMPLES WERE COLLECTED FROM APPROXIMATELY 18 INCHES IN DEPTH		

ADDITIONAL PROCEDURES FOR SITE DETERMINATION

☐ BIOLOGICAL EVALUATION N.A.

☐ ATSDR N.A.

SITE DETERMINATION

LIST – USE NCP CRITERIA, CLOSURE MEMO 300.415 REMOVAL ACTION; SUBSECTION (b)(2) (ii) POTENTIAL CONTAMINATION TO DRINKING WATER OR SENSITIVE ECOSYSTEMS, RECEPTORS; CONNECTICUT RIVER, UNNAMED BROOK, TIDAL FLATS, DRINKING WATER WELLS (iii) HAZARDOUS SUBSTANCES, POLLUTANTS OR CONTAMINANTS IN DRUMS, TANKS; RECEPTORS: POSSIBLE BURIED DRUMS AS IDENTIFIED BY GEOPHYSICAL SURVEY (iv) HIGH LEVELS OF HAZARDOUS SUBSTANCES AT OR NEAR THE SURFACE, (v) WEATHER CONDITIONS THAT MAY CAUSE HAZARDOUS SUBSTANCES TO MIGRATE; BECAUSE THERE IS NO GROUNDCOVER, EROSION AND EXTENSIVE RUNOFF EMPTY INTO UNNAMED BROOK OR CONNECTICUT RIVER.

III. APPENDICIES

APPENDIX A

SITE LOCATION MAP

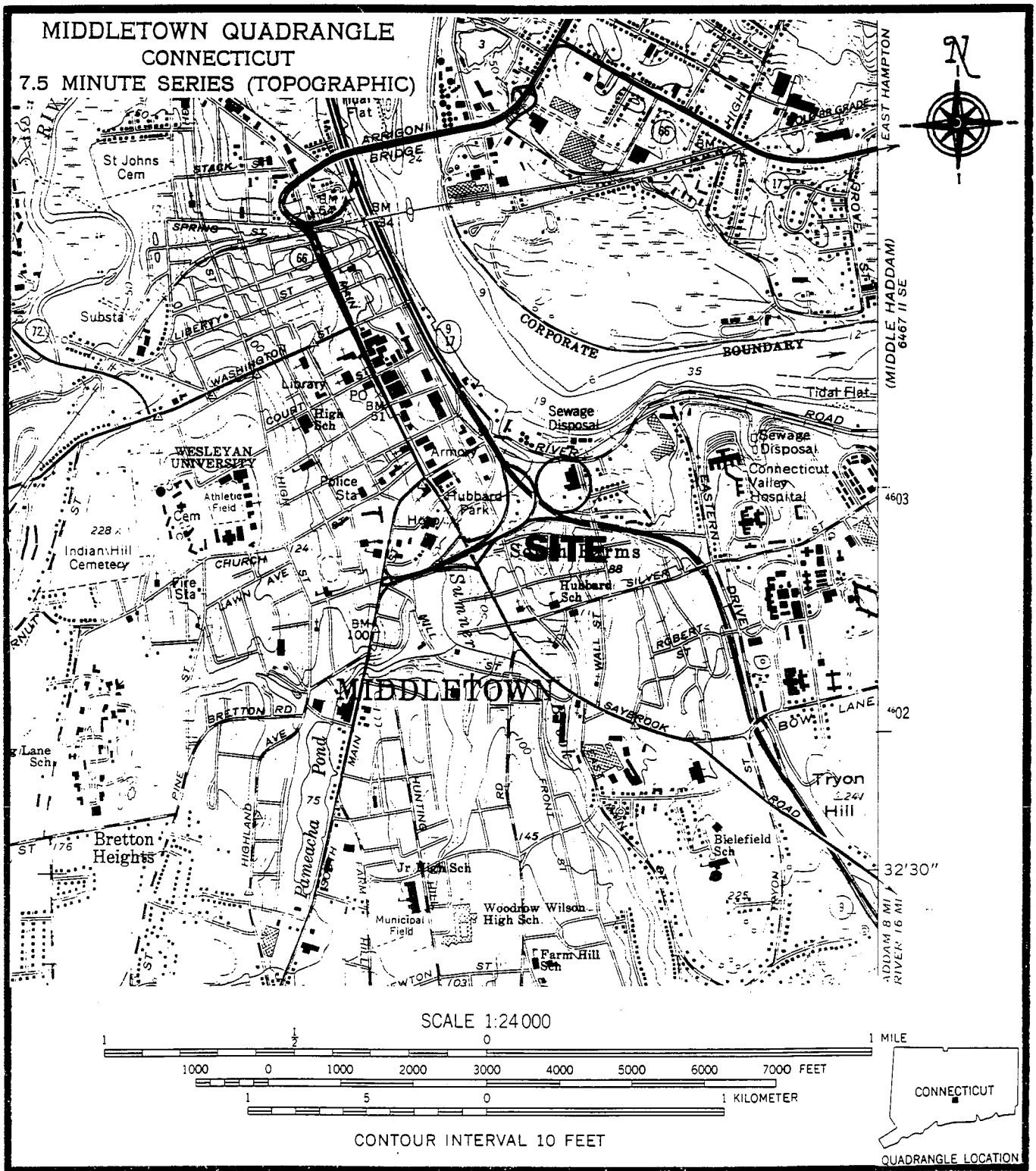


FIGURE: 1

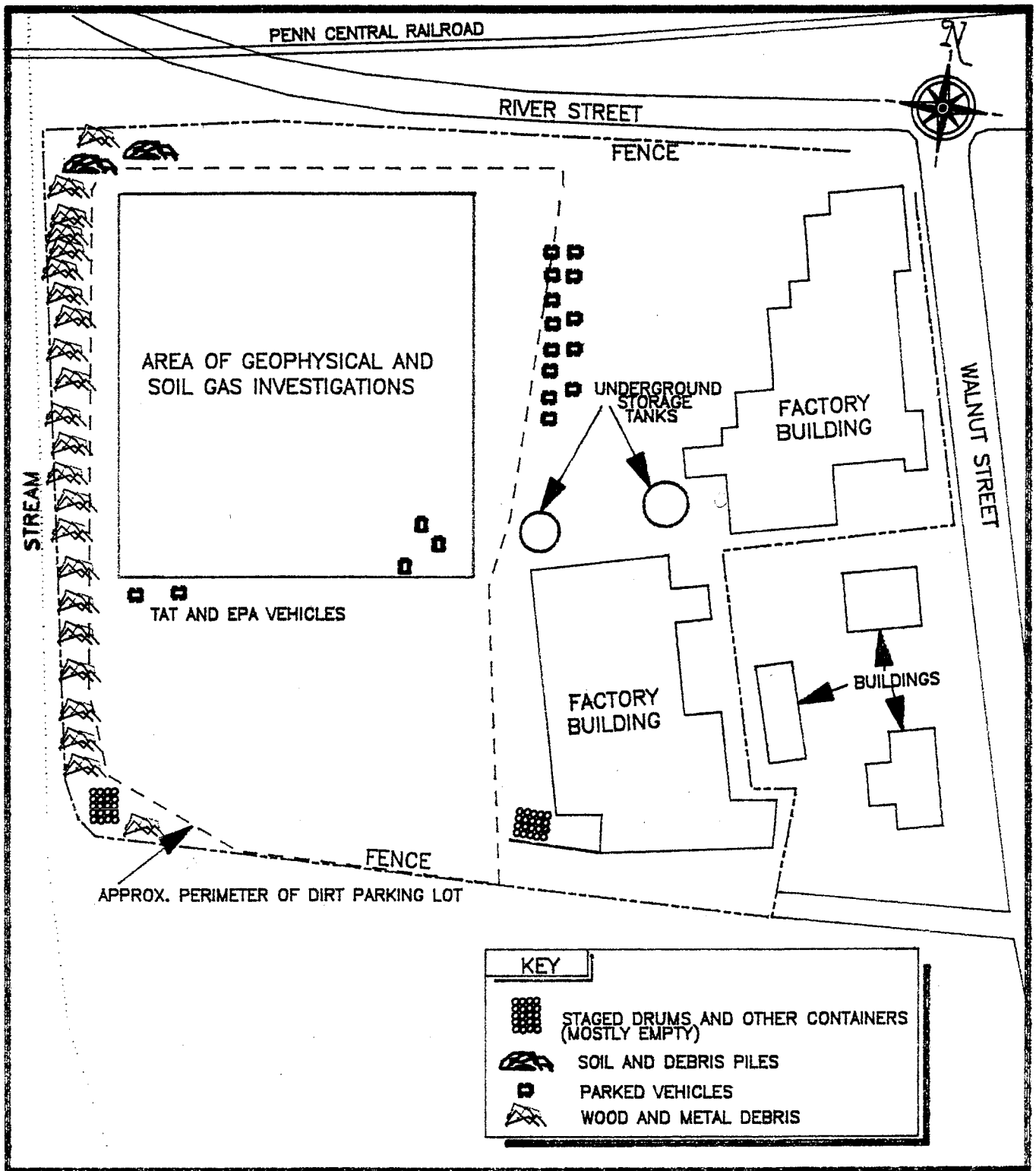
SITE LOCATION MAP
MARINO PROPERTY
MIDDLETOWN, MIDDLESEX COUNTY
CONNECTICUT

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN ERIC FAHLE	DATE 12/90	PCS # 1114
APPROVED MJM	DATE 12/90	TDD # 01-9010-578

APPENDIX B

SITE DIAGRAM



NOT TO SCALE

FIGURE: 2

SITE DIAGRAM
MARINO PROPERTY
MIDDLETOWN, MIDDLESEX COUNTY
CONNECTICUT

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN ERIC FAHLE	DATE 11/90	PCS # 1059
APPROVED MJM	DATE 11/90	TDD # 01-9010-57

APPENDIX C

SITE SAMPLING QA/QC PLAN

MARINO PROPERTY
SITE SAMPLING QA/QC PLAN
MIDDLETOWN, CONNECTICUT

Prepared For:

U.S. Environmental Protection Agency
Region I
60 Westview Street
Lexington, MA 02173

CONTRACT NO. 68-WO-0036

TAT-01-N-00716

TDD NO. 01-9010-57

Prepared By:

ROY F. WESTON, INC.
Technical Assistance Team
Region I

November 1990

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1.0 BACKGROUND

The Marino Property is located at 50 Walnut Street in Middletown, Connecticut. (Figure 1). The Connecticut River is approximately one-tenth mile north of the site.

According to the Connecticut Department of Environmental Protection (CT DEP), the Marino property consists of an old rubber factory that is currently utilized by small businesses. A large level filled-in area, is located on the west side of the factory building (Figure 2).

According to Edward C. Parker, Director of the Site Remediation and Closure Division (SRCD) of the waste management bureau of the CT DEP, an anonymous complaint received by the SRCD on August 14, 1990 stated that a drum was uncovered during excavation activities in the center of the previously mentioned filled-in area at the Marino Property during March of 1990. The complaint reported that the damaged drum had a dark thick liquid flowing out and that the surrounding soil had a purplish color. The drum was immediately reburied at a depth of approximately six feet. The complaint also stated that a former employee at the rubber company witnessed the dumping of five to ten chemical liquids on a weekly basis over a period of twenty to thirty years.

A review of the CT DEP Waste Engineering and Enforcement Division files by CT DEP personnel identified a previous complaint of past hazardous waste dumping at the site. An investigation was conducted on August 14, 1983 and September 16, 1983 by the CT DEP. Several rusty drums were discovered at the western edge of the filled in area at the Marino Property.

The groundwater classification in the immediate area is GB. Therefore, its designated use is for process water and cooling water. The water is presumed not suitable for direct human consumption without prior treatment. However, several community water supply wells are located six tenths (0.6) of a mile downstream from the site. In addition, the Connecticut River is one tenth (0.1) of a mile north of the site.

2.0 OBJECTIVES

The objective of the sampling survey is to obtain sufficient analytical data from a representative number of samples which can be used to determine if further actions at the site by the US EPA Emergency Planning and Response Branch (EPRB) are necessary.

3.0 QUALITY ASSURANCE LEVELS

The quality assurance (QA) levels for the on-site screening activities will be QA1. These activities include the use of the following instrumentation/test equipment:

Geonics LTD. EM 31-D Non-Contacting Conductivity Meter
EG&G Model G-856 Proton Precession Portable Magnetometer
Photovac 10S50 Gas Chromatograph
Victoreen Radiation Meter Model 490 (RAD meter)
HNu Photoionization Detector (HNu)

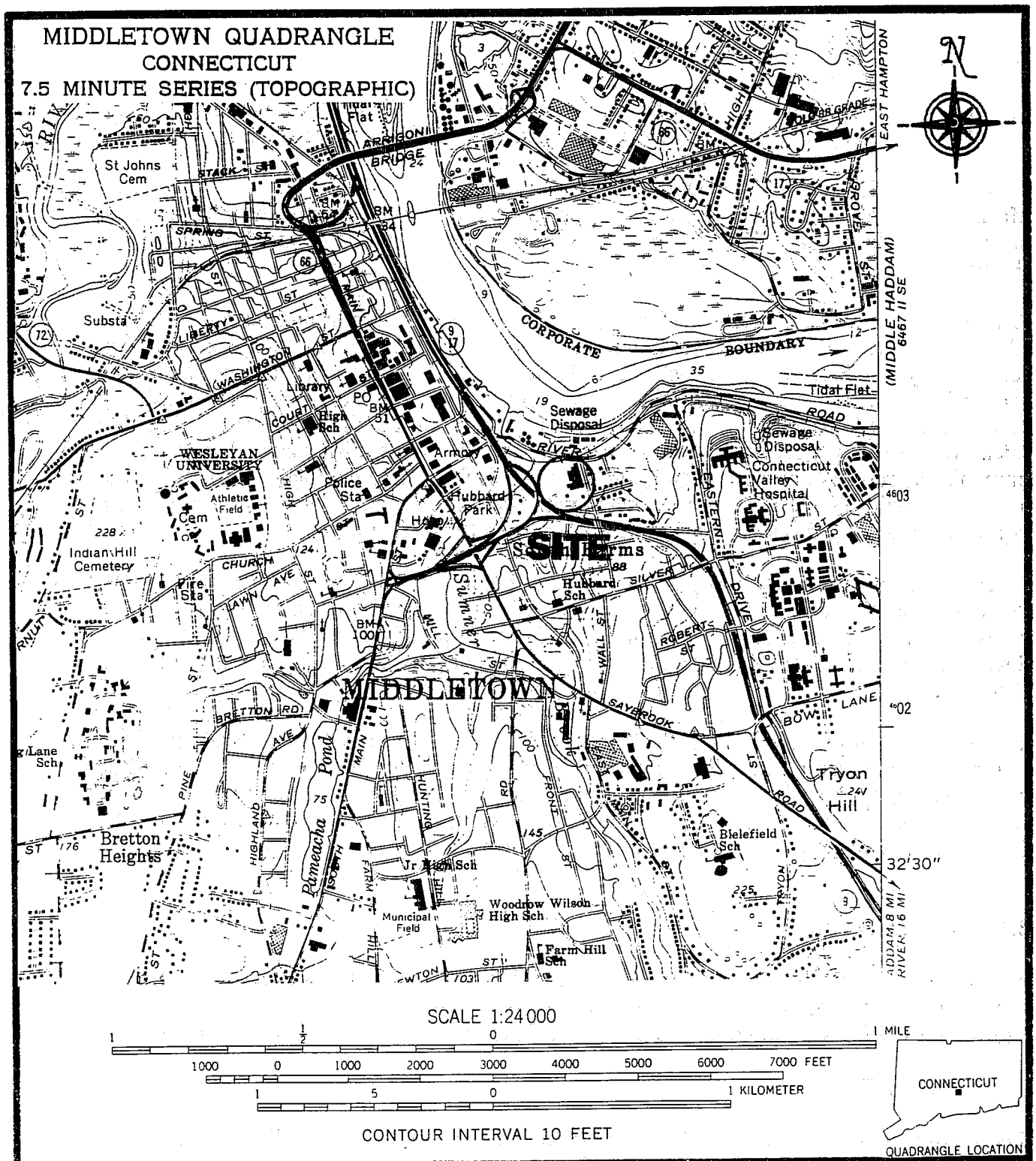
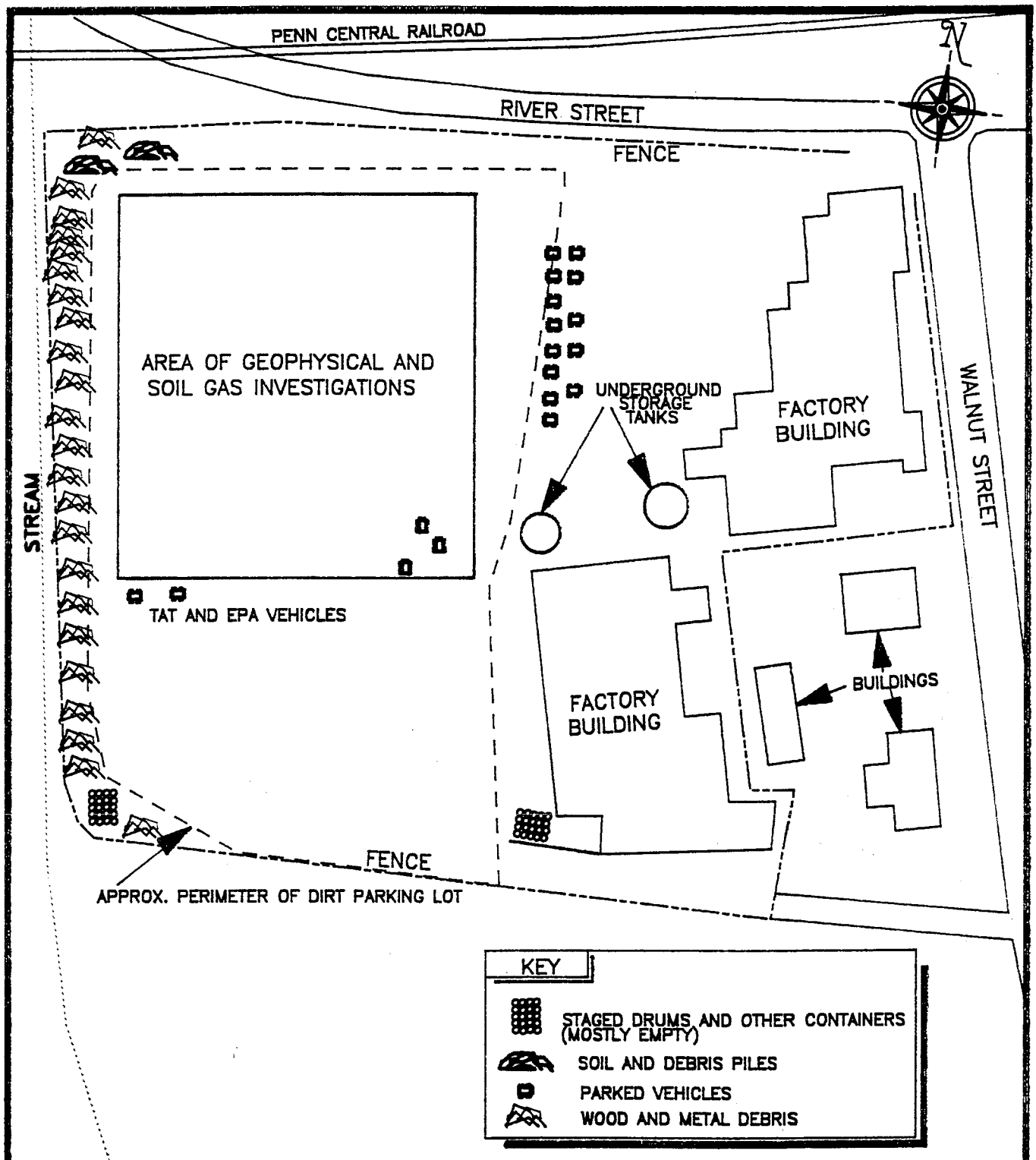


FIGURE: 1

SITE LOCATION MAP
MARINO PROPERTY
MIDDLETOWN, MIDDLESEX COUNTY
CONNECTICUT

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN ERIC FAHLE	DATE 12/90	PCS # 1114
APPROVED MJM	DATE 12/90	TOD # 01-9010-578



NOT TO SCALE

FIGURE: 2

SITE DIAGRAM
MARINO PROPERTY
MIDDLETOWN, MIDDLESEX COUNTY
CONNECTICUT

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN	DATE	PCS #
ERIC FAHLE	11/90	1059
APPROVED	DATE	TDD #
MJM	11/90	01-9010-57

The QA level for the samples analyzed at the laboratory will be modified QA2.

See Section 6.0 for details.

4.0 APPROACH AND SAMPLING METHODOLOGIES

4.1 Geophysical Surveys

A continuous geophysical subsurface screening investigation will be conducted on October 31, 1990, using a Geonics LTD. EM31-D non-contacting terrain conductivity meter (EM31). The EM31 survey will be performed with the instrument measuring the inphase component of the subsurface magnetic field (mode selector switch in the COMP position). This is due to the greater sensitivity of the inphase component of the magnetic field in detecting large metallic objects. The range switch will be set at 30 mmho/meter and the primary field compensation controls will be set for a meter deflection of approximately 20% of full scale deflection.

A second geophysical investigation will be conducted using an EG&G proton precession portable magnetometer. This instrument will be used to record the Earth's magnetic field intensity at grid-specified locations. Four background measurements of the Earth's magnetic field intensity will be recorded in the vicinity of the site to obtain and average background reading. A grid controlled, station by station, subsurface geophysical screening investigation will then be conducted at 25 foot intervals. After completion and inspection of the electromagnetic data, a contour interval will be chosen to best depict any subsurface anomalies. A contour map indicating areas of equal total magnetic field intensity will be produced.

4.2 Soil Gas Survey

A soil gas survey will be conducted at the Marino Property to determine the presence of volatile organic compounds (VOCs). The soil gas survey methodology is as follows:

Soil gas sampling will be conducted around the perimeter of subsurface electromagnetic conductors (i.e. metallic objects) and subsurface anomalies in the Earths magnetic field.

At each sample point, a manual piston slam bar will be used to punch a hole down 48 to 56 inches below ground surface. After the hole is made, the slam bar will be carefully withdrawn to prevent the collapse of the walls of the hole. A metal wire, slightly longer than the probe will be placed into the soil gas probe (a stainless steel or copper 1/4" tube of 5' length). The probe (with wire) will be inserted to a full depth, then pulled up 3" to 6". The wire will then be removed. The top of the sample hole will be sealed at the surface against ambient air infiltration by using modeling clay and native soil molded around the probe at the surface of the hole.

The bore volume of the sample probe will be evacuated prior to sampling. A pump with operates at a rate of approximately 100 cc/min, will be connected to the sample probe using a section of tygon or teflon tubing. The pump will be turned on, and the soil gas will be evacuated through the probe for approximately three minutes.

Soil gas samples will be collected in 250 ul Hamilton Glass Syringes for Photovac 10S50 Gas Chromatograph screening at the sampling points which have HNu readings above background during the survey, or until enough data is obtained.

Soil gas probe contamination will be checked between each sample by drawing ambient air through the probe via the pump and checking the response of the HNu. If HNu readings are higher than ambient air background, replacement or decontamination of the probe will be necessary. Soil gas probes will be decontaminated by drawing ambient air through the probe until the HNu reading is at background. Persistent contamination will be removed by rinsing out the probe using a methanol and water rinse, followed by air drying.

The teflon or tygon tubing will be changed immediately if visible contamination is drawn into the tube. When sampling in highly contaminated areas, the tubing will be purged with ambient air for approximately 30 seconds between each sample. After purging, the tubing will be checked using an HNu to establish the cleanliness of the teflon or tygon tubing.

4.3 Headspace Analysis of Soil Samples

Selected surface soils will be analyzed for VOC. The sampling methodology is as follows:

At each sample location, one gram of surface soil will be placed in a 40 ml VOA vial. Approximately 30 mls of or distilled water will be added to the VOA vial with the mixture shaken vigorously for one minute. 200 uls of headspace will be drawn from each vial for analysis on the Photovac 10S50.

5.0 PROJECT ORGANIZATION AND RESPONSIBILITIES

U.S. EPA Emergency Planning and Response Branch:

Mary Ellen Stanton	Site Investigator

Roy F. Weston Technical Assistance Team Member:

Eric Fahle	Photovac 10S50/Magnetometer/EM 31-D/Air Monitoring
Mike Lombardi	Photovac 10S50/ Air Monitoring

6.0 QUALITY ASSURANCE REQUIREMENTS

The on-site screening activities will employ the following QA level 1 requirements: sample documentation; instrument calibration/performance check; and the determination of a detection limit, if appropriate.

The analyses of samples at the laboratory will employ the following modified QA level 2 requirements: sample documentation; chain of custody; sample holding times; method blanks, rinsate blanks, trip blanks, preparation blanks; initial and continuing calibration data; definitive identification: confirm the identification of analytes via a second GC column or mass spectra on the samples submitted (for organics only); and provide gas

chromatograms and/or mass spectra.

The on-site screening for the previously mentioned surveys are to have standard QA/QC protocols for checking the calibration of the instruments used. The HNu photoionization detector calibration will be checked with an HNu calibration standard. The Photovac analysis will employ the following QA/QC protocols. A syringe blank and column blank will be analyzed before any sample injection to assure contamination does not exist in the Photovac system. The Photovac's internal library will not be activated during the sample analyses at the Marino Property since this will enable greater flexibility when changing parameters such as chart speed and carrier gas flow which will increase separation of individual compounds, especially early eluting compounds such as acetone methylene chloride and cis- and trans-1,2-dichloroethylene. In addition, by not engaging the Photovac's internal library, the chance of the system assigning the wrong name to a given compound due to changes in temperature (retention time) will be avoided. Each unknown compound will be manually identified by comparing its retention time and characteristic peak shape to that of the 10 part per billion (ppb) standard. During the soil gas analyses, the 10 ppb standard will be kept on ice. During the headspace analyses, the 10 ppb standard will be kept at room temperature. A new 10 ppb standard will be run every two hours or when the ambient temperature changes by 5°C. A syringe blank will be analyzed between sample injections to indicate the presence of VOCs to ensure syringe integrity. The concentrations of individual VOCs will be derived by the following:

$$\frac{\text{Area Standard (volt seconds)}}{\text{Standard Concentration (ppb)}} = \frac{\text{Area of Unknown Sample (volt seconds)}}{(X)}$$

X must then be multiplied by the standard injection volume/sample injection volume ratio to obtain X, the concentration of the unknown volatile compound in ppb.

When calculating X in soil gas surveys, conversion factors must be used to quantitate soil gas concentrations based on aqueous standards. The conversion factors are as follows:

Compound	Clifford Conversion Factor*
Benzene	15.1
Trichloroethylene	14.2
Toluene	15.9
Tetrachloroethylene	20.1
Chlorobenzene	13.0
Ethylbenzene	13.3
p-xylene	37.0
o-xylene	0.9
m-xylene	10.0

* Figures derived by Scott Clifford, U.S. EPA New England Regional Laboratories.

When calculating X from headspace analysis of soil samples, a different type of conversion

factor is necessary to quantify the headspace concentrations based on aqueous standards. Dilution factors and soil moisture content must be introduced into the calculation to obtain a quantitative measurement of X. This is achieved by multiplying X by the following:

$$\frac{30}{[(\text{wet weight of soil})(\text{weight of dry soil})]}$$

The dilution factor is 30. The weight of the soil is the wet weight of the soil at the time of collection, in this case one gram, times the normal dry weight of the one-gram sample. Soils are normally 80% dry. Hence the conversion factor would be as follows for a normal surface soil:

$$\frac{30}{[(1)(0.8)]} = 37.5$$

7.0 DELIVERABLES

Photographic and written documentation of on-site activities will be generated by the Roy F. Weston Technical Assistance Team.

8.0 DATA VALIDATION

A data quality review of the sample analyses will be conducted by the Roy F. Weston Technical Assistance Team and/or EPA New England Regional Laboratory personnel.

QA level 1 data will be evaluated for calibration and detection limits.

QA level 2 modified data will be evaluated by the following: results of 10% of the samples in the analytical data packages will be evaluated for all of the elements listed in Section 6, "QA Requirements"; and holding times, blank contamination, and detection capability will be reviewed for all samples.

9.0 REFERENCES

1. "Soil Gas Sampling Adjacent to the Seaway Boats Site", Winthrop, Maine, Roy F. Weston, Inc., September 7, 1989.

2. "Removal Program Site Investigation for Watkins Machinery Company Site, Beacon Falls, Connecticut", Roy F. Weston, Inc., July 15, 1990.

3. "Procedures for Utilizing the Photovac 10S50 Portable Gas Chromatograph", Roy F. Weston, Inc., October 1989.

4. "Hooper Sands Site Sampling QA/QC Plan", South Berwick, York County Maine, Roy F. Weston, Inc., October 1990.

TABLE 1

SAMPLING SUMMARY, ANALYTICAL METHODS & QA/QC SAMPLES

MATRIX	#SAMPLES	ANALYTICAL PARAMETER	VOLUME	CONTAINER	PRESERVATIVE	METHOD	TRIP BLANKS
Soil	4	VOCs	4 oz	glass	ice	8240	3 40-ml org. Free H20
Soil	4	BNA	8 oz	glass	ice	8250	none
Soil	4	Metals	8 oz	glass	ice	6010	none

APPENDIX D

HEALTH AND SAFETY PLAN

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

U.S. EPA CONTACT: MARY ELLEN STANTON
Date of Inspection: 10/3/90 Time: 0900 HRS TDD No. 01-9010-57
Original Safety Plan: Yes ✓ No ____ PCS No. 1059
Admendment/Modification No. ____

SITE SAFETY COORDINATOR: ERIC FAHLE

Site Name: MARINO PROPERTY

Site Address: Street No. 170 WALNUT STREET
City MIDDLETOWN
County MIDDLESEX COUNTY
State CONNECTICUT Zip Code 06457

Site Contact: MICHAEL MONDADORI Phone (203) 346-7308

Directions to Site: (Attach Map) TAKE I-91 SOUTH TO EXIT 16 WEST TO RTE 66 TO 9 SOUTH TO RTE 9 SOUTH TO RTE 17 N (SOUTH MAIN) TO RIVER STREET, EAST ON RIVER TO WALNUT. THE MARINO PROPERTY IS AT THE CORNER OF RIVER AND WALNUT

SITE HISTORY: THE MARINO PROPERTY CONSISTS OF AN OLD RUBBER FACTORY THAT IS CURRENTLY BEING USED BY SMALL BUSINESSES. THE THE SITE CLOSURE AND REMEDIATION DIVISION REPORT OF THE CT DEP REGISTERED A COMPLAINT THAT A DRUM WAS UNCOVERED DURING SITE EXCAVATION AND THAT THE DRUMS WERE LEAKING. THE LEAKING DRUM WAS REMOVED. IT WAS ALSO REPORTED TO THE CT DEP THAT CHROMIUM AND ENDOSULFAN DISPOSAL OF SOLVENT FROM PAINT OF TWENTY TO THIRTY YEARS.

INCIDENT DESCRIPTION

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

PERSONNEL PHYSICAL SAFETY HAZARDS:

Heat ____ Cold ✓ Noise ____ Underground Utilities ✓
Overhead Utilities ____ Heavy Equipment ✓ Slip, Trip, Fall ✓
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	—	—	—	—	—	—	—

Description of Decontamination To Be Used: A dry decon will be used or if necessary, a soap containing TH-3 Rinse. Contaminated Disposable Clothing and Equipment will be properly disposed.

SPECIFY PPE TYPE

TASK TO BE PERFORMED	ANTIC. LEVEL OF PROTECT.	COVERALL	GLOVE IN/OUT.	AIR PURIF. RESPIRATOR CART/CANN
site walkthrough	level C	Tyvek, boots	latex gloves	/ nitrile gloves / MSA GMH combo
Geophysical surveys	level D	coveralls	boots	
soil gas	level C	Tyvek	boots	latex gloves / nitrile gloves / MSA GMH combo

Anticipated Monitoring

Radiation Meter [✓] CGI [✓] HNU [✓] 10.2 eV Probe OVA [ ]

Detector Tube [ ] _____ Other _____

EMERGENCY PHONE NUMBERS:	LOCATION	PHONE	NOTIFIED
FIRE	Cross Street Fire Department	1 203 346 8621	yes
POLICE	middlesex police dept	1-203-347-6941	yes
AMBULANCE	clinton ambulance	1-203-346-9687	yes
HOSPITAL	middlesex memorial 29 Cresent St.	1-203-347-9471	yes

CHEMICAL TRAUMA CAPABILITY? yes

DIRECTIONS TO HOSPITAL: (ATTACH MAP) RTE. VERIFIED BY_____ DATE_____

From site: walnut street (R) onto silver (R) onto main street extension at first traffic light (L) onto Cresent. Hospital is ½ block on left.

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: Eric Fahle Date: 10/30/90

Pre-Response Approval by: [signature] Date: 11/6/90

verbal approval provided 10/31/90

TDD# 01-9010-57 PCS# 1059

OBSERVED CONDITIONS/ACTIVITIES

Describe Initial Conditions (Source/Type/Quantity): THE SITE IN QUESTION WAS AN OLD FACTORY AND SURROUNDING GROUNDS THE AREA IN QUESTION WAS A DIRT PARKING LOT WHERE HEAVY EQUIPMENT WAS PARKED THERE WAS NO PHYSICAL EVIDENCE OF CONTAMINATION IN THE AREA IN QUESTION THE OWNER HAD AT ONE TIME PLACED APPROXIMATELY 2 FEET OF FILL BENEATH THE FILL WAS THE REMAINS OF AN OLD LANDFILL AND SUPPOSEDLY INDUSTRIAL SLUDGES

DOCUMENTATION PERFORMED BY: ERIC FAHLER MIKE LAMBARDI

Type: Photo ✓ Log Book ✓ Recorder ____ Video ____

PHYSICAL DESCRIPTION

Size of Site: APPROX 5 ACRES Topography Terrain: FLAT Weather CLOUDY

Distance to Nearest: Residence YARD School ½ mile Hospital ½ mile

Public Building ¾ mile Other ____

Evacuation: Yes ____ No X Number ____ By Whom ____

Nearest Waterway: CONNECTICUT RIVER Distance: ½ mile

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

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

Was Entry Made by TAT: YES ____ NO X

TASK CONDUCTED: Describe Specific PPE Used and Why

SITE IN QUESTION WAS A DIRT PARKING LOT, THOUGH IT WAS PREDOMINANT WOODED NO SOURCE WAS BACKGROUND WAS DETERMINED HENCE TAT PERFORMED GEOPHYSICAL SURVEYS SOIL GAS, SOIL GAS LOCATIONS WERE CHOSEN AWAY FROM MAPPED & NOMADIC ITEMS HENCE TAT PERFORMED SOIL GAS INCLUDED METAL BNA AND SOIL VOAS WERE COLLECTED IN LEVEL C

AIR MONITORING LOG

OVA Calibration NA
HNU Calibration [illegible]
OGI Calibration NA

Background O_2 NA
Organics NA
Radiation .03-.05 mr/hr

(ATTACH CALIBRATION DATA TO LOG)

OGI NA

SITE NAME

STATION/ LOCATION	DATE	TIME	NAME OF AIR MONITOR	TYPE OF EQUIPMENT (HNU(PROBE/SPAN), OGI, OVA, RAD MTR	READING	SUMMARY/COMMENTS
N/E Adjacent to River	10/3/90	7:00	Frank Gambardi	Radiation meter Hall	.05 mr/hr 2 unit	None Background seen to 2 unit
N/W Adjacent to Factory	10/3/90	7:15	Frank Gambardi	Radiation meter Hall	.03 mr/hr 1 unit	None None
S/E Adjacent to River	10/3/90	7:30	Frank Gambardi	Radiation meter Hall	.03 mr/hr 1 unit	None None
S/W Adjacent to Factory	10/3/90	7:30	Frank Gambardi	Radiation meter Hall	.03 mr/hr 1 unit	None None

SAMPLING: CONDUCTED? YES ✓ NO ____

If Yes, Describe Sampling Method Soil samples were collected in DPE level C. Samples MAG 3, SM4, SM5 were collected at a depth of approx. 1.5-2 feet below the surface of the parking lot. This was done in an attempt to reach the contaminated soils. Sample "Lower Bank" was taken approx. 4 feet from a small stream which borders the property. The sample was collected at a depth of 4 feet. Samples were collected for BNA's, soil VOAs and metals.

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.

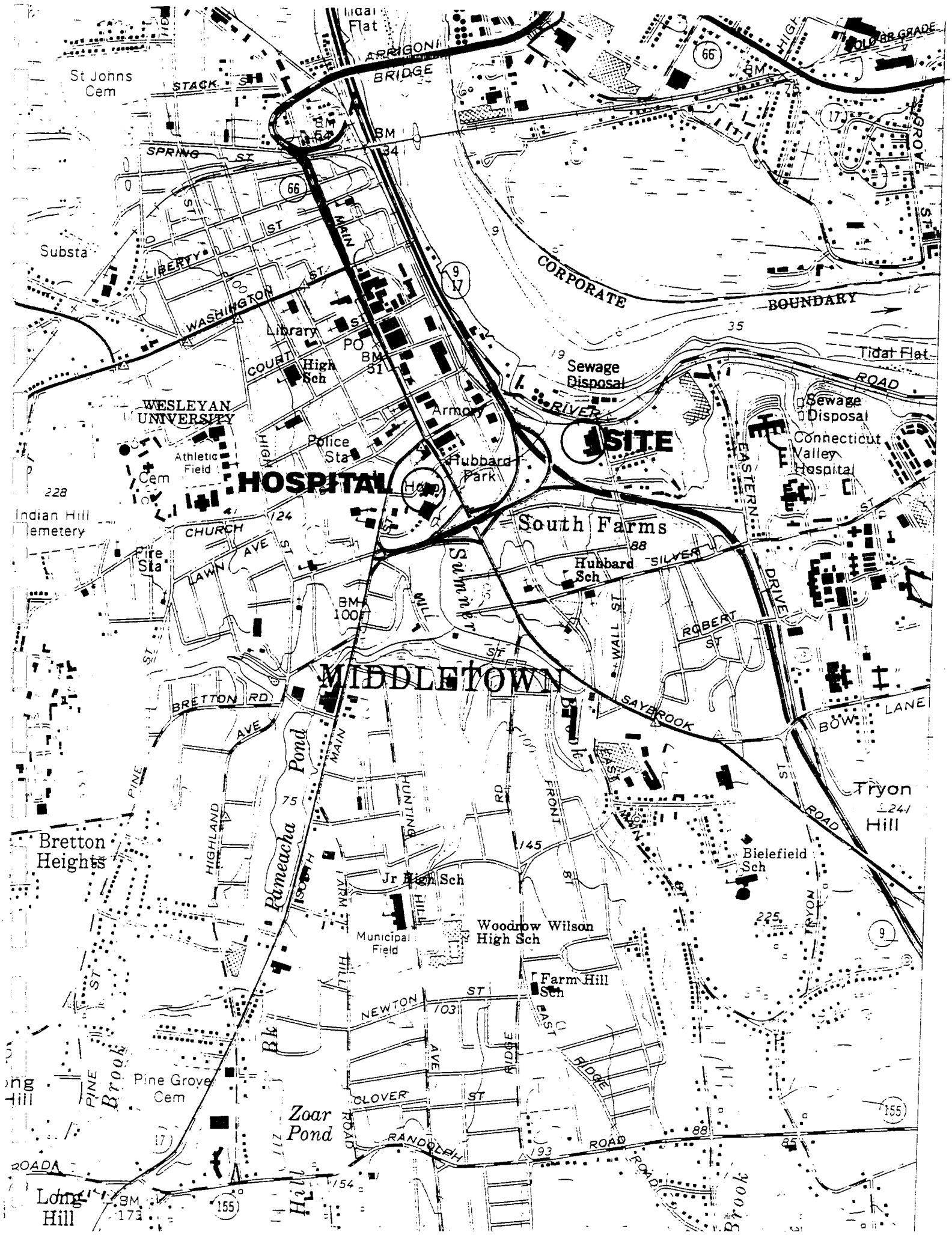
NAME (PRINTED)	SIGNATURE	AFFILIATION	DATE
ERIC FAMLE	[signature]	WESTON-TAT	10/31/90
MICHAEL COMBARDI	[signature]	WESTON-TAT	10/31/90

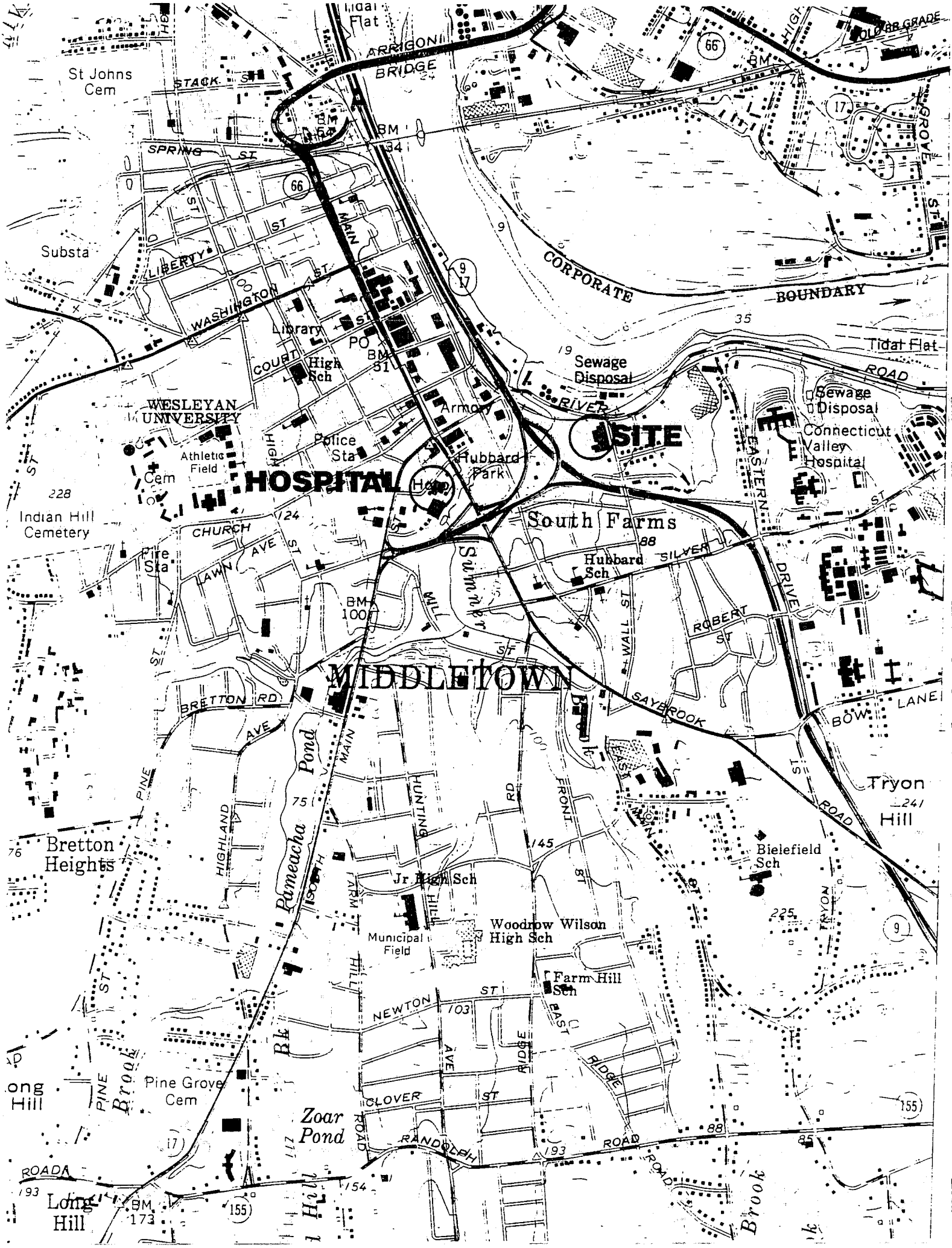
Final Submission of Plan by ERIC FAMLE Date 11/1/90

Post Response Approval [signature] Date 11/6/90

Copy to ZPMO ____ Date ____

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


Tidal Flat
ARRIGONI BRIDGE
St Johns Cem
STACK ST
SPRING ST
Substa
LIBERTY ST
WASHINGTON ST
MAIN
CORPORATE BOUNDARY
Library
PO
COURT
High Sch
Sewage Disposal
Tidal Flat
ROAD
RIVER
WESLEYAN UNIVERSITY
Armory
Sewage Disposal
Connecticut Valley Hospital
SITE
Athletic Field
Police Sta
Hubbard Park
HOSPITAL
Cem
Indian Hill Cemetery
CHURCH
South Farms
Fire Sta
LAWN AVE
Hubbard Sch
SILVER
EASTERN DRIVE
Sumner
WILL ST
WALL ST
ROBERT ST
MIDDLETOWN
BRETTON RD
SAYBROOK ROAD
BOW LANE
Tryon Hill
Bretton Heights
Pamacha Pond
HIGHLAND
Jr High Sch
Bielefield Sch
Woodrow Wilson High Sch
Municipal Field
Farm Hill Sch
NEWTON ST
Pine Grove Cem
Zoar Pond
CLOVER ST
RANDOLPH ROAD
Long Hill
Brook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St Johns Cem
STACK ST
SPRING ST
Substa
LIBERTY ST
WASHINGTON ST
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PO
COURT ST
High Sch
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Athletic Field
Cem
Indian Hill Cemetery
Pire Sta
CHURCH AVE
LAWN ST
Police Sta
Armory
HOSPITAL
Hosp
Hubbard Park
CORPORATE BOUNDARY
Sewage Disposal
RIVER
SITE
Tidal Flat
ROAD
Sewage Disposal
Connecticut Valley Hospital
EASTERN DRIVE
South Farms
Hubbard Sch
SILVER ST
Summer
MILL ST
WALL ST
ROBERT ST
MIDDLETOWN
BRETTON RD
SAYBROOK ROAD
BOW LANE
Pamacha Pond
MAIN
HUNTING HILL RD
FRONT ST
Tryon Hill
Bretton Heights
HIGHLAND AVE
Bielefield Sch
Jr High Sch
Municipal Field
Woodrow Wilson High Sch
Farm Hill Sch
NEWTON ST
EAST RIDGE
Pine Grove Cem
Zoar Pond
CLOVER ST
RANDOLPH ROAD
Long Hill
Brook

APPENDIX E

PHOTODOCUMENTATION LOG

APPENDIX F

GEOPHYSICAL SUBSURFACE SCREENING INVESTIGATIONS

GEOPHYSICAL SUBSURFACE SCREENING INVESTIGATIONS

On Wednesday, October 31, 1990 Technical Assistance Team (TAT) members Eric Fahle, Michael Lombardi and EPA Site Investigator (SI) Mary Ellen Stanton proceeded to the Marino Property located in Middletown, Middlesex County, Connecticut.

After the initial site walkthrough, TAT members Fahle and Lombardi designated a 325 by 275 foot area in the northwest portion of the Marino Property for two geophysical subsurface screening investigations.

The first investigation consisted of traversing the designated area with a Geonics LTD. EM-D non-contacting terrain conductivity meter (EM-31). The EM-31 survey was performed with the instrument measuring the inphase component of the magnetic field (mode selector switch in the COMP position). This is due to the greater sensitivity of the inphase component of the magnetic field in detecting large metallic objects. The range was set to 30 mmhos/meter and the primary field compensation controls were set for a meter deflection of approximately 20% of full scale deflection.

During the investigation TAT member Fahle detected six large subsurface electromagnetic conductors, (i.e. metallic objects), as indicated by large negative meter fluctuations in the designated area. The locations were tentatively marked for incorporation into the designated area grid system (Figure 1). No other significant electromagnetic conductors were detected in the area.

The second investigation utilized an EG&G Geometrics proton precession portable magnetometer. This geophysical instrument was used to record the Earth's magnetic field intensity (measured in gammas) at grid-specified locations. The detection and measurement of the anomalies in the Earth's magnetic field are caused by the presence of matrices with varying magnetic susceptibility. Iron and steel objects usually produce high magnetic susceptibility contrasts with materials of low magnetic susceptibility. Hence, producing magnetic anomalies in the Earth's magnetic field. The amplitude, shape and size of an anomaly in the Earth's magnetic field depend on the shape, size and depth of burial of the object and its magnetic susceptibility contrast with surrounding matrices. Four background measurements of the Earth's magnetic field were recorded approximately 100 feet northeast of the site and resulted in an average reading of 54,500 gammas. A grid controlled, station by station, subsurface geophysical screening investigation was then conducted at 25 foot intervals. A total of 108 measurements in the Earth's magnetic field were recorded in the designated area.

After completion and inspection of the resulting electromagnetic data, a 100 gamma contour interval was chosen to best depict the subsurface electromagnetic anomalies. A two-dimensional gamma isoconcentration map indicating areas of equal total magnetic intensity (Figure 2) indicates several electromagnetic anomalies in the area of investigation. The magnetic anomaly patterns generated by the gamma isoconcentration map delineate the extent, location and shape of a given electromagnetic source (i.e. iron or steel object(s)). When interpreting the gamma isoconcentration map, each anomaly will have a positive and negative component.
The electromagnetic source generating the anomaly is usually located at the inflection point between a high and low gamma reading. More exactly, the electromagnetic source is

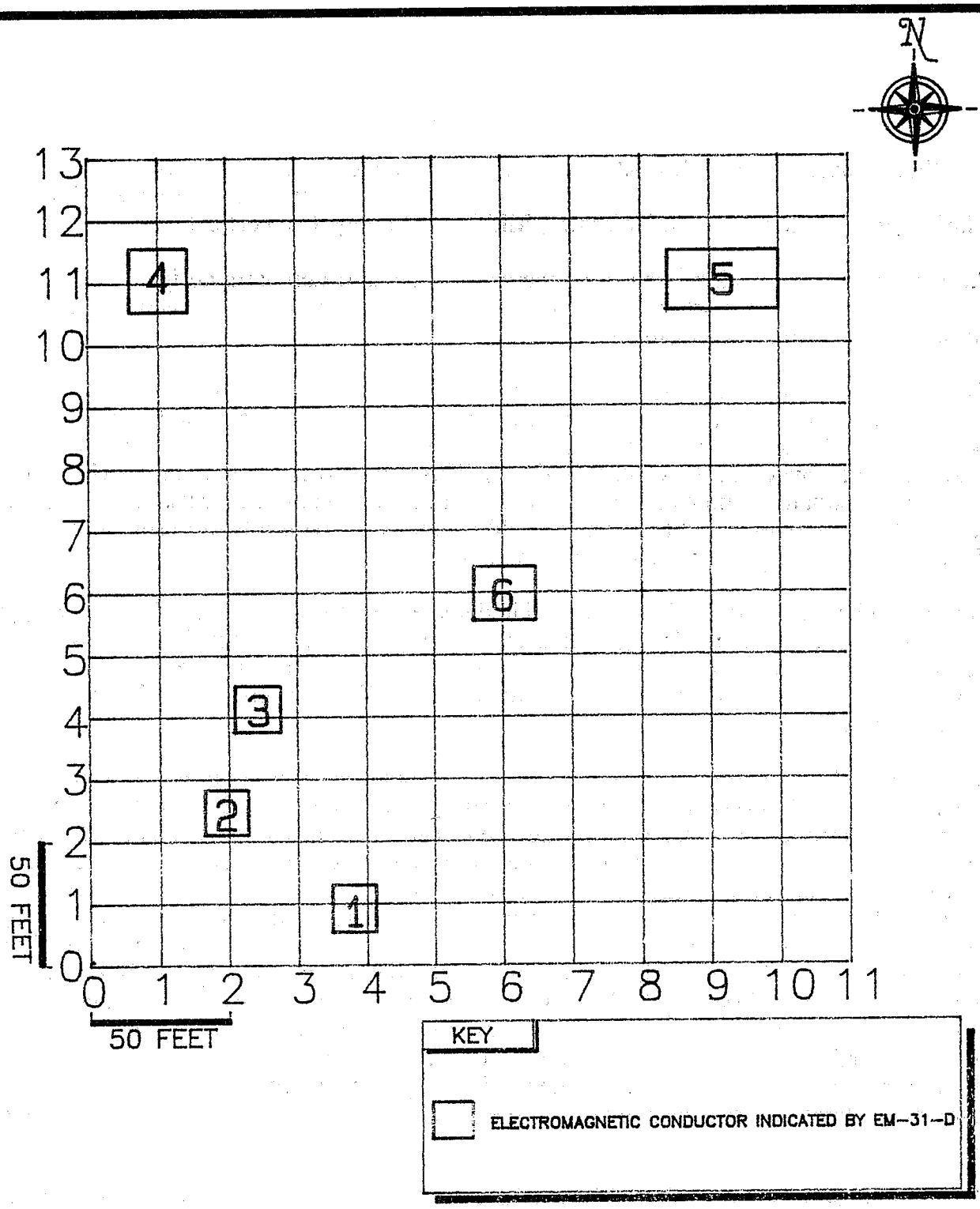


FIGURE: 1

SUBSURFACE ELECTROMAGNETIC CONDUCTORS
MARINO PROPERTY
MIDDLETOWN, MIDDLESEX COUNTY
CONNECTICUT

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN	DATE	PCS #
ERIC FAHLE	11/90	1059
APPROVED	DATE	TDD #
MJM	11/90	01-9010-57

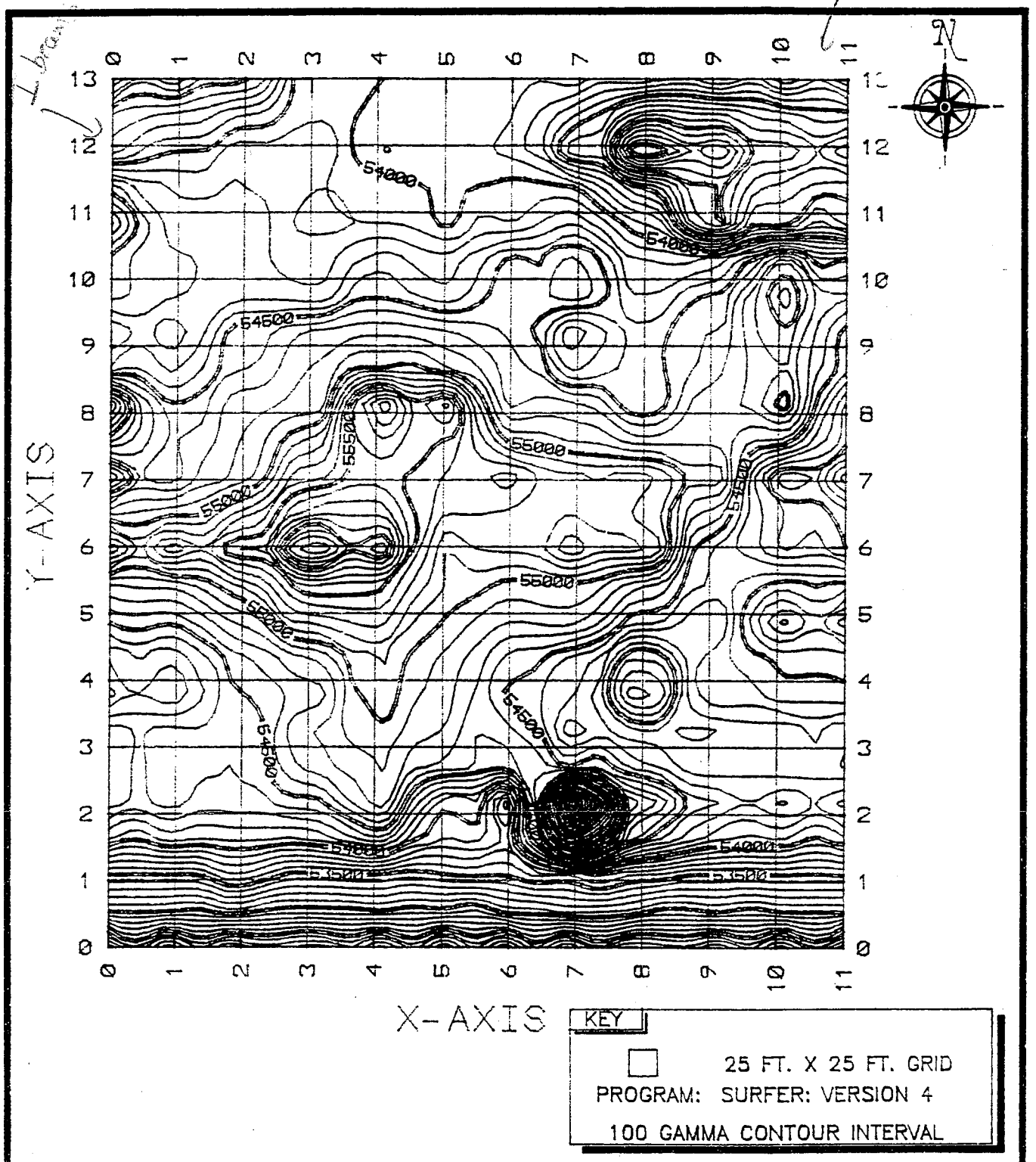


FIGURE: 2

2-DIMENSIONAL GAMMA ISOCONCENTRATION MAP
GRID CONTROLLED GEOPHYSICAL
SUBSURFACE SCREENING INVESTIGATION

INSTRUMENT: E G & G MODEL G-856 PROTON PRECESSION PORTABLE MAGNETOMETER

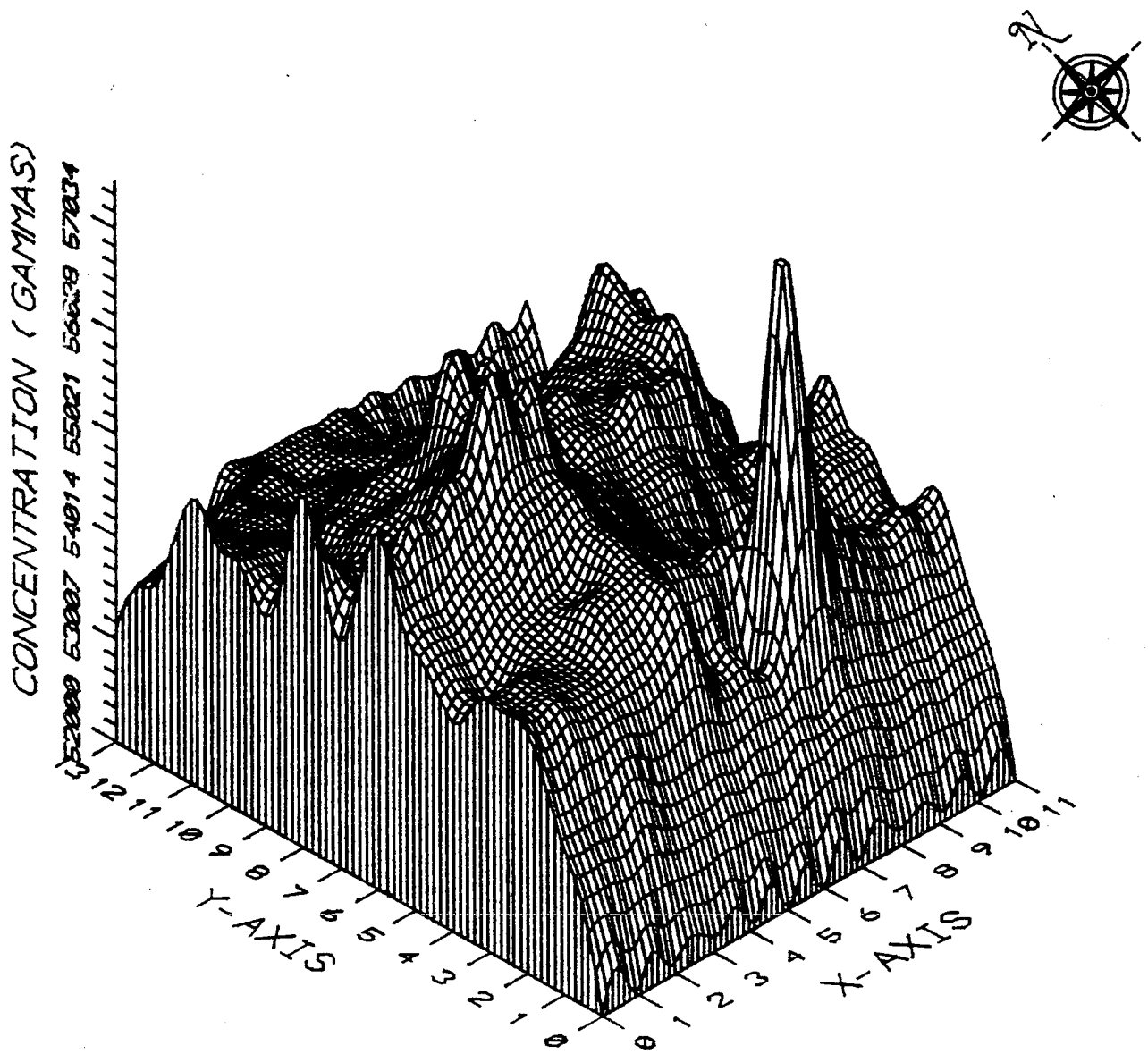
MARINO PROPERTY
50 WALNUT AVENUE
MIDDLETOWN, MIDDLESEX COUNTY, CONNECTICUT

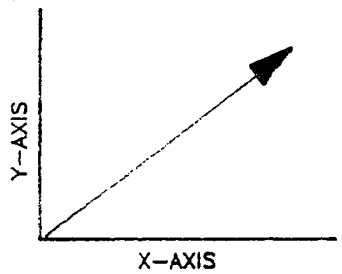
WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN	DATE	PCS #
ERIC FAHLE	11/90	1086
APPROVED	DATE	TDD #
MJM	11/90	01-9010-57A

located just south of the inflection point between a north facing magnetic low and a magnetic high to the south. A series of six three-dimensional gamma isoconcentration maps (Figures 3A-3F) are presented to enhance interpretation of electromagnetic anomalies in the area of investigation.

The exact nature of the electromagnetic sources and their depth of burial at the Marino Property is difficult to ascertain due to the suspected abundance of subsurface metallic materials in the area of investigation. In addition, oxidation of iron objects will lower their contribution to an electromagnetic anomaly. Hence, decreasing the magnitude of the anomaly. However, it is evident when viewing the three-dimensional gamma isoconcentration maps that a multitude of electromagnetic sources reside at depth in the area of investigation. In addition, a pattern of magnetic highs and lows in a parallel alignment with the X-axis suggest that electromagnetic sources may have been buried in trenches.





ARROW INDICATES VIEW DIRECTION

KEY

PROGRAM: SURFER: VERSION 4
35° PLOT TILT AT 225°

FIGURE: 3A

3-DIMENSIONAL GAMMA INTENSITY MAGNITUDE MAP
GRID CONTROLLED GEOPHYSICAL
SUBSURFACE SCREENING INVESTIGATION

INSTRUMENT: E G & G MODEL G-856 PROTON
PRECESSION PORTABLE MAGNETOMETER

MARINO PROPERTY
50 WALNUT AVENUE
MIDDLETOWN, MIDDLESEX COUNTY, CONNECTICUT

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN ERIC FAHLE	DATE 12/90	PCS # 1114
APPROVED MJM	DATE 12/90	TDD # 01-9010-57B

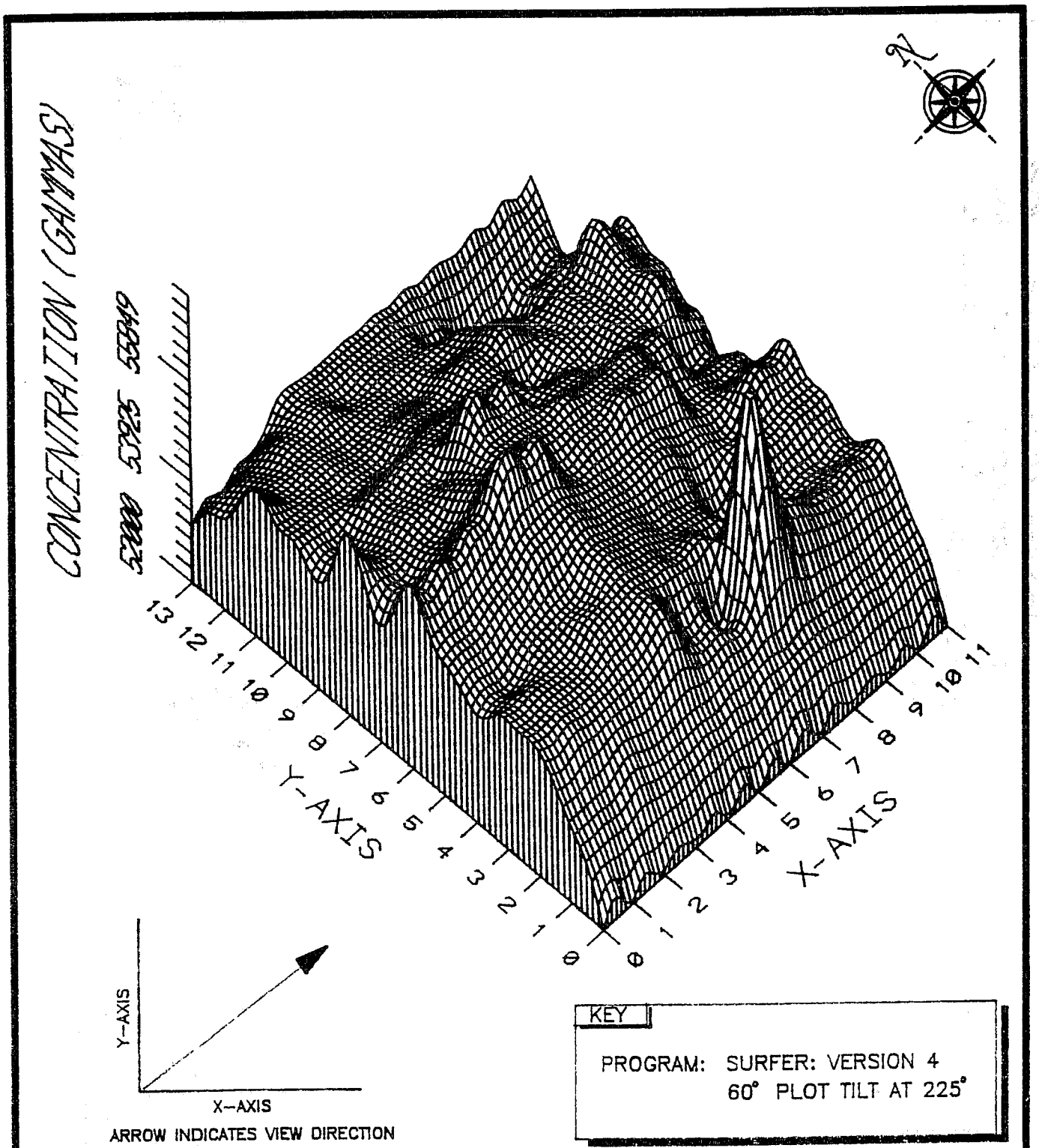


FIGURE 3B

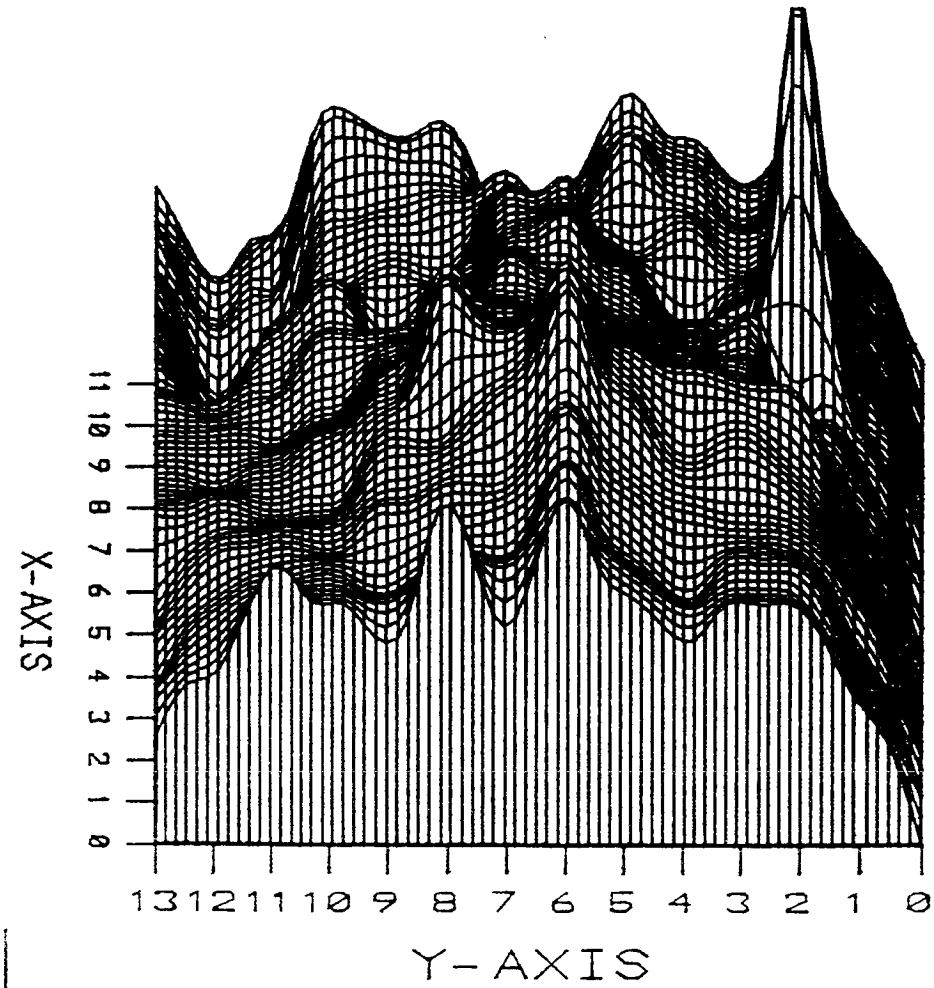
3-DIMENSIONAL GAMMA INTENSITY MAGNITUDE MAP
GRID CONTROLLED GEOPHYSICAL
SUBSURFACE SCREENING INVESTIGATION

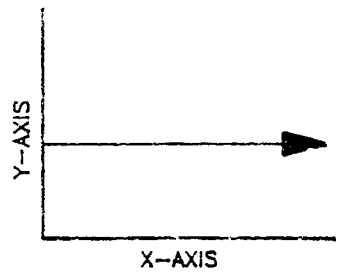
INSTRUMENT: E G & G MODEL G-856 PROTON PRECESSION PORTABLE MAGNETOMETER

MARINO PROPERTY
50 WALNUT AVENUE
MIDDLETOWN, MIDDLESEX COUNTY, CONNECTICUT

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN	DATE	PCS #
ERIC FAHLE	12/90	1114
APPROVED	DATE	TDD #
MJM	12/90	01-9010-57B





ARROW INDICATES VIEW DIRECTION

KEY

PROGRAM: SURFER: VERSION 4
45° PLOT TILT AT 270°

FIGURE: 3C

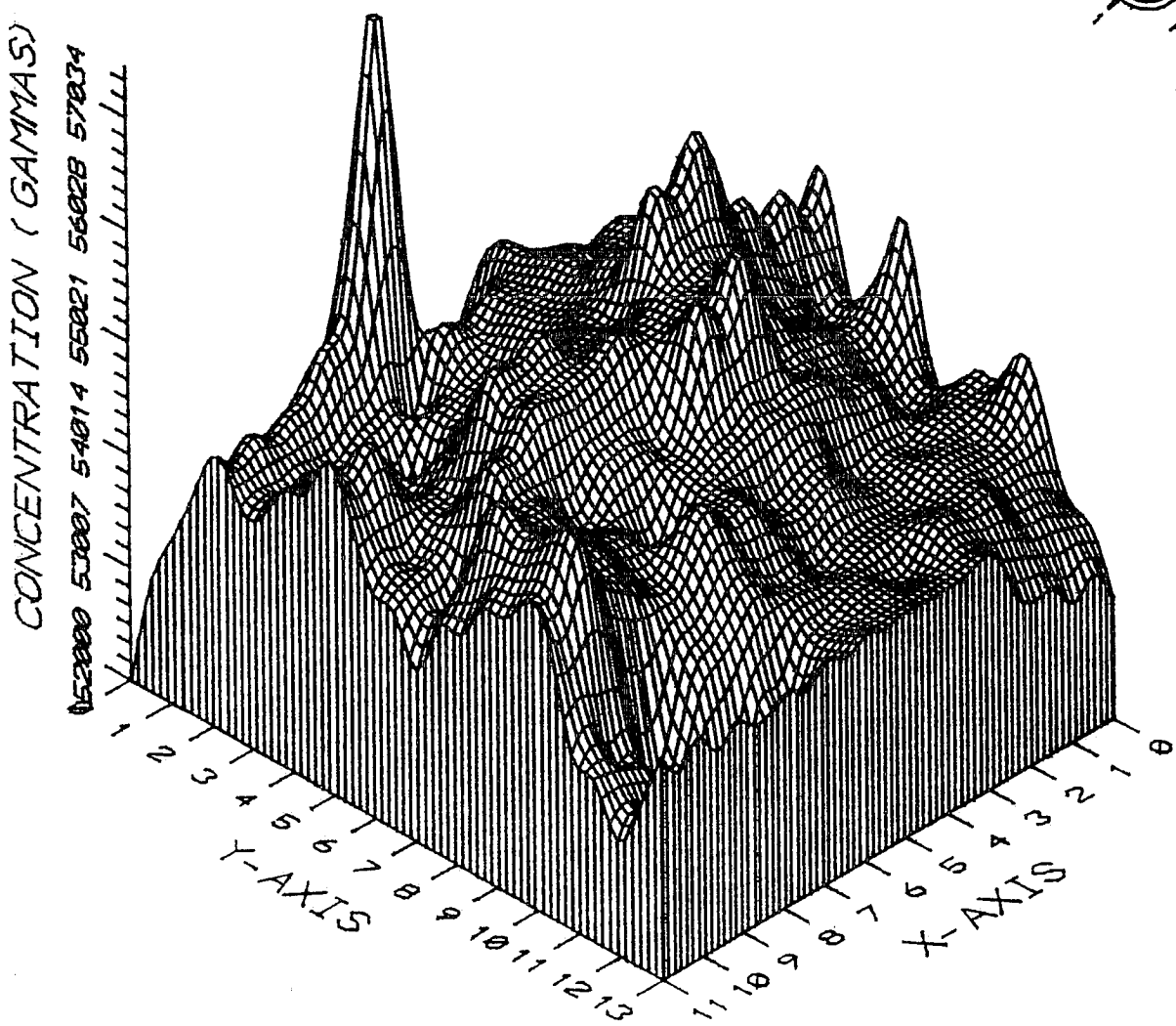
3-DIMENSIONAL GAMMA INTENSITY MAGNITUDE MAP
GRID CONTROLLED GEOPHYSICAL
SUBSURFACE SCREENING INVESTIGATION

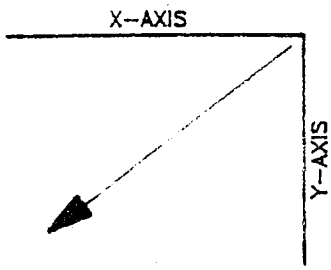
INSTRUMENT: E G & G MODEL G-856 PROTON
PRECESSION PORTABLE MAGNETOMETER

MARINO PROPERTY
50 WALNUT AVENUE
MIDDLETOWN, MIDDLESEX COUNTY, CONNECTICUT

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN ERIC FAHLE	DATE 12/90	PCS # 1114
APPROVED MJM	DATE 12/90	TDD # 01-9010-57B





ARROW INDICATES VIEW DIRECTION

KEY

PROGRAM: SURFER: VERSION 4
35° PLOT TILT AT 45°

FIGURE: 3D

3-DIMENSIONAL GAMMA INTENSITY MAGNITUDE MAP
GRID CONTROLLED GEOPHYSICAL
SUBSURFACE SCREENING INVESTIGATION

INSTRUMENT: E G & G MODEL G-856 PROTON PRECESSION PORTABLE MAGNETOMETER

MARINO PROPERTY
50 WALNUT AVENUE
MIDDLETOWN, MIDDLESEX COUNTY, CONNECTICUT

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN ERIC FAHLE	DATE 12/90	PCS # 1114
APPROVED MJM	DATE 12/90	TDD # 01-9010-57B

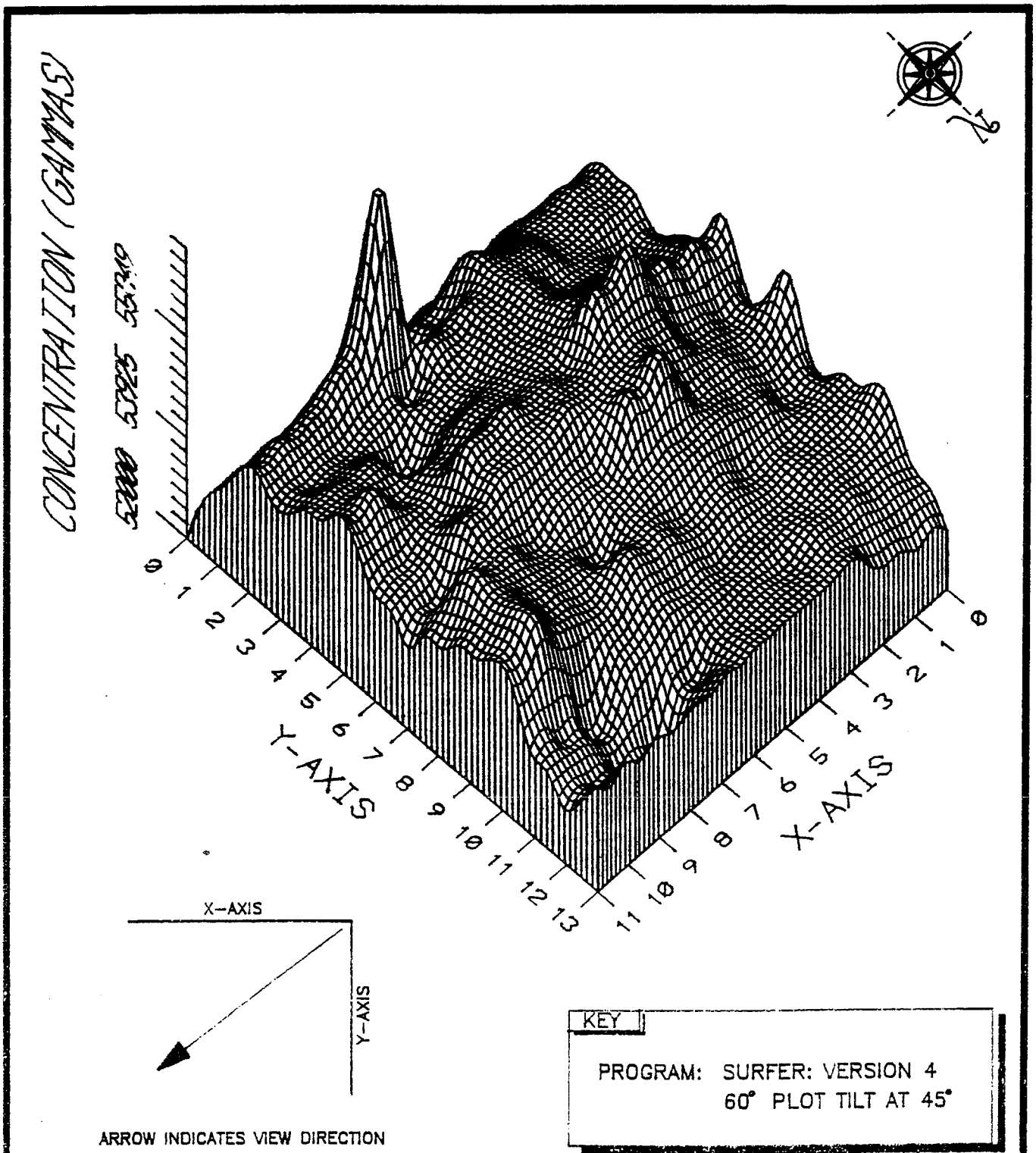


FIGURE: 3E

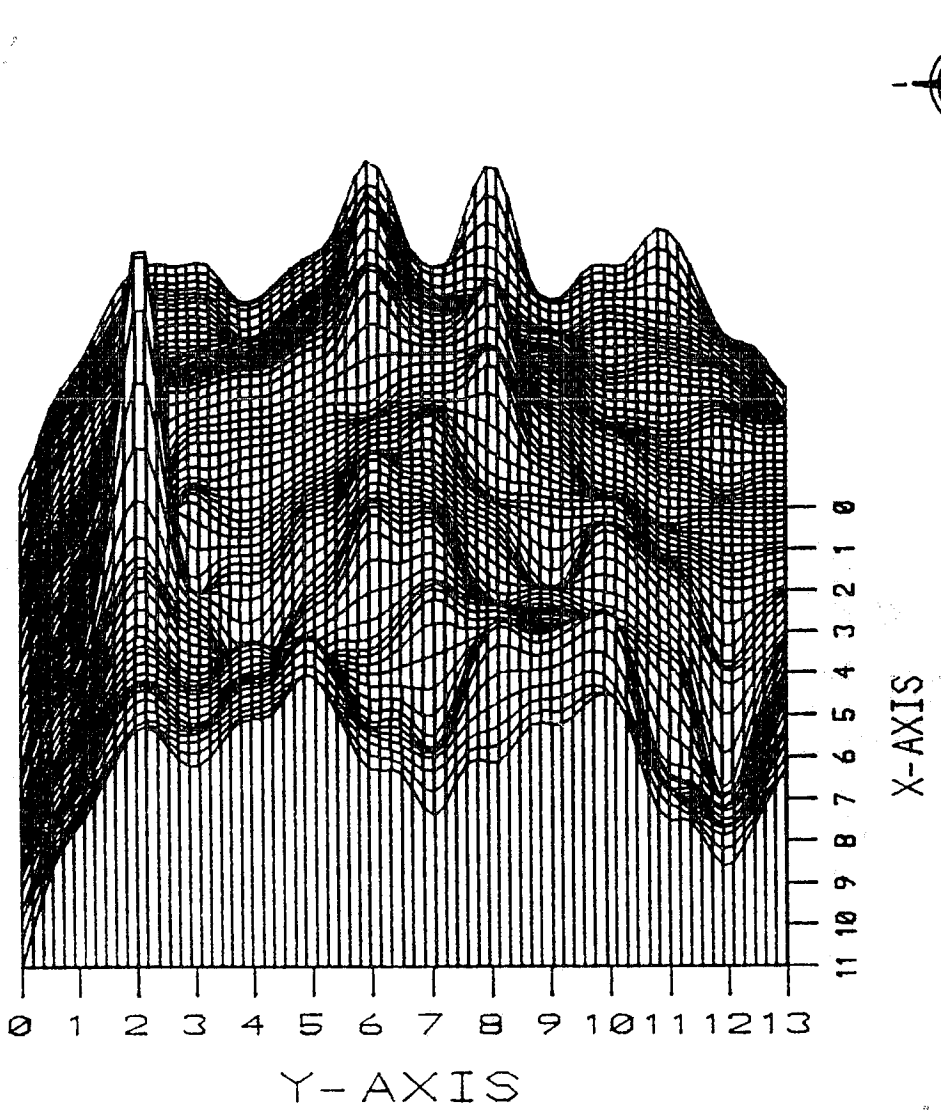
3-DIMENSIONAL GAMMA INTENSITY MAGNITUDE MAP
GRID CONTROLLED GEOPHYSICAL
SUBSURFACE SCREENING INVESTIGATION

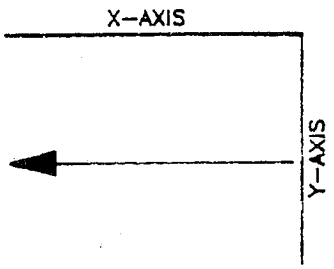
INSTRUMENT: E G & G MODEL G-856 PROTON PRECESSION PORTABLE MAGNETOMETER

MARINO PROPERTY
50 WALNUT AVENUE
MIDDLETOWN, MIDDLESEX COUNTY, CONNECTICUT

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN	DATE	PCS #
ERIC FAHLE	12/90	1114
APPROVED	DATE	TDD #
MJM	12/90	01-9010-57B





ARROW INDICATES VIEW DIRECTION

KEY

PROGRAM: SURFER: VERSION 4
45° PLOT TILT AT 90°

FIGURE: 3F
3-DIMENSIONAL GAMMA INTENSITY MAGNITUDE MAP
GRID CONTROLLED GEOPHYSICAL
SUBSURFACE SCREENING INVESTIGATION

INSTRUMENT: E G & G MODEL G-856 PROTON
PRECESSION PORTABLE MAGNETOMETER

MARINO PROPERTY
50 WALNUT AVENUE
MIDDLETOWN, MIDDLESEX COUNTY, CONNECTICUT

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN	DATE	PCS #
ERIC FAHLE	12/90	1114
APPROVED	DATE	TDD #
MJM	12/90	01-9010-57B

APPENDIX G

PHOTOVAC 10S50 SCREENING ANALYSIS OF SOIL GAS SAMPLES

PHOTOVAC ANALYSIS OF SOIL GAS SAMPLES

Soil gas samples were analyzed at the Marino Property 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 air, with a flow rate of approximately 6 milliliters per minute.

The Photovac was set up within an on-site vehicle where an average temperature was maintained at approximately 38°C. Samples were collected from soil gas apparatus using 250 uL HAMILTON MICROLITER syringes. Prior to extracting the sample, the syringe was evacuated five times by drawing the sample through it.

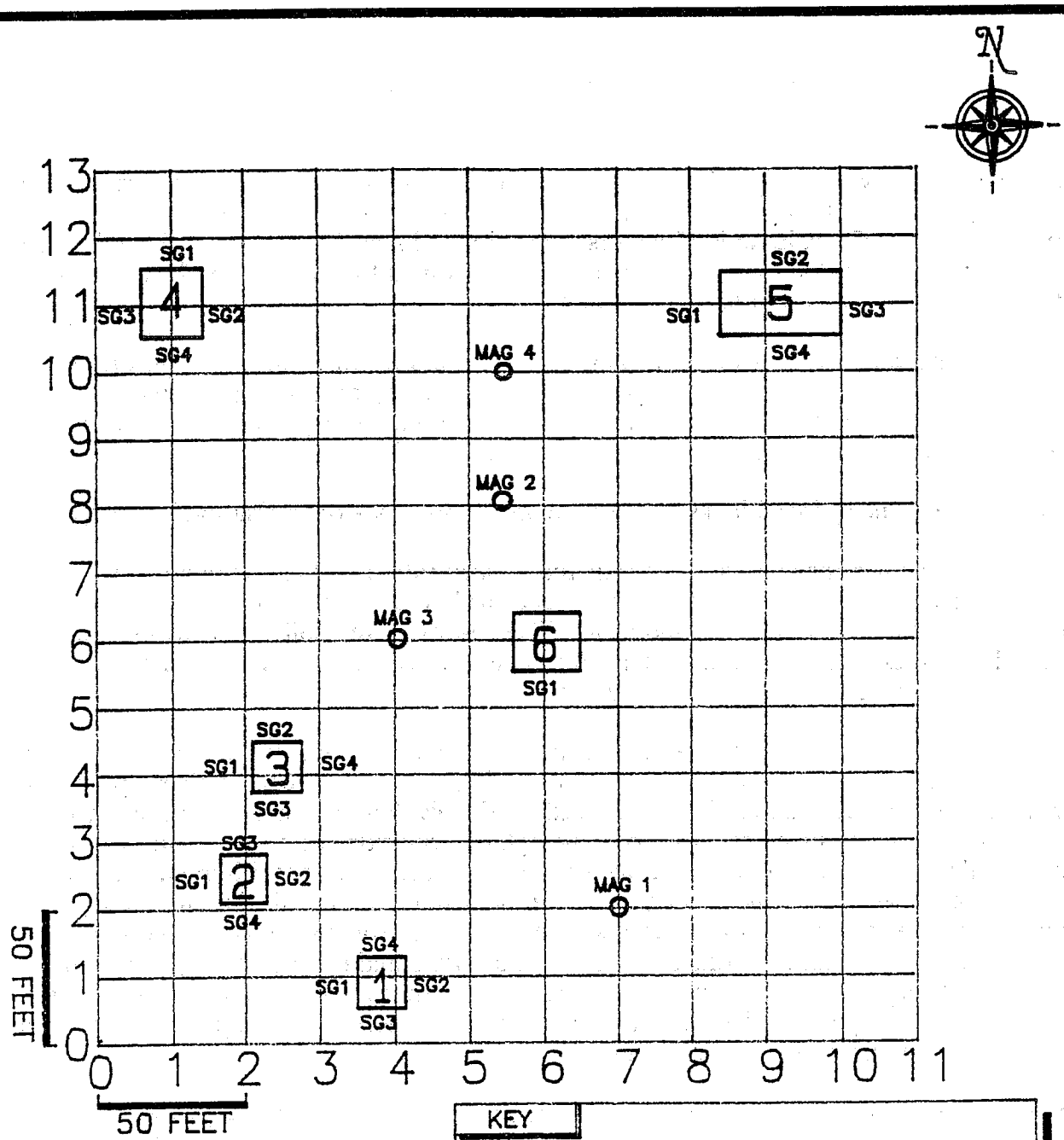
Column blanks and syringe blanks were run to assure no cross-contamination had occurred.

Quantitation values for soil gas 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 and/or ground water. The results of the soil gas analyses can best be used as an identification and comparison of relative concentrations of the compounds present in the proximity of the sampling point.

The Photovac's internal library was not activated during the sample analyses at the Marino Property. This enabled greater flexibility in changing parameters such as chart speed and carrier gas flow which enabled better separation of individual compounds, especially early eluting compounds such as acetone, methylene chloride and cis- and trans-1,2-dichloroethylene. In addition, by not engaging the Photovac's internal library, the chance of the system assigning the wrong name to a given compound due to changes in temperature (retention time) was avoided. An attempt to was made to manually identify each unknown compound by comparing its retention time and characteristic peak shape to that of a 10 part per billion (ppb) standard. However, retention times of compounds detected in the soil gas samples did not corellate with the those of the 10 ppb standard. See Figure 1 for soil gas collection locations.

Photovac analysis of the soil gas sample collected from station # EM 1, SG1, contained six early eluting unidentified peaks, four off scale, between the range of trans-1,2-dichloroethylene and chlorobenzene. See chromatogram of soil gas collected at subsurface electromagnetic anomaly: EM 1, SG1, for further details. There are 18 EPA New England Regional Laboratory (NERL) target compounds which fall in this range. See Figure 2 for further details. Sample injection volume was 200 uL.

Photovac analysis of the soil gas sample collected from station #EM 1, SG2, contained four early eluting unidentified peaks, two off scale, between the range of trans-1,2-dichloroethylene and chlorobenzene. See chromatogram of soil gas collected at subsurface electromagnetic anomaly: EM 1, SG2, for further details. There are 18 EPA NERL target compounds which fall in this range. See Figure 2 for further details. The chromatogram is analogous to chromatogram EM 1, SG1 suggesting similar volatile organic compounds (VOCs). In addition, the chromatogram indicates four later eluting compounds suggestive



KEY

ELECTROMAGNETIC CONDUCTOR INDICATED BY EM31-D

MAGNETIC FIELD HIGH INDICATED BY MAGNETOMETER

SG1-4
MAG 1-4 SOIL GAS COLLECTION LOCATIONS

FIGURE: 1

SOIL GAS COLLECTION LOCATIONS
MARINO PROPERTY
MIDDLETOWN, MIDDLESEX COUNTY
CONNECTICUT

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN ERIC FAHLE	DATE 12/90	PCS # 1114
APPROVED MJM	DATE 12/90	TDD # 01-9010-57B

FIGURE II

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

TARGET COMPOUNDS

		Chloromethane
		Bronomethane
		Vinyl Chloride
		Chloroethane
		Methylene Chloride
		Trichloroethylene
		1,1-Dichloroethylene
		1,1-Dichloroethane
		1,2-Dichloroethylene isomers
**	*	Chloroform
**	*	1,2-Dichloroethane
**	*	1,1,1-Trichloroethane
**	*	Carbon Tetrachloride
**	*	Bromodichloromethane
**	*	1,2-Dichloropropane
**	*	t-1,3-Dichloropropane
**	*	Trichloroethylene
**	*	Dibromochloromethane
**	*	c-1,3-Dichloropropene and/or
**	*	1,1-Dichloropropene
**	*	1,1,2-Trichloroethane
	*	Benezene
	*	2-Chloroethylvinyl ether
	*	Bromoform
	*	Tetrachloroethylene
	*	1,1,2,2-Tetrachloroethane
	*	Toluene
		Chlorobenzene

* Indicates 18 target compounds which have retention times between 1-2 dichloroethylene isomers and chlorobenzene.

** Indicates 12 target compounds which have retention times between 1-2 dichloroethylene isomers, and benzene.

of poly-aromatic hydrocarbons (PAHs). Sample injection volume was 100 uL.

Photovac analysis of the soil gas sample collected from station #EM 1, SG3, contained seven early eluting unidentified peaks between the range of trans-1,2-dichloroethylene and chlorobenzene. See chromatogram of soil gas collected at subsurface electromagnetic anomaly: EM 1, SG3, for further details. There are 18 EPA NERL target compounds which fall in this range. See Figure 2 for further details. The chromatogram is analogous to chromatogram EM 1, SG1 suggesting similar VOCs. Sample injection volume was 50 uL.

Photovac analysis of the soil gas sample collected from station #EM 1, SG4, contained six early eluting unidentified peaks, one off scale, between the range of trans-1,2-dichloroethylene and chlorobenzene. See chromatogram of soil gas collected at subsurface electromagnetic anomaly: EM 1, SG4, for further details. There are 18 EPA NERL target compounds which fall in this range. See Figure 2 for further details. The chromatogram is analogous to chromatogram EM 1, SG1 suggesting similar VOCs. Sample injection volume was 50 uL.

Photovac analysis of the soil gas sample collected from station #EM 2, SG1, contained one early eluting unidentified peak in the range of trans-1,2-dichloroethylene. See chromatogram of soil gas collected at subsurface electromagnetic anomaly: EM 2, SG1 for further details.

Photovac analysis of the soil gas sample collected from station #EM 2, SG2, contained four early eluting unidentified peaks, three off scale, between the range of trans-1,2-dichloroethylene and chlorobenzene. See chromatogram of soil gas collected at subsurface electromagnetic anomaly: EM 2, SG2, for further details. There are 18 EPA NERL target compounds which fall in this range. See Figure 2 for further details. The chromatogram is analogous to chromatogram EM 1, SG2 suggesting similar VOCs. Sample injection volume was 50 uL.

Photovac analysis of the soil gas sample collected from station #EM 2, SG3, contained four early eluting unidentified peaks between the range of trans-1,2-dichloroethylene and benzene. See chromatogram of soil gas collected at subsurface electromagnetic anomaly: EM 2, SG3, for further details. There are 12 EPA NERL target compounds which fall in this range. See Figure 2 for further details. Sample injection volume was 50 uL.

Photovac analysis of the soil gas sample collected from station #EM 2, SG4, contained six early eluting unidentified peaks, two off scale, between the range of trans-1,2-dichloroethylene and chlorobenzene. See chromatogram of soil gas collected at subsurface electromagnetic anomaly: EM 2, SG4, for further details. There are 18 EPA NERL target compounds which fall in this range. See Figure 2 for further details. The chromatogram is analogous to chromatogram EM 1, SG3 suggesting similar VOCs. Sample injection volume was 100 uL.

Photovac analysis of the soil gas sample collected from station #EM 3, SG1, contained one very large off scale early eluting unidentified peak. See chromatogram of soil gas collected at subsurface electromagnetic anomaly: EM 3, SG1, for further details. This may have been caused by methanol contamination of the soil gas sample. Sample injection volume was 100 uL.

Photovac analysis of the soil gas sample collected from station #EM 3, SG2, contained three early eluting large off scale unidentified peaks between the range of trans-1,2-dichloroethylene and chlorobenzene. See chromatogram of soil gas collected at subsurface electromagnetic anomaly: EM 3, SG2, for further details. There are 18 EPA NERL target compounds which fall in this range. See Figure 2 for further details. The chromatogram is analogous to chromatogram EM 1, SG2 suggesting similar VOCs. In addition, the chromatogram indicates one later eluting compound suggestive of PAHs. Sample injection volume was 100 uL.

Photovac analysis of the soil gas sample collected from station #EM 3, SG3, contained seven early eluting unidentified peaks between the range of trans-1,2-dichloroethylene and chlorobenzene. See chromatogram of soil gas collected at subsurface electromagnetic anomaly: EM 3, SG3, for further details. There are 18 EPA NERL target compounds which fall in this range. See Figure 2 for further details. The chromatogram is analogous to chromatogram EM 1, SG3 suggesting similar VOCs. Sample injection volume was 10 uL.

Photovac analysis of the soil gas sample collected from station #EM 3, SG4, contained four early eluting unidentified peaks between the range of trans-1,2-dichloroethylene and benzene. See chromatogram of soil gas collected at subsurface electromagnetic anomaly: EM 3, SG4, for further details. There are 12 EPA NERL target compounds which fall in this range. See Figure 2 for further details. The chromatogram is analogous to chromatogram EM 2, SG3 suggesting similar VOCs. Sample injection volume was 50 uL.

Photovac analysis of the soil gas sample collected from station #EM 4, SG1, contained four very large off scale early eluting unidentified peaks between the range of trans-1,2-dichloroethylene and chlorobenzene. See Chromatogram of soil gas collected at subsurface electromagnetic anomaly: EM 4, SG1, for further details. There are 18 EPA NERL target compounds which fall in this range. See Figure 2 for further details. In addition, the chromatogram indicates one large later eluting compound suggestive of PAHs. Sample injection volume was 100 uL.

Photovac analysis of the soil gas sample collected from station #EM 4, SG2, contained six early eluting unidentified peaks between the range of trans-1,2-dichloroethylene and chlorobenzene. See chromatogram of soil gas collected at subsurface electromagnetic anomaly: EM 4, SG2, for further details. There are 18 EPA NERL target compounds which fall in this range. See Figure 2 for further details. In addition, the chromatogram differs from EM 4, SG1 in that an additional off-scale peak in the range of tetrachloroethylene and chlorobenzene is detected. In addition, no later eluting peaks are detected. Sample injection volume was 50 uL.

Photovac analysis of the soil gas sample collected from station #EM 4, SG3, contained four early eluting unidentified peaks between the range of trans-1,2-dichloroethylene and chlorobenzene. See chromatogram of soil gas collected at subsurface electromagnetic anomaly: EM 4, SG3 for further details. There are 18 EPA NERL target compounds which fall in this range. See Figure 2 for further details. In addition, the chromatogram differs from chromatogram EM 4, SG2 in that the additional peak in the range of tetrachloroethylene and chlorobenzene is not detected. In addition, no later eluting peaks are detected as in chromatogram EM 4, SG1 . Sample injection volume was 50 uL.

Photovac analysis of the soil gas sample collected from station #EM 5, SG1, contained seven large early eluting unidentified peaks, four off scale, between the range of trans-1,2-dichloroethylene and chlorobenzene. See chromatogram of soil gas collected at subsurface electromagnetic anomaly: EM 5, SG1, for further details. There are 18 EPA NERL target compounds which fall in this range. See Figure 2 for further details. In addition, the chromatogram indicates three later eluting compounds suggestive of PAHs. Sample injection volume was 20 uL.

Photovac analysis of the soil gas sample collected from station #EM 5, SG2, contained eight early eluting unidentified peaks between the range of trans-1,2-dichloroethylene and chlorobenzene. See chromatogram of soil gas collected at subsurface electromagnetic anomaly: EM 5, SG2, for further details. There are 18 EPA NERL target compounds which fall in this range. See Figure 2 for further details. In addition, the chromatogram differs from chromatogram EM 5, SG1 in that the additional later eluting compounds suggestive of PAHs were not detected. Sample injection volume was 25 uL.

Photovac analysis of the soil gas sample collected from station #EM 5, SG3, contained eight early eluting unidentified peaks between the range of trans-1,2-dichloroethylene and chlorobenzene. See chromatogram of soil gas collected at subsurface electromagnetic anomaly: EM 5, SG3 for further details. There are 18 EPA NERL target compounds which fall in this range. See Figure 2 for further details. The chromatogram is analogous to chromatogram EM 5, SG2 suggesting similar VOCs. Sample injection volume was 50 uL.

Photovac analysis of the soil gas sample collected from station #EM 5, SG4, contained two off scale early eluting unidentified peaks between the range of trans-1,2-dichloroethylene and chlorobenzene. See chromatogram of soil gas collected at subsurface electromagnetic anomaly: EM 5, SG4, for further details. There are 18 EPA NERL target compounds which fall in this range. See Figure 2 for further details. In addition, the chromatogram indicates four later eluting compounds suggestive of PAHs. The chromatogram is analogous to chromatogram EM 5, SG1 suggesting similar VOCs. Sample injection volume was 50 uL.

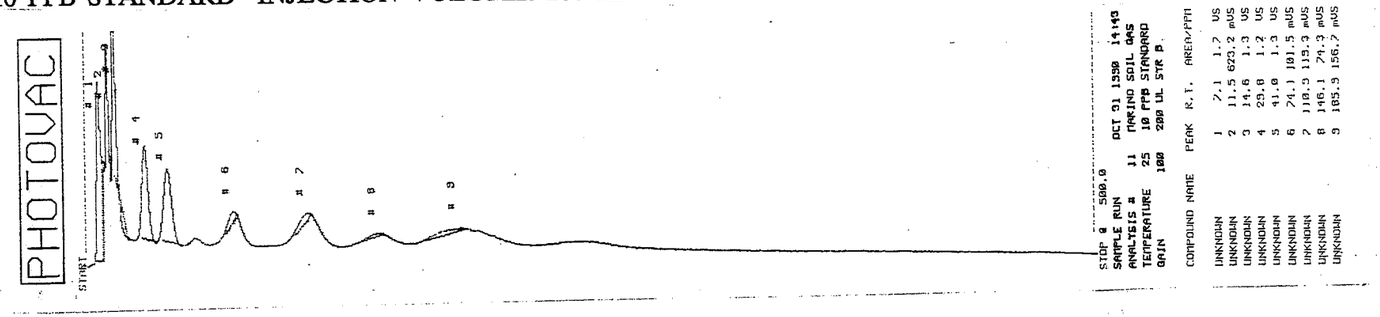
Photovac analysis of the soil gas sample collected from station #MAG 1, contained four early eluting unidentified peaks, three off scale, between the range of trans-1,2-dichloroethylene and chlorobenzene. See chromatogram of soil gas collected at subsurface electromagnetic anomaly: MAG 3, for further details. There are 18 EPA NERL target compounds which fall in this range. See Figure 2 for further details. In addition, the chromatogram indicates three later eluting compounds suggestive of PAHs. The chromatogram is analogous to chromatogram EM 5, SG4 suggesting similar VOCs. Sample injection volume was 50 uL.

Photovac analysis of the soil gas sample collected from station #MAG 2, contained 10 early eluting unidentified peaks between the range of trans-1,2-dichloroethylene and chlorobenzene. See chromatogram of soil gas collected at subsurface electromagnetic anomaly: MAG 2, for further details. There are 18 EPA NERL target compounds which fall in this range. See Figure 2 for further details. In addition, the chromatogram indicates six later eluting compounds suggestive of PAHs. The early eluting compounds of the chromatogram are analogous to chromatogram EM 5, SG3 suggesting similar VOCs. Sample injection volume was 100 uL.

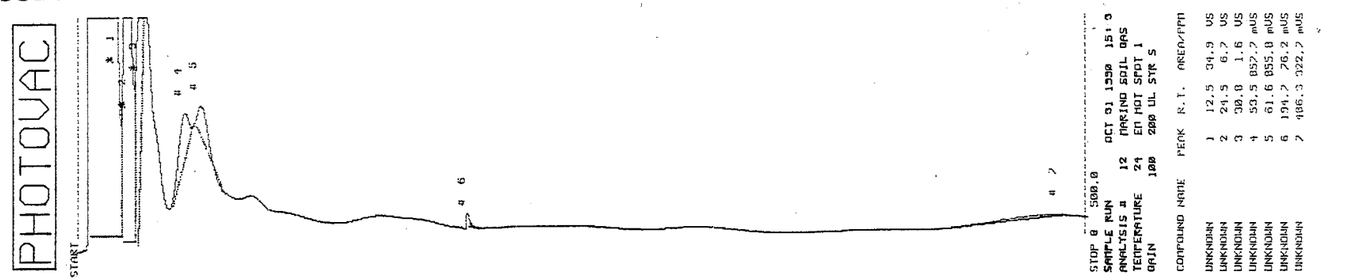
Photovac analysis of the soil gas sample collected from station #MAG 3, saturated the photovac column resulting in a near complete off scale chromatogram. before going off scale, the chromatogram indicated four large off-scale early eluting unidentified peaks between the range of trans-1,2-dichloroethylene and chlorobenzene. See chromatogram of soil gas collected at subsurface electromagnetic anomaly: MAG 3, for further details. There are 18 EPA NERL target compounds which fall in this range. See Figure 2 for further details. Sample injection volume was 50 uL.

Photovac analysis of the soil gas sample collected from station #MAG 4, contained four very large off scale early eluting unidentified peaks between the range of trans-1,2-dichloroethylene and chlorobenzene. See chromatogram of soil gas collected at subsurface electromagnetic anomaly: MAG 4, for further details. There are 18 EPA NERL target compounds which fall in this range. See Figure 2 for further details. In addition, the chromatogram indicates five later eluting compounds, two off scale, suggestive of PAHs. Sample injection volume was 50 uL.

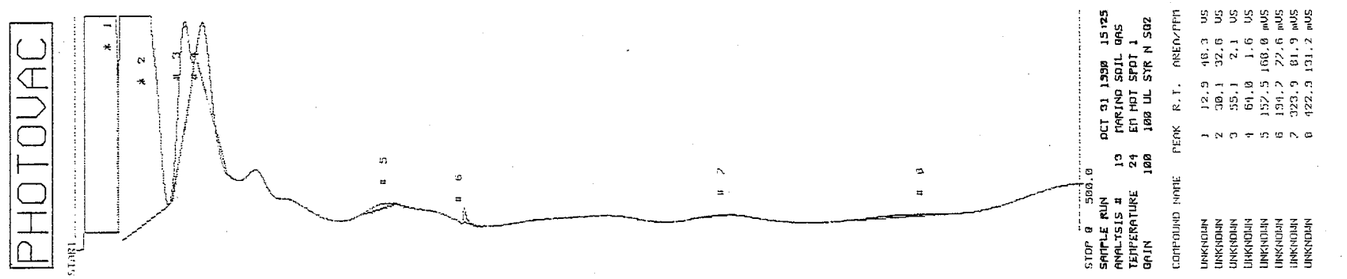
10 PPB STANDARD INJECTION VOLUME: 200 uL



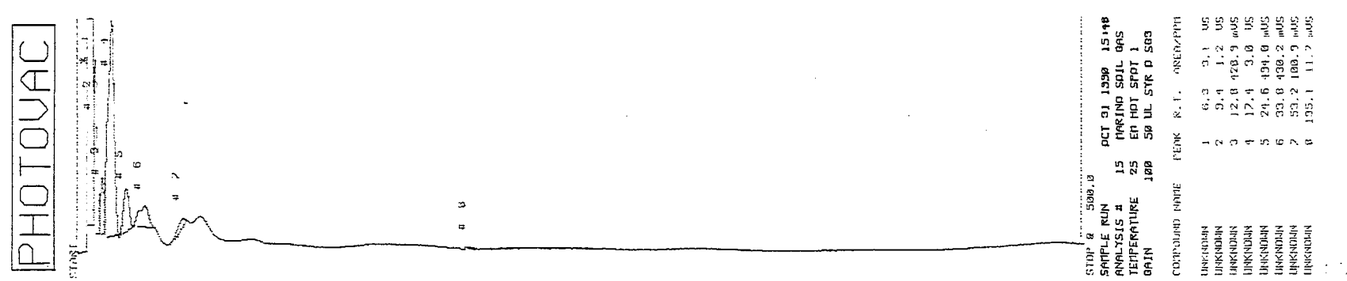
SUBSURFACE ELECTROMAGNETIC ANOMALY: EM 1, SG1, INJECTIONVOLUME: 200 uL



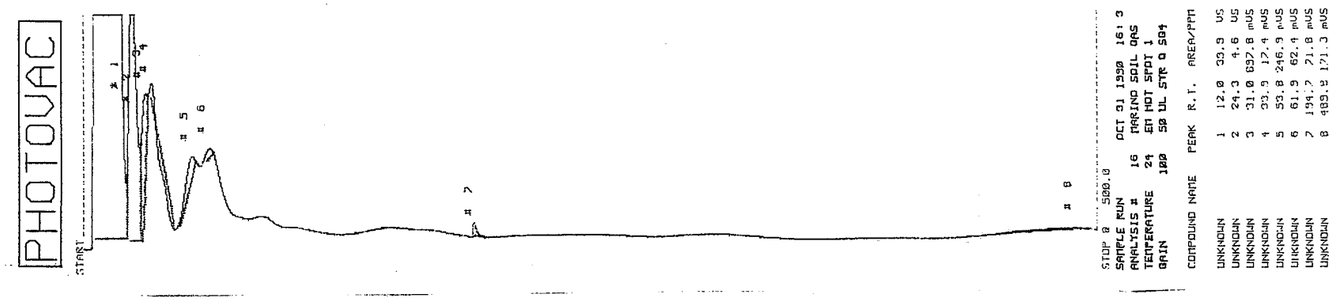
SUBSURFACE ELECTROMAGNETIC ANOMALY: EM 1, SG2, INJECTION VOLUME: 100 uL



SUBSURFACE ELECTROMAGNETIC ANOMALY: EM 1, SG3, INJECTION VOLUME: 50 uL

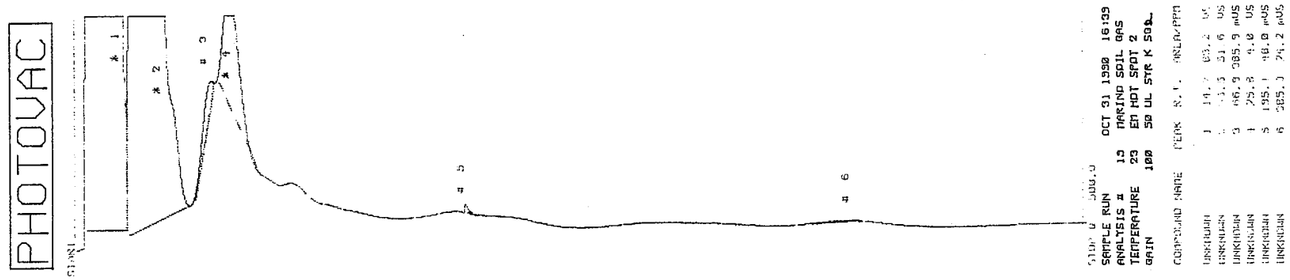


SUBSURFACE ELECTROMAGNETIC ANOMALY: EM 1, SG4, INJECTION VOLUME: 50 uL

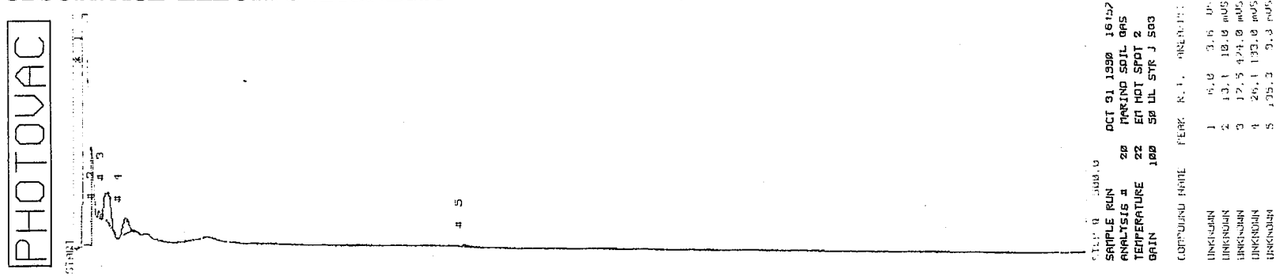


SUBSURFACE ELECTROMAGNETIC ANOMALY: EM 2, SG1, INJECTION VOLUME: 50 uL

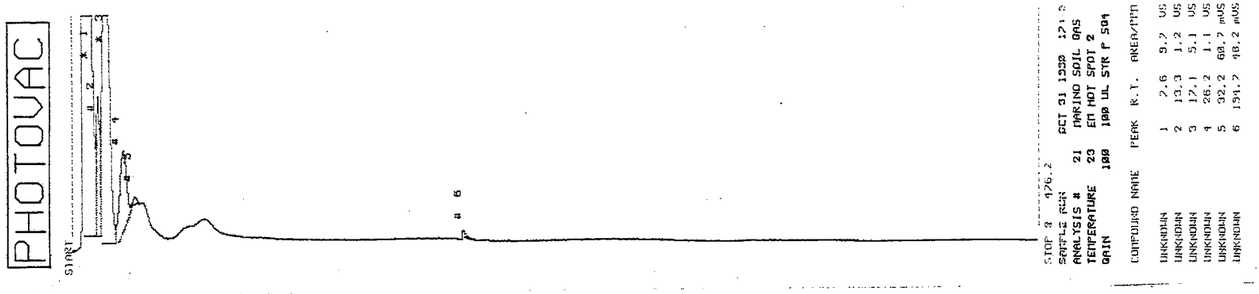
SUBSURFACE ELECTROMAGNETIC ANOMALY: EM 2, SG2, INJECTION VOLUME: 50 uL



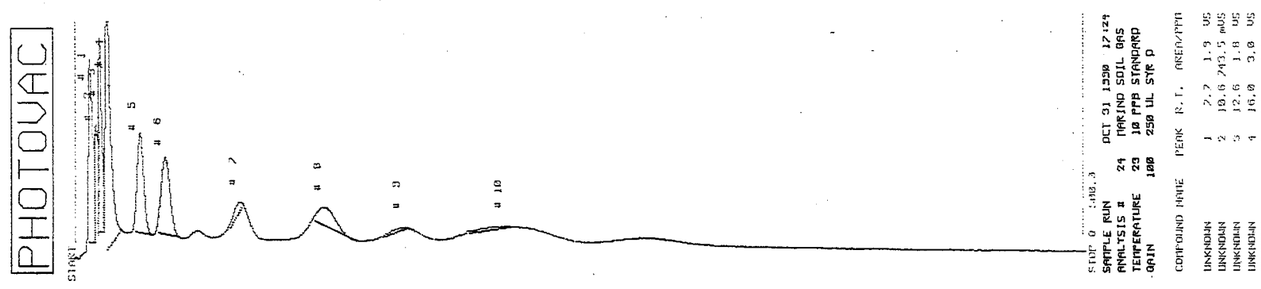
SUBSURFACE ELECTROMAGNETIC ANOMALY: EM 2, SG3, INJECTION VOLUME: 50 uL



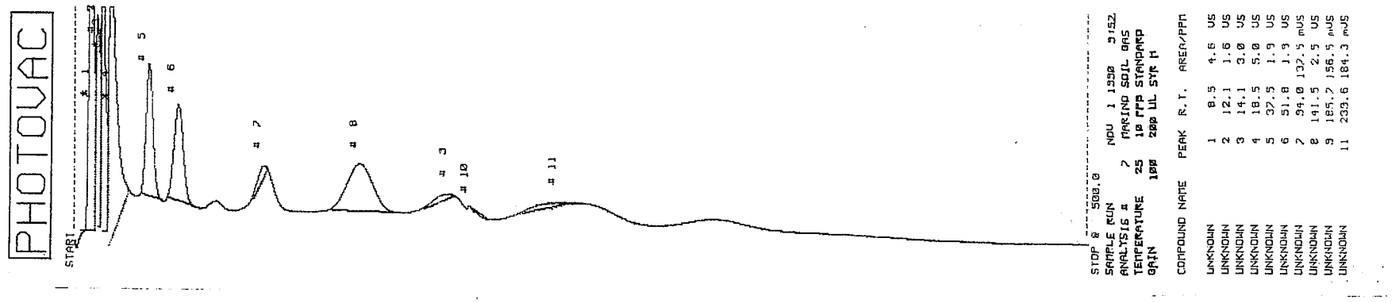
SUBSURFACE ELECTROMAGNETIC ANOMALY: EM 2, SG4, INJECTION VOLUME: 100 uL



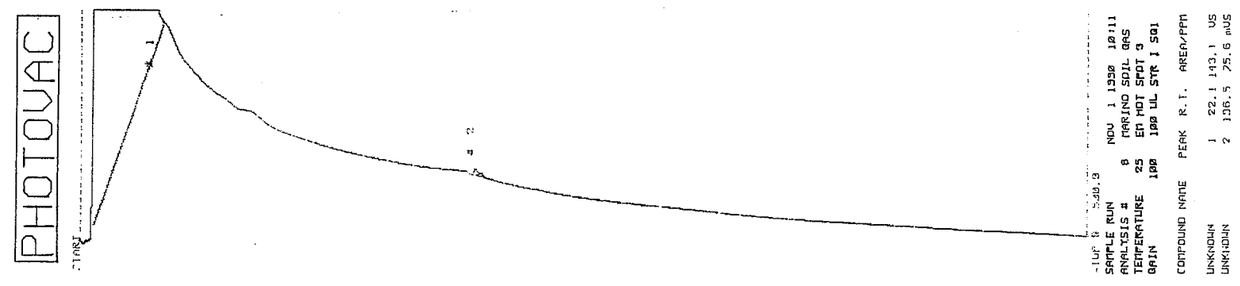
10 PPB STANDARD INJECTION VOLUME: 200 uL



10 PPB STANDARD INJECTION VOLUME: 200 uL

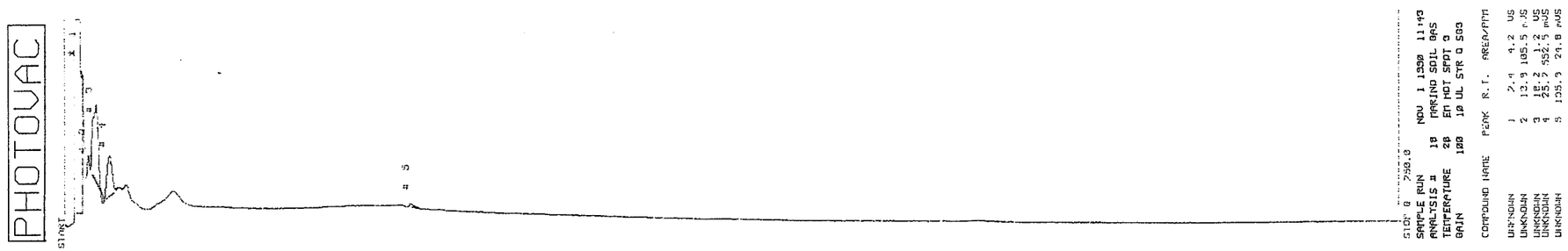


SUBSURFACE ELECTROMAGNETIC ANOMALY: EM 3, SG1, INJECTION VOLUME: 100 uL

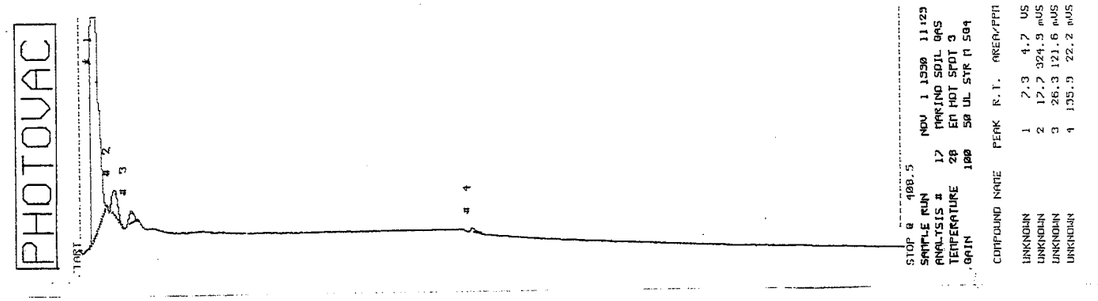


SUBSURFACE ELECTROMAGNETIC ANOMALY: EM 3, SG2, INJECTION VOLUME: 100 uL

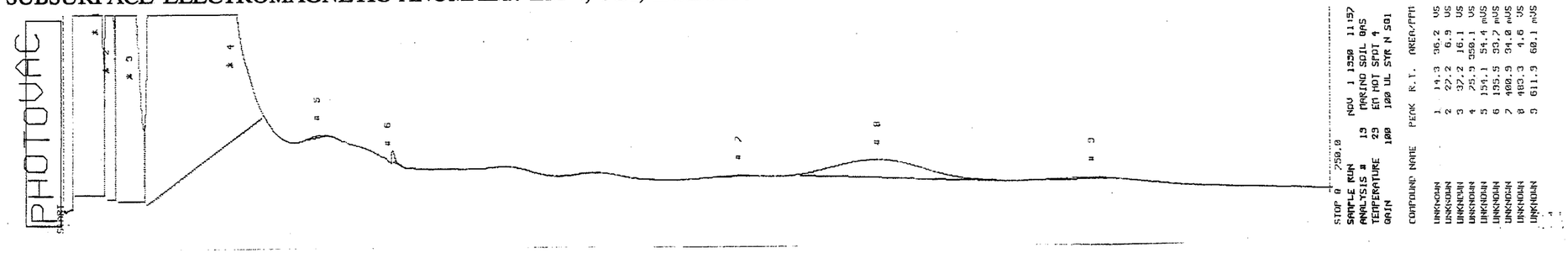
SUBSURFACE ELECTROMAGNETIC ANOMALY: EM 3, SG3, INJECTION VOLUME: 10 uL



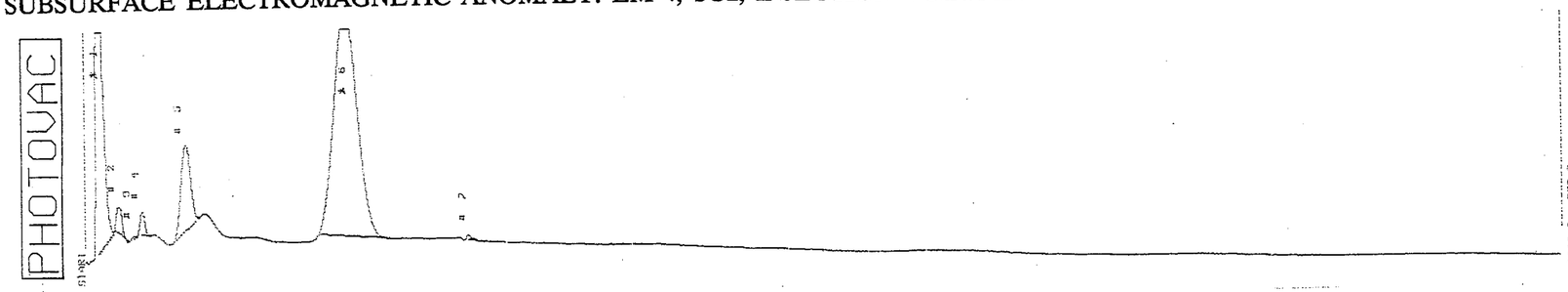
SUBSURFACE ELECTROMAGNETIC ANOMALY: EM 3, SG4, INJECTION VOLUME: 50 uL



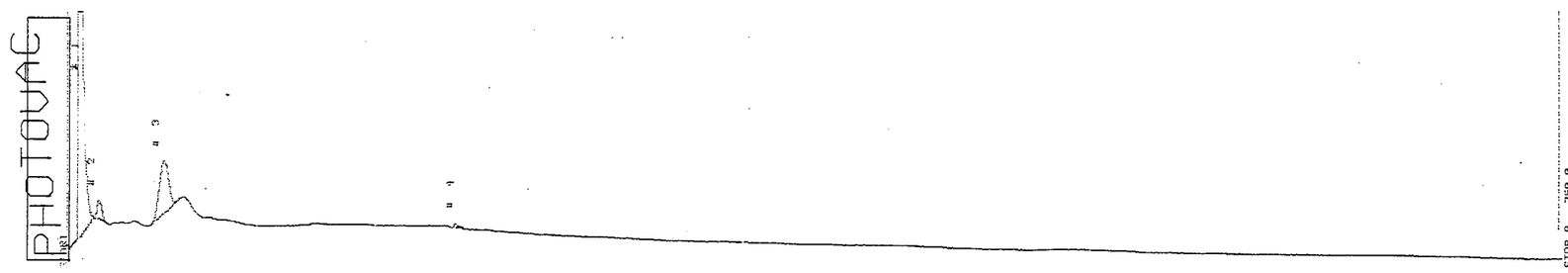
SUBSURFACE ELECTROMAGNETIC ANOMALY: EM 4, SG1, INJECTION VOLUME: 100 uL



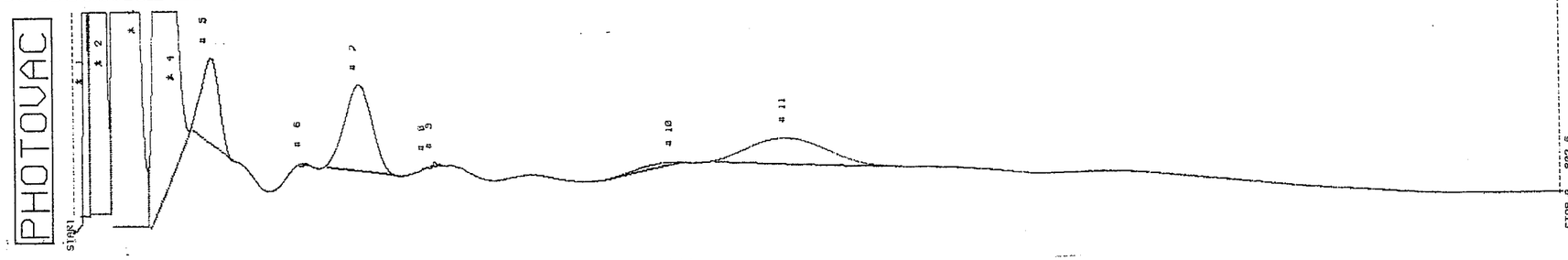
SUBSURFACE ELECTROMAGNETIC ANOMALY: EM 4, SG2, INJECTION VOLUME: 50 uL



SUBSURFACE ELECTROMAGNETIC ANOMALY: EM 4, SG3, INJECTION VOLUME: 50 uL



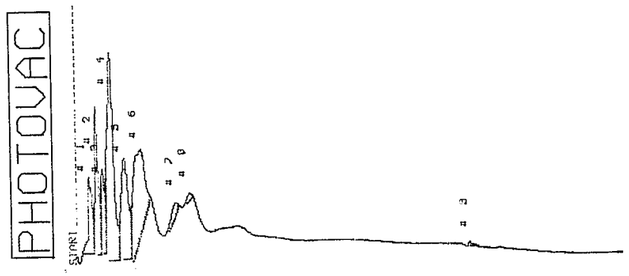
SUBSURFACE ELECTROMAGNETIC ANOMALY: EM 5, SG1, INJECTION VOLUME: 20 uL



STOP @ 803.6
SAMPLE RUN 26 NOV 1 1990 13:25
ANALYSIS # 31 MARINO SOIL GAS
TEMPERATURE 100 EM HOT SPOT 5
GAIN 20 UL STR @ SG1

COMPOUND NAME	PEAK	R.T.	AREA/PPM
UNKNOWN	1	6.7	3.4 US
UNKNOWN	2	13.6	12.3 US
UNKNOWN	3	28.5	51.4 US
UNKNOWN	4	50.0	30.9 US
UNKNOWN	5	74.4	3.8 US
UNKNOWN	6	124.3	28.7 mUS
UNKNOWN	7	154.3	6.4 US
UNKNOWN	8	191.7	14.1 mUS
UNKNOWN	9	195.9	29.7 mUS
UNKNOWN	10	324.8	314.7 mUS
UNKNOWN	11	386.9	5.2 US

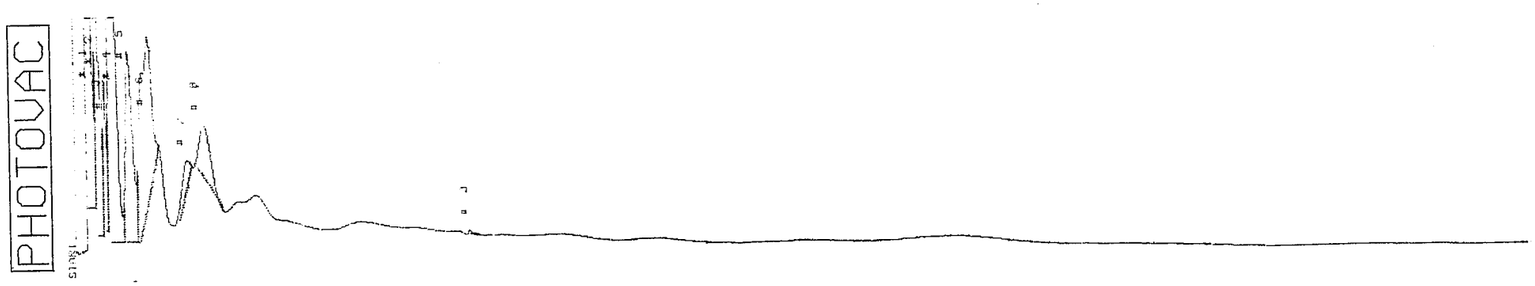
SUBSURFACE ELECTROMAGNETIC ANOMALY: EM 5, SG2, INJECTION VOLUME: 25 uL



STOP @ 686.7
SAMPLE RUN 25 NOV 1 1990 13:10
ANALYSIS # 31 MARINO SOIL GAS
TEMPERATURE 100 EM HOT SPOT 5
GAIN 25 UL STR @ SG2

COMPOUND NAME	PEAK	R.T.	AREA/PPM
UNKNOWN	1	2.0	1.0 US
UNKNOWN	2	10.6	1.2 US
UNKNOWN	3	13.8	659.7 mUS
UNKNOWN	4	17.9	3.8 US
UNKNOWN	5	24.4	1.6 US
UNKNOWN	6	32.7	2.1 US
UNKNOWN	7	43.8	192.8 mUS
UNKNOWN	8	154.3	50.8 mUS
UNKNOWN	9	195.9	28.8 mUS

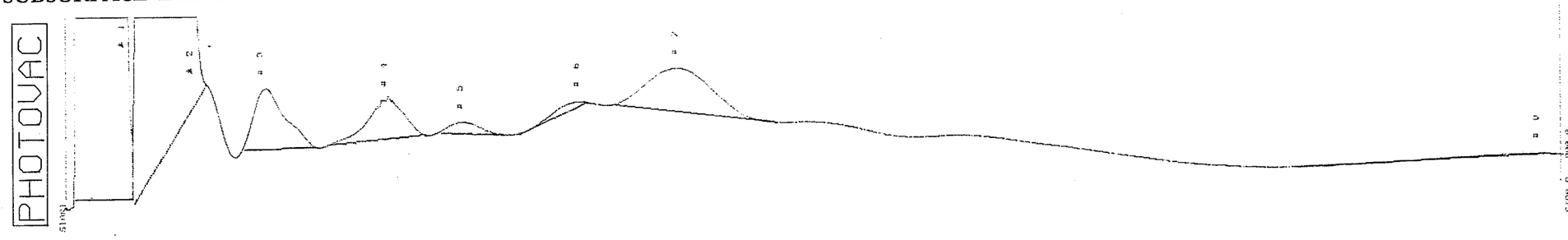
SUBSURFACE ELECTROMAGNETIC ANOMALY: EM 5, SG3, INJECTION VOLUME: 50 uL



STOP @ 832.5
SAMPLE RUN 27 NOV 1 1990 13:41
ANALYSIS # 31 MARINO SOIL GAS
TEMPERATURE 100 EM HOT SPOT 5
GAIN 50 UL STR K SG3

COMPOUND NAME	PEAK	R.T.	AREA/PPM
UNKNOWN	1	7.2	4.1 US
UNKNOWN	2	11.3	2.2 US
UNKNOWN	3	15.0	1.3 US
UNKNOWN	4	13.0	6.9 US
UNKNOWN	5	22.2	3.1 US
UNKNOWN	6	36.7	4.1 US
UNKNOWN	7	55.9	284.1 mUS
UNKNOWN	8	83.4	1.3 US
UNKNOWN	9	196.5	26.6 mUS

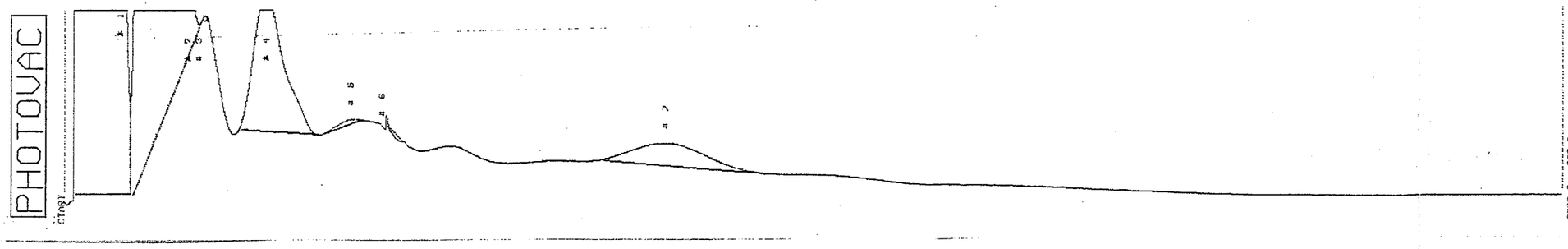
SUBSURFACE ELECTROMAGNETIC ANOMALY: EM 5, SG4, INJECTION VOLUME: 50 uL



STOP @ 809.0
SAMPLE RUN 28 NOV 1 1990 13:58
ANALYSIS # 31 MARINO SOIL GAS
TEMPERATURE 100 EM HOT SPOT 5
GAIN 50 UL STR E SG4

COMPOUND NAME	PEAK	R.T.	AREA/PPM
UNKNOWN	1	21.6	186.6 US
UNKNOWN	2	60.0	171.7 US
UNKNOWN	3	121.5	6.9 US
UNKNOWN	4	135.7	9.9 US
UNKNOWN	5	241.4	1.1 US
UNKNOWN	6	311.0	481.1 mUS
UNKNOWN	7	326.3	3.4 US
UNKNOWN	8	802.8	134.8 mUS

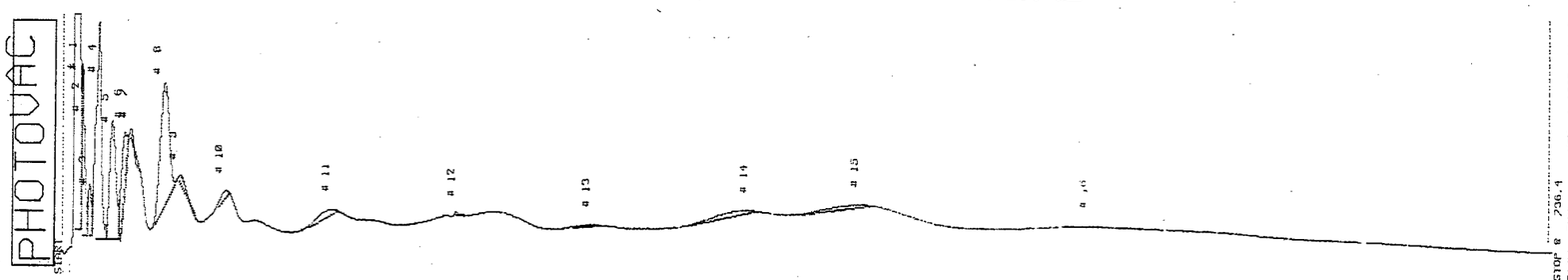
SUBSURFACE ELECTROMAGNETIC ANOMALY: MAG 1, INJECTION VOLUME: 50 uL



STOP @ 300.0
SAMPLE RUN NOV 1 1990 14:16
ANALYSIS # 23 MARINO SOIL GAS
TEMPERATURE 32 MAG HOT SPOT 1
GAIN 100 50 UL STR D [MG]

COMPOUND NAME	PEAK	R.T.	AREA/PPM
UNKNOWN	1	21.7	88.3 US
UNKNOWN	2	53.0	169.8 US
UNKNOWN	3	84.7	40.0 mVS
UNKNOWN	4	121.4	14.3 US
UNKNOWN	5	176.7	231.8 mVS
UNKNOWN	6	195.3	15.0 mVS
UNKNOWN	7	364.9	5.1 US

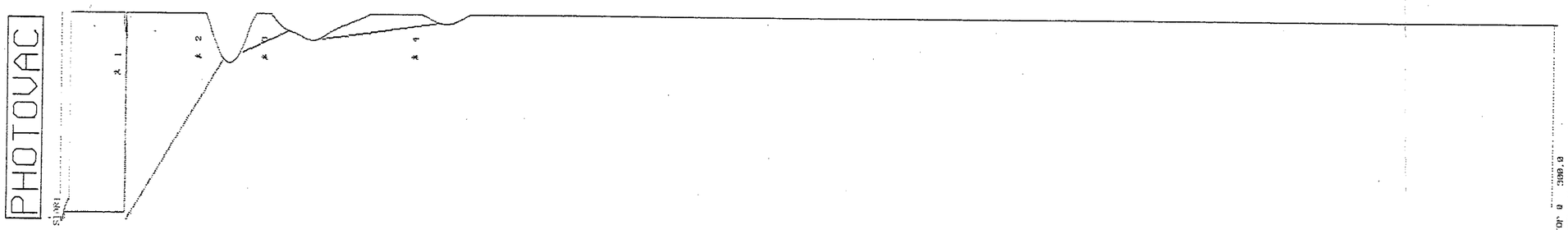
SUBSURFACE ELECTROMAGNETIC ANOMALY: MAG 2, INJECTION VOLUME: 100 uL



STOP @ 236.4
SAMPLE RUN NOV 1 1990 14:38
ANALYSIS # 30 MARINO SOIL GAS
TEMPERATURE 32 MAG HOT SPOT 2
GAIN 100 50 UL STR L [MG]

COMPOUND NAME	PEAK	R.T.	AREA/PPM
UNKNOWN	1	7.1	3.9 US
UNKNOWN	2	18.2	1.2 US
UNKNOWN	3	13.8	412.1 mVS
UNKNOWN	4	18.3	2.8 US
UNKNOWN	5	25.0	1.7 US
UNKNOWN	6	31.3	593.3 mVS
UNKNOWN	7	34.1	186.2 mVS
UNKNOWN	8	50.8	2.2 US
UNKNOWN	9	52.7	195.0 mVS
UNKNOWN	10	81.2	76.6 mVS
UNKNOWN	11	124.3	164.7 mVS
UNKNOWN	12	136.3	24.5 mVS
UNKNOWN	13	262.7	37.4 mVS
UNKNOWN	14	339.8	229.5 mVS
UNKNOWN	15	395.3	158.2 mVS
UNKNOWN	16	587.3	8.4 mVS

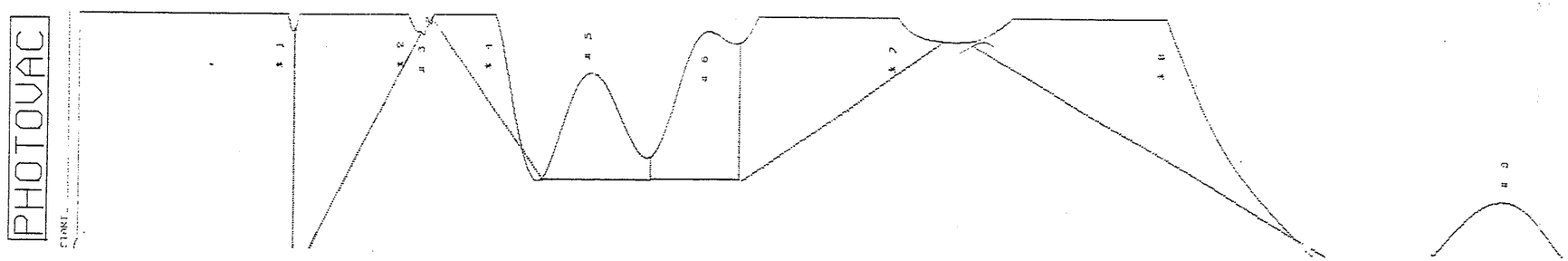
SUBSURFACE ELECTROMAGNETIC ANOMALY: MAG 3, INJECTION VOLUME: 50 uL



STOP @ 300.0
SAMPLE RUN NOV 1 1990 14:47
ANALYSIS # 31 MARINO SOIL GAS
TEMPERATURE 33 MAG HOT SPOT 3
GAIN 100 50 UL STR R STKR

COMPOUND NAME	PEAK	R.T.	AREA/PPM
UNKNOWN	1	21.9	178.4 US
UNKNOWN	2	63.0	82.4 US
UNKNOWN	3	122.3	2.8 US
UNKNOWN	4	281.9	5.9 US

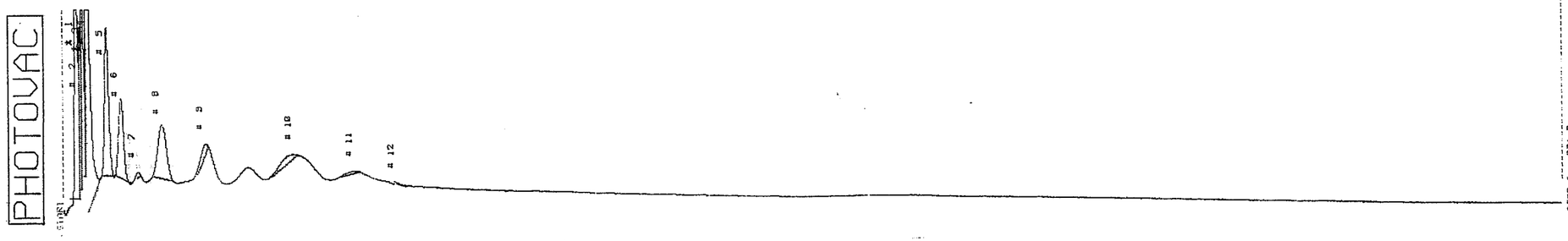
SUBSURFACE ELECTROMAGNETIC ANOMALY: MAG 4, INJECTION VOLUME: 50 uL



STOP @ 300.0
SAMPLE RUN NOV 1 1990 15:46
ANALYSIS # 34 MARINO SOIL GAS
TEMPERATURE 33 MAG HOT SPOT 4
GAIN 100 50 UL STR Q

COMPOUND NAME	PEAK	R.T.	AREA/PPM
UNKNOWN	1	62.5	1.2 KVS
UNKNOWN	2	155.5	96.4 US
UNKNOWN	3	196.3	71.3 mVS
UNKNOWN	4	215.6	23.8 US
UNKNOWN	5	267.8	16.0 US
UNKNOWN	6	351.5	23.8 US
UNKNOWN	7	415.5	194.7 US
UNKNOWN	8	559.1	112.8 US
UNKNOWN	9	787.2	13.2 US

10 PPB STANDARD INJECTION VOLUME: 200 uL



STOP @ 871.7

SAMPLE RUN 05 NOV 1 1990 18:46
ANALYSIS # 05 MARINO SOIL GAS
TEMPERATURE 02 10 PPB STANDARD
GAIN 100 200 UL SYR S

COMPOUND NAME	PEAK	R.T.	AREA/PPM
UNKNOWN	1	7.5	2.9 US
UNKNOWN	2	9.8	975.7 mUS
UNKNOWN	3	11.1	1.9 US
UNKNOWN	4	13.9	3.4 US
UNKNOWN	5	25.4	1.8 US
UNKNOWN	6	33.6	1.3 US
UNKNOWN	7	43.6	32.9 mUS
UNKNOWN	8	57.7	1.4 US
UNKNOWN	9	83.9	155.9 mUS
UNKNOWN	10	135.1	247.9 mUS
UNKNOWN	11	171.5	68.6 mUS
UNKNOWN	12	195.7	14.4 mUS

PHOTOGRAPHY LOG SHEET

SCENE: MARINO PROPERTY FROM THE WEST BORDER OF THE SITE: FRAMES 1 & 2.
SITE NAME: MARINO PROPERTY LOCATION: MIDDLETOWN, CONNECTICUT
FRAME NUMBER: 1 DATE: 10/31/90 TIME: 0925 SKY CONDITION: CLEAR
PHOTO BY: ERIC FAHLE WITNESSES: MICHAEL LOMBARI,
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: 35MM FILM ROLL: 35583

SCENE: MARINO PROPERTY FROM THE WEST BORDER OF THE SITE: FRAMES 3 & 4.
SITE NAME: MARINO PROPERTY LOCATION: MIDDLETOWN, CONNECTICUT
FRAME NUMBER: 3 DATE: 10/31/90 TIME: 0925 SKY CONDITION: CLEAR
PHOTO BY: ERIC FAHLE WITNESSES: MICHAEL LOMBARI,
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: 35MM FILM ROLL: 35583

PHOTOGRAPHY LOG SHEET

SCENE: LOCATION OF ELECTROMAGNETIC CONDUCTOR #2 AS INDICATED BY EM31-D.
SITE NAME: MARINO PROPERTY LOCATION: MIDDLETOWN, CONNECTICUT
FRAME NUMBER: 12 DATE: 11/01/90 TIME: 1442 SKY CONDITION: CLEAR
PHOTO BY: ERIC FAHLE WITNESSES: MICHAEL LOMBARI,
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: 35MM FILM ROLL: 35583

SCENE: LOCATION OF ELECTROMAGNETIC CONDUCTOR #3 AS INDICATED BY EM31-D.
SITE NAME: MARINO PROPERTY LOCATION: MIDDLETOWN, CONNECTICUT
FRAME NUMBER: 13 DATE: 11/01/90 TIME: 1442 SKY CONDITION: CLEAR
PHOTO BY: ERIC FAHLE WITNESSES: MICHAEL LOMBARI,
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: 35MM FILM ROLL: 35583

PHOTOGRAPHY LOG SHEET

SCENE: LOCATION OF ELECTROMAGNETIC CONDUCTOR #4 AS INDICATED BY EM31-D.
SITE NAME: MARINO PROPERTY LOCATION: MIDDLETOWN, CONNECTICUT
FRAME NUMBER: 13 DATE: 11/01/90 TIME: 1442 SKY CONDITION: CLEAR
PHOTO BY: ERIC FAHLE WITNESSES: MICHAEL LOMBARI,
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: 35MM FILM ROLL: 35583

SCENE: LOCATION OF ELECTROMAGNETIC CONDUCTOR #5 AS INDICATED BY EM31-D.
SITE NAME: MARINO PROPERTY LOCATION: MIDDLETOWN, CONNECTICUT
FRAME NUMBER: 14 DATE: 11/01/90 TIME: 1443 SKY CONDITION: CLEAR
PHOTO BY: ERIC FAHLE WITNESSES: MICHAEL LOMBARI,
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: 35MM FILM ROLL: 35583

PHOTOGRAPHY LOG SHEET

SCENE: LOCATION OF ELECTROMAGNETIC CONDUCTOR #6 AS INDICATED BY EM31-D.
SITE NAME: MARINO PROPERTY LOCATION: MIDDLETOWN, CONNECTICUT
FRAME NUMBER: 11 DATE: 11/01/90 TIME: 1441 SKY CONDITION: CLEAR
PHOTO BY: ERIC FAHLE WITNESSES: MICHAEL LOMBARI,
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: 35MM FILM ROLL: 35583

SCENE: VIEW OF THE STREAM THAT RUNS ALONG THE WEST BORDER OF THE PROPERY
SITE NAME: MARINO PROPERTY LOCATION: MIDDLETOWN, CONNECTICUT
FRAME NUMBER: 16 DATE: 11/01/90 TIME: 1707 SKY CONDITION: CLEAR
PHOTO BY: ERIC FAHLE WITNESSES: MICHAEL LOMBARI,
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: 35MM FILM ROLL: 35583

PHOTOGRAPHY LOG SHEET

SCENE: VIEW OF COLLECTION LOCATION FOR SAMPLE #81624 AT THE STREAM EDGE.
SITE NAME: MARINO PROPERTY LOCATION: MIDDLETOWN, CONNECTICUT
FRAME NUMBER: 18 DATE: 11/01/90 TIME: 1716 SKY CONDITION: CLEAR
PHOTO BY: ERIC FAHLE WITNESSES: MICHAEL LOMBARI,
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: 35MM FILM ROLL: 35583

NEGATIVES

SCENE: **********NEGATIVES**********
SITE NAME: MARINO PROPERTY LOCATION: MIDDLETOWN, CONNECTICUT
FRAME NUMBER: 0 DATE: 11/01/90 TIME: SKY CONDITION: CLEAR
PHOTO BY: ERIC FAHLE WITNESSES: MICHAEL LOMBARI,
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: 35MM FILM ROLL: 35583

APPENDIX H

CHAIN OF CUSTODY

RON TAL TEC AG

Office of Enforcement

CHAIN OF CUSTODY RECORD

JFK Federal Building, Rm. 2203
Boston, Massachusetts 02203

PROJ. NO.

PROJECT NAME TDD 01-9010-57 PCS 1059 MARINO PROPERTY

SAMPLERS: (Signature) J.M. Lombardi

SAMPLES REC'D WITH SEALS INTACT AND COLD.

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	BNA METHOD 8270	METALS					REMARKS
MAG 2	11/1/90	1600		X	MAG 2	2	X	X					BNA; 18oz METALS; 14oz #81623
EM 6	↓	1615		X	EM 6	2	X	X					#81622
LB		1625		X	LOWER BANK	2	X	X					#81624
EM 4	↓	1630		X	EM 4	2	X	X					#81625

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
J.M. Lombardi	11/2/90 1345				
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) Kathy Jarek	Date / Time 11/2/90 1345	Remarks	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

1— 3294

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

44 MALL RD SUITE 604
BURLINGTON, MA 01803 (617) 229-6430

(011G 308(001 .05)

CHAIN OF CUSTODY RECORD

REGION 1
JFK Federal Building, Rm. 2203
Boston, Massachusetts 02203

PROJ. NO.

PROJECT NAME: TOD 01-7010-LS PCS 0302

SAMPLERS: (Signature) M. Lombardi / [illegible]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	VOA METHOD 8240						REMARKS
MAG 2	11/1/90	1600		X	MAG 2 (SOIL 0'-6')	1 4oz	X						SAMPLE # 81623
LOWER BANK	11/1/90	1625		X	LOWER BANK	1 4oz	X						# 81624
EM 4	11/1/90	1630		X	EM 4	1 4oz	X						# 81625
EM 6	11/1/90	1615		X	EM 6	1 4oz	X						# 81622
NERL	10/30/90	2000		X	TRIP BLANK	3 40ml	X						# 81907 All have bubb

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To	From
Mike Lombardi	Julie B
Co.	Co.
Dept.	Phone #
Fax # 617 272-3619	Fax #

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
M. Lombardi	11/2/90 1600				
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) Merri Scott	Date / Time 11-3-90 11:34	Remarks WESTON GULF COAST LABORATORIES 2417 BOND ST. UNIV. PARK, IL 60466 (703) 534-5200 ATTN: E[illegible]	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field F[illegible]

APPENDIX I

CORRESPONDENCE BETWEEN CT DEP SITE REMEDIATION & CLOSURE DIVISION DIRECTOR EDWARD C. PARKER AND US EPA EMERGENCY RESPONSE AND PREVENTION SECTION CHIEF DAVID McINTYRE

01901057

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

October 2, 1990

RECEIVED
OCT 15 1990

David McIntyre, Chief
Response and Prevention Section
U.S. EPA
60 Westview Street
Lexington, MA 02173

Subject: Suspected Buried Drums at the Marino Property, 50 Walnut Street, Middletown, Connecticut

MARY - File please set up V.S. PROBABLY SOILS SOIL GASES AT LE

Dear Mr. McIntyre:

The Site Remediation and Closure Division (SRCD) of the CT DEP, Waste Management Bureau is referring the Marino Property located at 50 Walnut Street, Middletown, Connecticut (see attached map) to the Response and Prevention Section of EPA - Region I for an investigation and possible removal of buried drums containing chemical liquids.

The SRCD received an anonymous complaint (SF #208) on August 14, 1990 that a drum was uncovered during the removal of soil at the Marino Property. The soil removal occurred in March of this year. The complainant reported that the damaged drum had a dark, thick liquid flowing out and that the surrounding soil had a purplish color. The drum was immediately reburied at a depth of approximately 6 feet. The complainant also stated that a former employee at the Rubber Company witnessed the dumping of five to ten chemical liquids on a weekly basis over a period of twenty to thirty years.

The Marino Property consists of an old rubber factory that is currently being utilized by small businesses. A large, level, filled-in area (to approximately 20 feet) is located on the west side of the factory building. The drum that was uncovered was centrally located in this fill area.

A review of the CT DEP, Waste Engineering and Enforcement Division files identified a previous compliant (#303) of past hazardous waste dumping at this site. An investigation was conducted on 7-14-83 and 9-16-83. Several empty, rusted drums were discovered at the western edge of a filled area at the Marino Property.

The groundwater classification in the immediate area is GB (see attached map). However, several community water supply wells are located six tenths (0.6) of a mile downstream from the site. In addition, the Connecticut River is one tenth (0.1) of a mile north of the site.

Based upon a recent discussion with Don Berger regarding removal activities, I understand that there is a considerable backlog of sites your division is working on. As such, please let me know when you anticipate your office can respond to this situation.

If you have any questions, please do not hesitate to contact Michael McDaniel at (203) 566-7202. Thank you for your cooperation.

Sincerely,

Edward C. Parker
Director
Site Remediation & Closure Div.
Waste Management Bureau

ECP:MWM:sm

cc: Don Berger, EPA

Attachment

SF

COMPLAINT NO. 208

STATE OF CONNECTICUT

DEPARTMENT OF ENVIRONMENTAL PROTECTION
HAZARDOUS WASTE-MANAGEMENT SECTION
165 CAPITOL AVENUE, HARTFORD, CONNECTICUT 06106

DATE 8 / 14 / 90

REPORT OF COMPLAINT

Alleged Source Marino Property

Source Address 50 Walnut St. (Street) Middletown (Town)

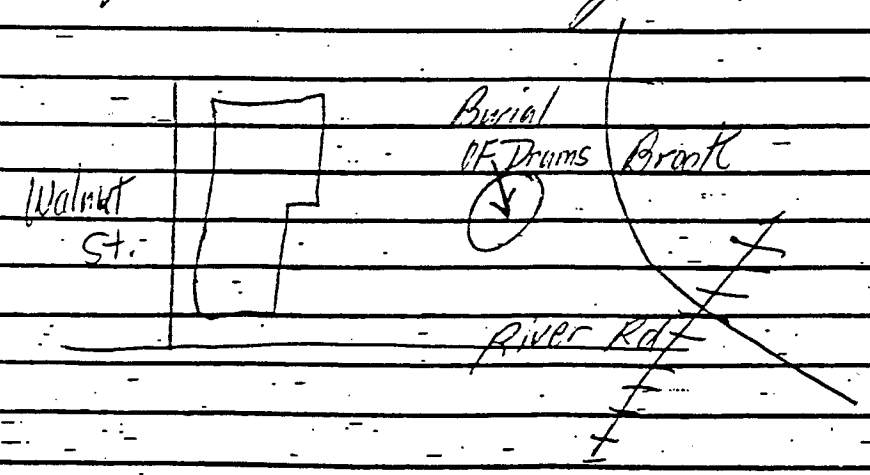
Complainant Anonymous

Address _____ Town _____

Phone _____ (Home) _____ (Office) Zip Code _____

STATEMENT OF COMPLAINT

Complainant stated that prior to 1975 semi-sealed barrels and liquid chemicals were dumped and buried on the west side of the large industrial building at 50 Walnut Street.



Received by: Michael McDaniel

Assigned 8 / 14 / 90 To TRB Investigation conducted / /

Referred to _____

APPENDIX J

CT DEP INTERDEPARTMENT MESSAGE BETWEEN FIELD INSPECTOR I MICHAEL McDANIEL AND PRINCIPAL ANALYST, PATRICK BOWE JULY 14, 1983

STATE OF CONNECTICUT

★ Every Idea is a Link in the Chain of Progress. ★

Send your ideas to: *Employees' Suggestion Award Program, 165 Capitol Ave., Hartford, 06115*

Interdepartment Message

REV. 5/81 STATE OF CONNECTICUT
Form No. 6938-051-011

SAVE TIME: *Handwritten messages are acceptable.*
Use carbon if you really need a copy. If expedition, ignore form.

TO	PAT BOWE	SENIOR ANALYST	7/14/83
	HAZ WASTE UNIT	122 WASHINGTON ST, HTFD	
FROM	MICHAEL McDANIEL	FIELD INSPECTOR	566-8843
	SAME	SAME	

COMPLAINT # 303 DISPOSAL ON MARINO PROPERTY

9:00 AM INSPECTOR McDANIEL ARRIVED AT THE MARINO PROPERTY. THERE ARE 8 SMALL COMPANIES THAT ARE PRESENTLY LEASING SPACE AT THE MARINO PROPERTY (SEE ATTACHED DEBRIEFING MEMOS)

I TALKED WITH PERSONNEL FROM EACH COMPANY AND ASKED ABOUT PAST DISPOSAL OF CHEMICALS ON MARINO PROPERTY. NOBODY THAT I TALKED TO WAS AWARE OF ANY DISPOSAL ON SITE. MOST COMPANIES HAVE ONLY BEEN ON SITE 2-3 YRS.

HOWEVER WALTER STEPCZYK (≈60 YRS OLD) - GROUNDS KEEPER + MAINTENANCE (BLDG) DID HAVE QUITE A BIT OF KNOWLEDGE OF THE SITE HISTORY. MR. STEPCZYK SAID THAT THE SITE WAS ORIGINALLY THE CITY DUMP (HE USED TO ICESKATE ON A POND NEXT TO THE DUMP WHEN HE WAS A KID) UP UNTIL ≈1939. THE TOWN OF MIDDLETOWN USE TO HAVE AN INCINERATOR ON SITE MANY YEARS AGO.

MR. STEPCZYK SAID THAT HE WAS NOT AWARE OF ANY DUMPING OF CHEMICALS ON SITE WHILE HE WAS WORKING AS AN EMPLOYEE FOR TWO OF THE FORMER OCCUPANTS. HE SAID OMO CO. MADE BABY PANTS AND THEN MIDDLETOWN RUBBER MADE ARTIFICIAL LEATHER. HE WORKED FOR MIDDLETOWN RUBBER AND THEN MIDDLETOWN MFG. CO. HE SAID THAT DEFINATELY NO DUMPING OF ANY CHEMICALS WAS DONE WHILE HE WAS THERE. ALL WASTES WENT TO THE NEW TOWN DUMP.

SAVE TIME. *If convenient, handwrite reply to sender on this sheet.*

★ Thank You for Sharing Your Idea ★

Please send your ideas to: *Employee's Suggestion Awards Program, 165 Capitol Ave., Hartford, Conn.*

Interdepartment Message

STATE OF CONNECTICUT

Stock No. 69-0-051-001

SAVE TIME: *Handwritten messages are acceptable. Use typewriter if you need a copy. If typewriter, use light line.*

To	NAME: PAT BONE AGENCY	TITLE ADDRESS	TEL.
From	NAME: MIKE McDANIEL AGENCY	TITLE ADDRESS	TELEPHONE
SUBJECT	COMPLAINT # 303		

I WALKED OVER THE GROUNDS AND FOUND NO EVIDENCE OF WASTE DISPOSAL. WEST OF THE BLDG. IS A LARGE PARKING LOT. TWO EMPTY RUBBISH TRUCKS WERE ON SITE AND A PILE OF CLEAN FILL WAS LOCATED ON THE NORTHWEST SIDE OF PARKING LOT.

SAVE TIME: *If convenient, handwrite reply to sender on this same sheet.*

STATE OF CONNECTICUT

★ Thank You for Sharing Your Idea. ★

Please send your ideas to: *Employees' Suggestion Awards Program, 165 Capitol Ave., Hartford, 06115.*

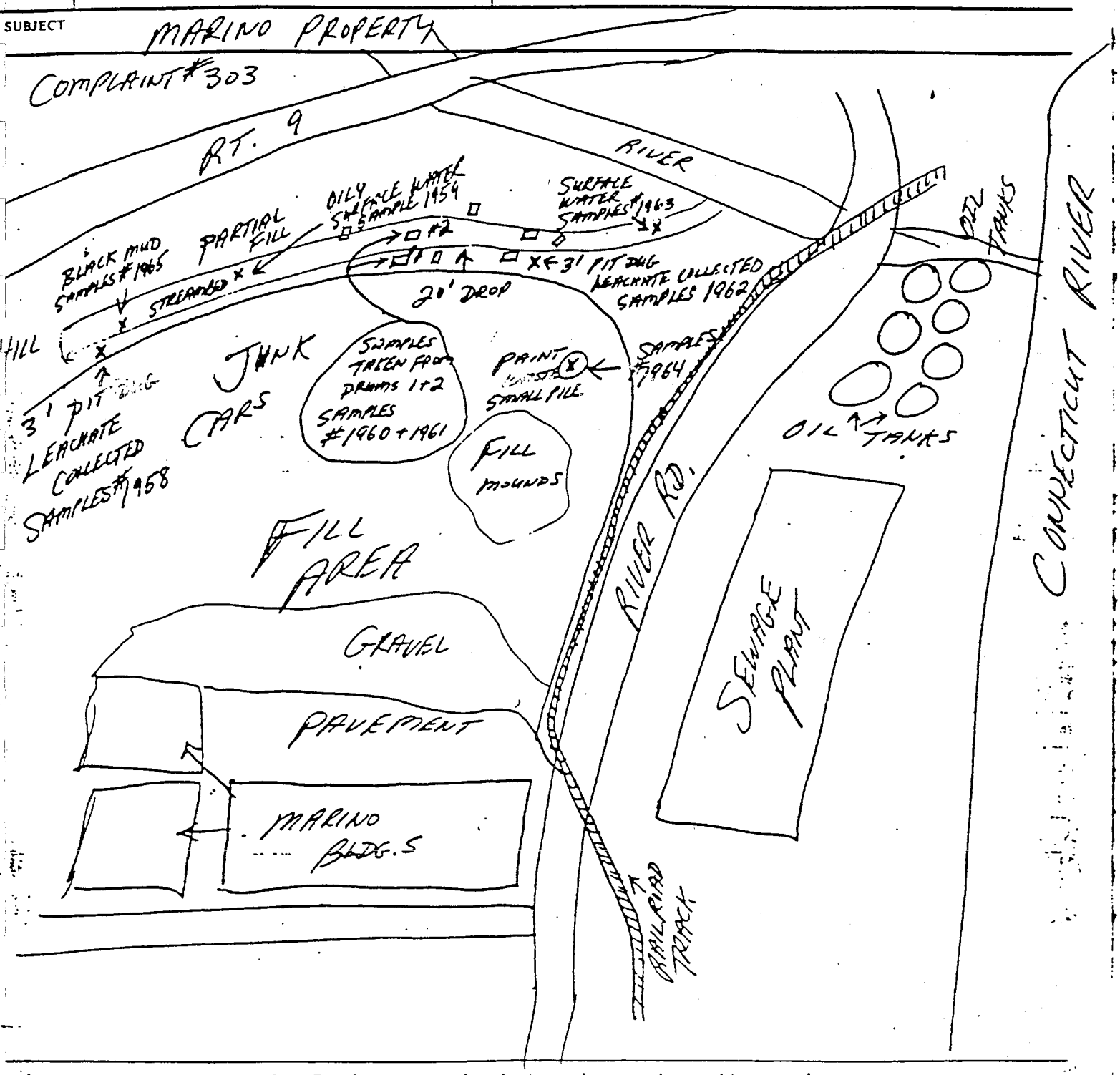
Interdepartment Message

STO-201 REV. 11/81 STATE OF CONNECTICUT
Stock No. 6938-051-01)

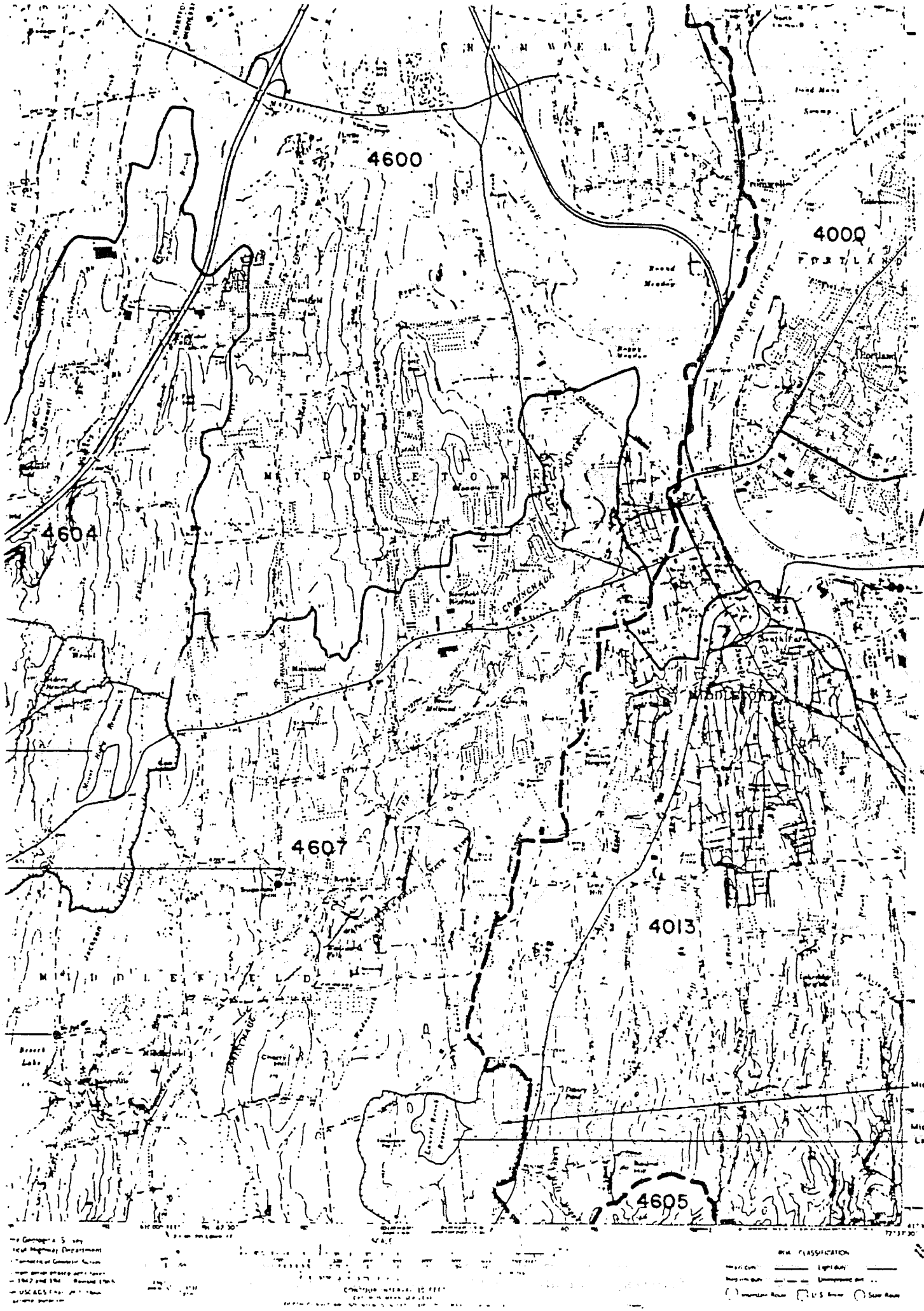
SAVE TIME: *Handwritten messages are acceptable.*
Use carbon if you really need a copy. If typewritten, ignore faint lines.

To	NAME	TITLE	DATE
	AGENCY	ADDRESS	
From	NAME	TITLE	TELEPHONE
	AGENCY	ADDRESS	

SUBJECT MARINO PROPERTY



SAVE TIME: *If convenient, handwrite reply to sender on this same sheet.*


4600
4000
4604
4607
4013
4605
MIDDLETOWN
MIDDLEFIELD
CONNECTICUT
RIVER
Portland
Middletown
MARINO PROPER
FILL AREA
Middletown W
River Road
Middletown Watr
Middletown Watr
Laurel Brook R

APPENDIX K

CT DEP INTERDEPARTMENT MESSAGE BETWEEN FIELD INSPECTOR I MICHAEL McDANIEL AND PRINCIPAL ANALYST, PATRICK BOWE SEPTEMBER 16, 1983

STATE OF CONNECTICUT

★ Thank You for Sharing Your Idea. ★

Please send your ideas to: *Employees' Suggestion Awards Program, 165 Capitol Ave., Hartford, 06115.*

Interdepartment Message

STO-201 REV. 11/81 STATE OF CONNECTICUT
(Stock No. 6938-051-01)

SAVE TIME: *Handwritten messages are acceptable.*
Use carbon if you really need a copy. If typewritten, ignore faint lines.

	NAME	TITLE	DATE
To	PAT BOLLE	PRINCIPAL ANALYST	9/16/83
	AGENCY: HAZARDOUS WASTE UNIT	ADDRESS: 122 WASHINGTON ST, HTFD. CT	
From	MICHAEL McDANIEL	FIELD INSPECTOR I	TELEPHONE 566 8843
	AGENCY: SAME	ADDRESS: SAME	

SUBJECT: COMPLAINT # 303 MARINO PROPERTY MIDDLETOWN

SEASONAL MAINTAINER WITH HAZ. WASTE UNIT

11:00 A.M. DOUG ZIMMERMAN AND I ARRIVED AT THE MARINO PROPERTY TO GATHER EVIDENCE (IF POSSIBLE) OF PAST HAZARDOUS WASTE DUMPING.

MR. + MRS. MARINO WERE NOT IN BUT WE DID INFORM THEIR SECRETARY THAT DOUG AND I WOULD BE INSPECTING THE WESTERN PORTION OF THEIR PROPERTY.

NEAR THE WESTERN PORTION (EDGE) OF THE PROPERTY WE LOCATED A STEEP BANK THAT DROPPED DOWN ≈20' TO A SEMI-DRY STREAMBED. THE STREAMBED STARTS AT THE SOUTHERN MOST PART OF THE MARINO PROPERTY AND RUNS ALONG THE BASE OF THE BANK FOR ≈ 1/4 MILE UNTIL IT EMPTIES INTO THE ADJACENT BROOK (RIVER) WHICH THEN RUNS INTO THE NEARBY CONN. RIVER.

WE DISCOVERED THAT THE BANK IS THE RESULT OF ≈20' OF FILL THAT COVERS MOST OF THE MARINO PROPERTY.

DOUG AND I CLIMBED DOWN THE STEEP BANK AND STARTED WALKING SOUTHWARD ALONG THE SEMI-DRY STREAMBED. WE NOTICED 8 HEAVILY RUSTED 55 GAL. DRUMS SCATTERED ALONG BOTH SIDES OF THE STREAMBED. TWO OF THE DRUMS CONTAINED A LIQUID (> 1/2 FULL) WHILE THE OTHER 6 DRUMS WERE EMPTY. WE TOOK 2 SAMPLES FROM EACH DRUM (SAMPLES # 1960 AND 1961). ONE OF THE DRUMS WAS LAYING ON IT SIDE ABOUT 1/2 WAY UP THE BANK WHILE THE OTHER DRUM WAS FOUND UPSIDE DOWN IN THE STREAMBED. SAMPLE #1960 WAS A YELLOWISH RUST COLOR AND SAMPLE 1961 SEEMED TO BE FOR THE MOST PART WATER.

WHILE WALKING UP THE STREAMBED WE NOTICED

SAVE TIME: *If convenient, handwrite reply to sender on this same sheet.*

Interdepartment Message

To	NAME	TITLE	DATE
	AGENCY	ADDRESS	
From	NAME	TITLE	TELEPHONE
	AGENCY	ADDRESS	
SUBJECT	COMPLAINT # 303		

THAT THE STREAMBED WAS AN OILY BLACK IN SEVERAL LOCATIONS. WE TOOK 2 SAMPLES OF THIS BLACK MUD (SAMPLE # 1965).

WE ALSO NOTICED THAT SOME OF THE ISOLATED SURFACE WATER HAD AN OILY SHEEN AT THE TOP (ONE SAMPLE WAS TAKEN #1959).

SOME OF THE SLOW MOVING SURFACE WATER NEAR THE MOUTH OF THE STREAMBED (BEFORE IT ENTERS THE ADJACENT RIVER) WAS A YELLOWISH-RUST COLOR WITH YELLOW SCUM FLOATING AT THE SURFACE (TWO SAMPLES TAKEN # 1963).

DOUG AND I ALSO DUG 2 PITS (ONE ON SOUTHERN END AND ONE ON NORTHERN END) ≈ 2-3' DEEP AND 3' FROM STREAMBED AT THE BASE OF THE FILLED BANK. SAMPLES (2) OF THE LEACHATE WAS TAKEN AT EACH PIT (SAMPLES # 1958 AND 1962).

ALONG THE 20' FILL AREA WE NOTICED A GREAT DEAL OF CONSTRUCTION MATERIAL, RAILROAD TIMBER, AND ALL KINDS OF JUNK.

ON THE TOP OF THE FILL AREA IN THE NORTHWESTERN PORTION (≈ 20' FROM BANK) WE FOUND A SMALL PILE OF (3'x8'x1') PAINTING MATERIAL (1+5 GAL CANS BRUSHES PLASTER). ONE 5 GAL CAN CONTAIN ≈ 2/3 FULL OF PAINT (SAMPLES (2) #1964). MOST OF THE PAINT IN THE CANS WAS SOLIDIFIED.

AFTER DEPARTING THE MARINO PROPERTY WITH OUR SAMPLES WE WENT TO THE ADJACENT SEWAGE PLANT AND TALKED WITH SAM MONCATA - PLANT SUPERVISOR. MR. MONCATA GREW UP NEAR THE SITE AND REMEMBERS

STATE OF CONNECTICUT

★ Thank You for Sharing Your Idea. ★

Please send your ideas to: *Employees' Suggestion Awards Program, 165 Capitol Ave., Hartford, 06115.*

Interdepartment Message

STO-201 REV. 11/81 STATE OF CONNECTICUT
Stock No. 6938-051-01)

SAVE TIME: *Handwritten messages are acceptable.*
Use carbon if you really need a copy. If typewritten, ignore faint lines.

To	NAME	TITLE	DATE
	AGENCY	ADDRESS	
From	NAME	TITLE	TELEPHONE
	AGENCY	ADDRESS	

SUBJECT COMPLAINT #303

ICE SKATING ON THE MARINO PROPERTY (OWNED BY SOME MFG. FIRM THEN) WHEN HE WAS A YOUNG BOY (THE SITE WAS A WETLAND BEFORE IT WAS FILLED).

MR. MONCATA (WORKING FOR THE CITY OF MIDDLETOWN FOR > 25 YRS.) SAID THAT THE MARINO PROPERTY WAS UTILIZED AS THE CITY LANDFILL FROM THE 1930'S UNTIL 1955. THE CITY HAD AN AGREEMENT WITH THE MFG. CO. (LAND OWNERS) TO USE THE WETLAND AS A LANDFILL IN ORDER TO CLAIM SOME OF THE WETLAND AS USEFUL PROPERTY IN THE FUTURE. (SEE 1934 AERIAL PHOTO OF AREA - MARINO PROPERTY WAS MOSTLY UNDER WATER IN 1934.).

MR. MANCATA SAID THAT HE REMEMBERS THE LANDFILL ON FIRE AT LEAST ONCE A WEEK. THE CITY ALSO DUMP ASHES FROM THE BURNING OF GARBAGE IN THE NEARBY INCINERATOR (STOPPED BURNING 1964).

IN 1955 THE LANDFILL ON THE NOW MARINO PROPERTY WAS COVERED OVER AS THE NEW RT. 9 WAS CONSTRUCTED. THE TOWN'S LANDFILL WAS RELOCATED JUST NORTH OF TOWN IN 1955.

BEFORE THE OLD LANDFILL WAS COVERED MR. MANCATA REMEMBERS (AS HE WALKED THROUGH THE LANDFILL IN THE EARLY 1950'S) SEEING DRUMS LAYING ALL ABOUT. HE ALSO REMEMBERS SEEING ≈ 50 DRUMS STACKED NEAR THE OMO MFG. BLDG (NOW MARINO). HE'S NOT SURE WAS HAPPENED TO THE STACKED DRUMS. OMO MFG. CO. MADE A RUBBERIZED LEATHER PRODUCT.

MR. MANCATA SAID THAT IN 1971-72 THE CITY CONTRACTED NEALONS CONSTRUCTION (BANKRUPT NOW) OF NEW HAMPSHIRE

SAVE TIME: *If convenient, handwrite reply to sender on this same sheet*

STATE OF CONNECTICUT

★ Thank You for Sharing Your Idea. ★

Please send your ideas to: *Employees' Suggestion Awards Program, 165 Capitol Ave., Hartford, 06115.*

Interdepartment Message

STO-201 REV. 11/81 STATE OF CONNECTICUT
Stock No. 6938-051-01)

SAVE TIME: *Handwritten messages are acceptable.*
Use carbon if you really need a copy. If typewritten, ignore faint lines.

To	NAME	TITLE	DATE
	AGENCY	ADDRESS	
From	NAME	TITLE	TELEPHONE
	AGENCY	ADDRESS	
SUBJECT	COMPLAINT # 303		

TO LAY A SEWER PIPE THROUGH THE NORTHWEST PORTION OF MARINO'S PROPERTY TO THE NEW SEWAGE PLANT. HE SAID THAT THE CONSTRUCTION COMPANY HAD A DIFFICULT TIME DIGGING THROUGH THE FILLED AREA DUE TO A GREAT DEAL OF BARRELS AND JUNK. HE WASN'T SURE IF ANY OF THE BARRELS CONTAINED ANYTHING.

ACCORDING TO MR MANCATA, MR. MARINO COVERED HIS WHOLE BACK PROPERTY WITH ≈ 2-3' OF SOIL (FILL). 1973-74 MR. MARINO GOT INTO A LITTLE TROUBLE WITH THE TOWN BECAUSE THE FILL HE USED ON HIS PROPERTY WAS SUPPOSE TO GO TO THE LANDFILL NORTH OF TOWN.

AS A RESULT OF THIS INVESTIGATION, THE SITE IN QUESTION (MARINO PROPERTY) WAS FOUND TO HAVE BEEN USED AS A TOWN LANDFILL FROM 1930 – 1955. THE SITE ALSO RECEIVED ASHES FROM THE TOWN INCINERATOR UNTIL 1955. THE SITE PROBABLY RECEIVED A CONSIDERABLE AMOUNT OF INDUSTRIAL WASTE FROM ONSITE INDUSTRY AS WELL AS OFF SITE.

SAVE TIME: *If convenient, handwrite reply to sender on this same sheet*

APPENDIX L

RESULTS OF HYDROCARBON VAPOR PHASE SCREENING OF SAMPLE #26165, #26166, #26167, #26168, #26169, #26170, #26171, AND #26172 CONDUCTED BY THE CONNECTICUT STATE DEPARTMENT OF HEALTH SERVICES, LABORATORY DIVISION ON SEPTEMBER 20, 1983

DEPARTMENT OF ENVIRONMENTAL PROTECTION
LABORATORY DIVISION
P.O. BOX 1689 HARTFORD, CT 06101

PHONE 566-5620

PRIORITY No. 3
SEP 19
10 CLINTON STREET

SURFACE WATER

SAMPLE INVOICE

SAMPLES OF SEWAGE OR TRADE WASTE

To be filled in by person collecting samples

From MARINO PROPERTY in town of MIDDLETOWN 83

Sample of sewage ( ), trade waste ( ), sludge ( ), or DISCARDED DRUMS(2) LEACHATE + SURFACE WATER

Name of treatment plant

Owned by

Plant processes or treatment

Collected by DEPT. OF ENVIRONMENTAL PROTECTION (Name) On 9/16/83

Report to HAZARDOUS MATERIALS MANAGEMENT UNIT (Title)
HAZARDOUS WASTE SECTION
165 CAPITOL AVENUE
HARTFORD, CONNECTICUT 06106

Shipped on Room 13 9/19/83
Pat Boyle x4869 / 8543

Laboratory Number	Sample Number	Sample of	Collected From	Composite Yes or No	Min. Apart	Time of Collection
26165	1958	WATER LEACHATE	3' PIT DUG	NO	5	11:45 AM
26166	1959	OILY WATER	SURFACE WATER STREAMBED			11:50
26167	1960	RUST COLOR LIQUID	DRUM ON BANK			11:55
26168	1961	WATER	DRUM ON STREAMBED			12:00
26169	1962	WATER LEACHATE	2' PIT DUG			12:05
26170	1963	WATER	STREAM 10' BEFORE BROOK			12:10
26171	1964	PAINT	5 GAL PAINT CAN.			12:15
26172	1965	OILY MUD	STREAMBED SOUTHERN MOST			12:20 PM

No. and Kind of Bottles 8 BROWN HC BOTTLES

OL-33 Rev. 10-82

PLEASE TEST FOR: 730 + 1 plastic 1 gal

(1) HC - QUALIFY + QUANTIFY

Collector

RECEIVED
OCT 17 1983
HAZARDOUS MATERIALS MANAGEMENT UNIT

Hartford, Connecticut

LABORATORY NUMBER 26165 (1956)
HYDROCARBONS Hankyplace F45

Telephone: 566-5494
Analyzed: 9/20/83

NAME	Micrograms per Liter	NAME	Micrograms per L
ACETONE		METHANOL	
BENZENE		METHYL ACETATE	
BROMOCHLOROMETHANE		METHYL iso-BUTYL KETONE	
BROMOETHANE		METHYL CELLOSOLVE	
BROMODICHLOROMETHANE		METHYL CYCLOHEXANE	
BUTANE		METHYL CYCLOPENTANE	
BUTANOL		METHYLENE CHLORIDE	
iso-BUTANOL		METHYL ETHYL KETONE	
sec-BUTANOL		NONANE	
BUTYL ACETATE		OCTANE	
iso-BUTYL ACETATE		iso-OCTANE	
CARBON TETRACHLORIDE		PENTANE	
CHLOROBENZENE		PROPANOL	
1-CHLOROBUTANE		iso-PROPANOL	
2-CHLOROBUTANE		PROPYL ACETATE	
CHLOROFORM		iso-PROPYL ACETATE	
CYCLOHEXANE		STYRENE	
DIBROMOMETHANE		1,1,2,2-TETRABROMOETHANE	
1, 2-DICHLOROETHANE		1,1,1,2-TETRACHLOROETHANE	
1, 2-DICHLOROETHENE		1,1,2,2-TETRACHLOROETHANE	
1, 1-DICHLOROETHYLENE		TETRACHLOROETHYLENE	
1, 2-DICHLOROPROPANE		TOLUENE	
ETHANOL		1,1,1-TRICHLOROETHANE	
ETHYL ACETATE		TRICHLOROETHYLENE	
ETHYL BENZENE		TRICHLOROTRIFLUOROETHANE	
FORMALDEHYDE		VINYL ACETATE	
HEPTANE		META-XYLENE	
HEXANE		ORTHO-XYLENE	
METHANE	TRACE	PARA-XYLENE	

CONCLUSION:

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OCT 17 1983
HAZARDOUS MATERIALS MANAGEMENT UNIT

R. C. LANTIERI

OCT 14 1983

Director: Dr. Jesse S. Tucker

Hartford, Connecticut

LABORATORY NUMBER 26-166 (1951)
HYDROCARBONS Hankyson F45

Telephone: 566-5494
Analyzed: 9/20/83

NAME	Micrograms per Liter	NAME	Micrograms per L
ACETONE		METHANOL	
BENZENE		METHYL ACETATE	
BROMOCHLOROMETHANE		METHYL iso-BUTYL KETONE	
BROMOETHANE		METHYL CELLOSOLVE	
BROMODICHLOROMETHANE		METHYL CYCLOHEXANE	
BUTANE		METHYL CYCLOPENTANE	
BUTANOL		METHYLENE CHLORIDE	
iso-BUTANOL		METHYL ETHYL KETONE	
sec-BUTANOL		NONANE	
BUTYL ACETATE		OCTANE	
iso-BUTYL ACETATE		iso-OCTANE	
CARBON TETRACHLORIDE		PENTANE	
CHLOROBENZENE		PROPANOL	
1-CHLOROBUTANE		iso-PROPANOL	
2-CHLOROBUTANE		PROPYL ACETATE	
CHLOROFORM		iso-PROPYL ACETATE	
CYCLOHEXANE		STYRENE	
DIBROMOMETHANE		1,1,2,2-TETRABROMOETHANE	
1, 2-DICHLOROETHANE		1,1,1,2-TETRACHLOROETHANE	
1, 2-DICHLOROETHENE		1,1,2,2-TETRACHLOROETHANE	
1, 1-DICHLOROETHYLENE		TETRACHLOROETHYLENE	
1, 2-DICHLOROPROPANE		TOLUENE	
ETHANOL		1,1,1-TRICHLOROETHANE	
ETHYL ACETATE		TRICHLOROETHYLENE	
ETHYL BENZENE		TRICHLOROTRIFLUOROETHANE	
FORMALDEHYDE		VINYL ACETATE	
HEPTANE		META-XYLENE	
HEXANE		ORTHO-XYLENE	
METHANE	MAJOR	PARA-XYLENE	

CONCLUSION:

RECEIVED
OCT 17 1983
HAZARDOUS MATERIALS MANAGEMENT UNIT

OCT 14 1983

R. C. LANTIER

Director: Dr. Jesse S. Tucker

Hartford, Connecticut

LABORATORY NUMBER 26167 (1960) Telephone: 566-5494
HYDROCARBONS Headspace F45 Analyzed: 9/20/83

NAME	Micrograms per Liter	NAME	Micrograms per L
ACETONE		METHANOL	
BENZENE	<1	METHYL ACETATE	
BROMOCHLOROMETHANE		METHYL iso-BUTYL KETONE	
BROMOETHANE		METHYL CELLOSOLVE	
BROMODICHLOROMETHANE		METHYL CYCLOHEXANE	
BUTANE		METHYL CYCLOPENTANE	
BUTANOL		METHYLENE CHLORIDE	
iso-BUTANOL		METHYL ETHYL KETONE	
sec-BUTANOL		NONANE	
BUTYL ACETATE		OCTANE	
iso-BUTYL ACETATE		iso-OCTANE	
CARBON TETRACHLORIDE		PENTANE	
CHLOROBENZENE		PROPANOL	
1-CHLOROBUTANE		iso-PROPANOL	
2-CHLOROBUTANE		PROPYL ACETATE	
CHLOROFORM		iso-PROPYL ACETATE	
CYCLOHEXANE		STYRENE	
DIBROMOMETHANE		1,1,2,2-TETRABROMOETHANE	
1, 2-DICHLOROETHANE		1,1,1,2-TETRACHLOROETHANE	
1, 2-DICHLOROETHENE		1,1,2,2-TETRACHLOROETHANE	
1, 1-DICHLOROETHYLENE		TETRACHLOROETHYLENE	
1, 2-DICHLOROPROPANE		TOLUENE	<1
ETHANOL		1,1,1-TRICHLOROETHANE	
ETHYL ACETATE		TRICHLOROETHYLENE	
ETHYL BENZENE		TRICHLOROTRIFLUOROETHANE	
FORMALDEHYDE		VINYL ACETATE	
HEPTANE		Ethyl Benzene META-XYLENE	
HEXANE		ORTHO-XYLENE	3
METHANE		PARA-XYLENE	(Mixed)

CONCLUSION: Configuration: Elution pattern is that of traces of early eluting hydrocarbons in water.
Identified Contaminants: Listed Above

RECEIVED OCT 17 1983 HAZARDOUS MATERIALS MANAGEMENT UNIT

J. C. LANTER

Director: Dr. Jesse S. Tucker

LABORATORY NUMBER 26168 (1961)
HYDROCARBONS H-[illegible] F 45

Telephone: 566-5494
[illegible] 9/21/83

NAME	Micrograms per Liter	NAME	Micrograms per L
ACETONE		METHANOL	
BENZENE		METHYL ACETATE	
BROMOCHLOROMETHANE		METHYL iso-BUTYL KETONE	
BROMOETHANE		METHYL CELLOSOLVE	
BROMODICHLOROMETHANE		METHYL CYCLOHEXANE	
BUTANE		METHYL CYCLOPENTANE	
BUTANOL		METHYLENE CHLORIDE	
iso-BUTANOL		METHYL ETHYL KETONE	
sec-BUTANOL		NONANE	
BUTYL ACETATE		OCTANE	
iso-BUTYL ACETATE		iso-OCTANE	
CARBON TETRACHLORIDE		PENTANE	
CHLOROBENZENE		PROPANOL	
1-CHLOROBUTANE		iso-PROPANOL	
2-CHLOROBUTANE		PROPYL ACETATE	
CHLOROFORM		iso-PROPYL ACETATE	
CYCLOHEXANE		STYRENE	
DIBROMOMETHANE		1,1,2,2-TETRABROMOETHANE	
1, 2-DICHLOROETHANE		1,1,1,2-TETRACHLOROETHANE	
1, 2-DICHLOROETHENE		1,1,2,2-TETRACHLOROETHANE	
1, 1-DICHLOROETHYLENE		TETRACHLOROETHYLENE	
1, 2-DICHLOROPROPANE		TOLUENE	
ETHANOL		1,1,1-TRICHLOROETHANE	
ETHYL ACETATE		TRICHLOROETHYLENE	
ETHYL BENZENE		TRICHLOROTRIFLUOROETHANE	
FORMALDEHYDE		VINYL ACETATE	
HEPTANE		META-XYLENE	
HEXANE		ORTHO-XYLENE	
METHANE	-MASCR'	PARA-XYLENE	

CONCLUSION:

RECEIVED
OCT 17 1983
HAZARDOUS MATERIALS MANAGEMENT UNIT

[illegible] 1983

[illegible] Director: Dr. Jesse S. Tucker

Hartford, Connecticut

LABORATORY NUMBER 26169 · (196-2)
HYDROCARBONS Handspace - F45

Telephone: 566-5494
Analyzed: 9/28/93

NAME	Micrograms per Liter	NAME	Micrograms per L
ACETONE		METHANOL	
BENZENE	(AREA) <1	METHYL ACETATE	
BROMOCHLOROMETHANE		METHYL iso-BUTYL KETONE	
BROMOETHANE		METHYL CELLOSOLVE	
BROMODICHLOROMETHANE		METHYL CYCLOHEXANE	
BUTANE		METHYL CYCLOPENTANE	
BUTANOL		METHYLENE CHLORIDE	
iso-BUTANOL		METHYL ETHYL KETONE	
sec-BUTANOL		NONANE	
BUTYL ACETATE		OCTANE	
iso-BUTYL ACETATE		iso-OCTANE	
CARBON TETRACHLORIDE		PENTANE	
CHLOROBENZENE		PROPANOL	
1-CHLOROBUTANE		iso-PROPANOL	
2-CHLOROBUTANE		PROPYL ACETATE	
CHLOROFORM		iso-PROPYL ACETATE	
CYCLOHEXANE		STYRENE	
DIBROMOMETHANE		1,1,2,2-TETRABROMOETHANE	
1, 2-DICHLOROETHANE		1,1,1,2-TETRACHLOROETHANE	
1, 2-DICHLOROETHENE		1,1,2,2-TETRACHLOROETHANE	
1, 1-DICHLOROETHYLENE		TETRACHLOROETHYLENE	
1, 2-DICHLOROPROPANE		TOLUENE	
ETHANOL		1,1,1-TRICHLOROETHANE	
ETHYL ACETATE		TRICHLOROETHYLENE	
ETHYL BENZENE		TRICHLOROTRIFLUOROETHANE	
FORMALDEHYDE		VINYL ACETATE	
HEPTANE		Ethyl Benzene META-XYLENE	
HEXANE		ORTHO-XYLENE	6
METHANE	TRACE	PARA-XYLENE	(Mixed

CONCLUSION: Configuration: Elution pattern is that of traces of early eluting hydrocarbons in water.
Identified Contaminants: Listed Above

RECEIVED OCT 17 1993 HAZARDOUS MATERIALS MANAGEMENT UNIT

C. LANTIER

Director: Dr. Jesse S. Tucker

Hartford, Connecticut

LABORATORY NUMBER 2617C (FILE 3) Telephone: 566-5494

HYDROCARBONS Hydrogen Flame Analyzed: 9/28/83

NAME	Micrograms per Liter	NAME	Micrograms per L
ACETONE		METHANOL	
BENZENE		METHYL ACETATE	
BROMOCHLOROMETHANE		METHYL iso-BUTYL KETONE	
BROMOETHANE		METHYL CELLOSOLVE	
BROMODICHLOROMETHANE		METHYL CYCLOHEXANE	
BUTANE		METHYL CYCLOPENTANE	
BUTANOL		METHYLENE CHLORIDE	
iso-BUTANOL		METHYL ETHYL KETONE	
sec-BUTANOL		NONANE	
BUTYL ACETATE		OCTANE	
iso-BUTYL ACETATE		iso-OCTANE	
CARBON TETRACHLORIDE		PENTANE	
CHLOROBENZENE		PROPANOL	
1-CHLOROBUTANE		iso-PROPANOL	
2-CHLOROBUTANE		PROPYL ACETATE	
CHLOROFORM		iso-PROPYL ACETATE	
CYCLOHEXANE		STYRENE	
DIBROMOMETHANE		1,1,2,2-TETRABROMOETHANE	
1, 2-DICHLOROETHANE		1,1,1,2-TETRACHLOROETHANE	
1, 2-DICHLOROETHENE		1,1,2,2-TETRACHLOROETHANE	
1, 1-DICHLOROETHYLENE		TETRACHLOROETHYLENE	
1, 2-DICHLOROPROPANE		TOLUENE	
ETHANOL		1,1,1-TRICHLOROETHANE	
ETHYL ACETATE		TRICHLOROETHYLENE	
ETHYL BENZENE		TRICHLOROTRIFLUOROETHANE	
FORMALDEHYDE		VINYL ACETATE	
HEPTANE		META-XYLENE	
HEXANE		ORTHO-XYLENE	
METHANE		PARA-XYLENE	

CONCLUSION: Configuration: Elution pattern is that of traces of early eluting hydrocarbons in water.

RECEIVED OCT 19 1983 HAZARDOUS MATERIALS MANAGEMENT UNIT

E. C. LANTIERI

Director: Dr. Jesse S. Tucker

Hartford, Connecticut

from PAINT Can

LABORATORY NUMBER 26-171 (M64) Telephone: 566-5494

HYDROCARBONS [illegible] F-45, 3/20/83 [illegible] 10/5/83

NAME	Micrograms per Liter	NAME	Micrograms per L
ACETONE	850,000	METHANOL	
BENZENE		METHYL ACETATE	
BROMOCHLOROMETHANE		METHYL iso-BUTYL KETONE	
BROMOETHANE		METHYL CELLOSOLVE	
BROMODICHLOROMETHANE		METHYL CYCLOHEXANE	
BUTANE		METHYL CYCLOPENTANE	
BUTANOL		METHYLENE CHLORIDE	
iso-BUTANOL		METHYL ETHYL KETONE	1,000,000
sec-BUTANOL		NONANE	
BUTYL ACETATE		OCTANE	
iso-BUTYL ACETATE		iso-OCTANE	
CARBON TETRACHLORIDE		PENTANE	
CHLOROBENZENE		PROPANOL	
1-CHLOROBUTANE		iso-PROPANOL	
2-CHLOROBUTANE		PROPYL ACETATE	
CHLOROFORM		iso-PROPYL ACETATE	
CYCLOHEXANE		STYRENE	
DIBROMOMETHANE		1,1,2,2-TETRABROMOETHANE	
1, 2-DICHLOROETHANE		1,1,1,2-TETRACHLOROETHANE	
1, 2-DICHLOROETHENE		1,1,2,2-TETRACHLOROETHANE	
1, 1-DICHLOROETHYLENE		TETRACHLOROETHYLENE	
1, 2-DICHLOROPROPANE		TOLUENE	750,000
ETHANOL		1,1,1-TRICHLOROETHANE	
ETHYL ACETATE		TRICHLOROETHYLENE	
ETHYL BENZENE		TRICHLOROTRIFLUOROETHANE	
FORMALDEHYDE		VINYL ACETATE	
HEPTANE		Ethyl Benzene META-XYLENE	
HEXANE		ORTHO-XYLENE	14,000,000
METHANE		PARA-XYLENE	(min.)
		Ethyl Cellosolve	CNQ

RECEIVED OCT 17 1983 HAZARDOUS MATERIALS MANAGEMENT UNIT

CONCLUSION: Configuration: Elution pattern is that of a paint thinner.
Reference Std. Paint Thinner (GC-PT-5)
Identified Components: Listed Above

J. G. LAMBERT

*(Cannot [illegible])

Director: Dr. Jesse S. Tucker

Hartford, Connecticut

LABORATORY NUMBER 26172 (1965)

HYDROCARBONS Headspace F45

Telephone: 566-5494

Analyzed: 10/5/83

NAME	Micrograms per Liter	NAME	Micrograms per Liter
ACETONE		METHANOL	
BENZENE		METHYL ACETATE	
BROMOCHLOROMETHANE		METHYL iso-BUTYL KETONE	
BROMOETHANE		METHYL CELLOSOLVE	
BROMODICHLOROMETHANE		METHYL CYCLOHEXANE	
BUTANE		METHYL CYCLOPENTANE	
BUTANOL		METHYLENE CHLORIDE	
iso-BUTANOL		METHYL ETHYL KETONE	
sec-BUTANOL		NONANE	
BUTYL ACETATE		OCTANE	
iso-BUTYL ACETATE		iso-OCTANE	
CARBON TETRACHLORIDE		PENTANE	
CHLOROBENZENE		PROPANOL	
1-CHLOROBUTANE		iso-PROPANOL	
2-CHLOROBUTANE		PROPYL ACETATE	
CHLOROFORM		iso-PROPYL ACETATE	
CYCLOHEXANE		STYRENE	
DIBROMOMETHANE		1,1,2,2-TETRABROMOETHANE	
1, 2-DICHLOROETHANE		1,1,1,2-TETRACHLOROETHANE	
1, 2-DICHLOROETHENE		1,1,2,2-TETRACHLOROETHANE	
1, 1-DICHLOROETHYLENE		TETRACHLOROETHYLENE	
1, 2-DICHLOROPROPANE		TOLUENE	
ETHANOL		1,1,1-TRICHLOROETHANE	
ETHYL ACETATE		TRICHLOROETHYLENE	
ETHYL BENZENE		TRICHLOROTRIFLUOROETHANE	
FORMALDEHYDE		VINYL ACETATE	
HEPTANE		META-XYLENE	
HEXANE		ORTHO-XYLENE	
METHANE		PARA-XYLENE	

CONCLUSION: Configuration: Elution pattern is that of early eluting components characteristically found in an organic soil plus a trace of an unidentified petroleum product.

RECEIVED OCT 17 1983 HAZARDOUS MATERIALS MANAGEMENT UNIT

Director: Dr. Jesse S. Tucker

APPENDIX M

RESULT OF FLASH POINT ANALYSIS OF SAMPLES #26174, #26178 AND #26179 AND EP TOXICITY METALS ANALYSIS OF SAMPLES #26173, #26174, #26175, #26176, #26177, #26178, AND #26179 CONDUCTED BY THE CONNECTICUT STATE DEPARTMENT OF HEALTH SERVICES, LABORATORY DIVISION ON SEPTEMBER 19, 1983

DEPARTMENT OF HEALTH SERVICES

PHONE 566-5626 LABORATORY DIVISION 10 CLINTON STREET

P.O. BOX 1689, HARTFORD, CT 06101

SEP 19 10 53 AM '83

SAMPLE SURFACE WATER

INVOICE

SAMPLES OF SEWAGE OR TRADE WASTE

To be filled in by person collecting samples

From MARINO PROPERTY in town of MIDDLETOWN 83

Sample of sewage ( ), trade waste ( ), sludge ( ), or DISCARDED DRUMS(2) LEACHATE + SURFACE WATER

Name of treatment plant

Owned by

Plant processes or treatment

RECEIVED OCT 19 1983 HAZARDOUS MATERIALS MANAGEMENT UNIT

Collected by DEPT. OF ENVIRONMENTAL PROTECTION (Name) (Title) On 9/16/83

Report to HAZARDOUS MATERIALS MANAGEMENT UNIT HAZARDOUS WASTE SECTION 165 CAPITOL AVENUE HARTFORD, CONNECTICUT 06106 Shipped on Pat Bolue x4869/8843 Room 13 9/19/83

Laboratory Number	Number	Sample of	Collected From	Composite Yes or No	Min. Apart	Time of Collection
26173	1958	WATER LEACHATE	3' PIT DUG	NO	5	11:45 AM
SUBMITTED VOID	~~1959~~	~~OILY WATER~~	~~SURFACE WATER STREAMED~~			~~11:50~~
26174	1960 *	RUST COLOR LIQUID	DRUM ON BANK			11:55
26175	1961	WATER	DRUM ON STREAMBED			12:00
26176	1962	WATER LEACHATE	2' PIT DUG			12:05
26177	1963	WATER	STREAM 10' BEFORE BROOK			12:10
26178	1964 *	PAINT	5 GAL PAINT CAN			12:15
26179	1965 *	OILY MUD	STREAMBED SOUTHERN MOST			12:20 PM

No. and Kind of Bottles 8 BROWN HCO BOTTLES

OL-33 Rev. 10-82

PLEASE TEST FOR: BB + 1 plastic jar [redacted] Director

1. EP TOXICITY (METALS) Pb, Cd, Cr, Ba, Zn,
2. FLASH POINT ON SAMPLES #1960, 1964, + 1965.

Middletown Reported as mg/kg

Collector's Number	Pb	Cd	Cr	Ba	Zn	Flash point	
26173	3.5	0.12	0.24	5.0	7.8		
26174	0.16	0.05	0.02	0.00	0.39	107.6	°F
26175	0.12	0.02	0.00	0.00	2.1		
26176	14.	0.35	1.4	28.	38.		
26177	0.12	0.02	0.00	5.4	0.36		
26178	1700.	0.40	170.	0.00	7.3	114.8	°F
mg/1 26179	0.85	0.02	0.00	0.90	2.3	107.6	°F

Mass analysis all liquids

PAINT CAN

EPA Tox Leachate

A. S. COLLINS

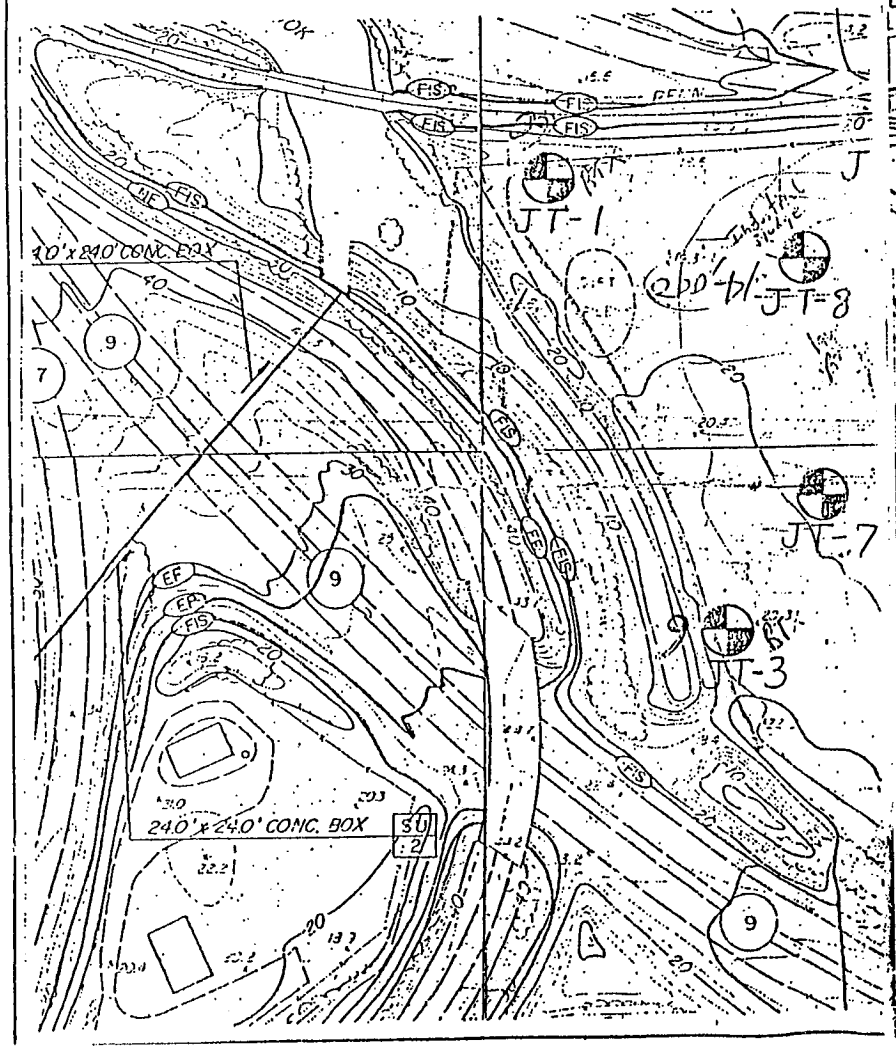
APPENDIX N

MARINO PROPERTY SOIL BORING/MONITORING WELL LOCATION MAP
HEYNEN ENGINEERS, CLINTON, CONNECTICUT
DECEMBER 4, 1985

BORING PLAN
BY
HEYNEN ENGINEERS.

HEYNEN ENGINEERS
3 Woodland Drive
CLINTON, CONNECTICUT 06413
(203) 669-9342

JOB 50 WALNUT ST. MIDDLETOWN, CT.
SHEET NO ____ OF ____
CALCULATED BY ____ DATE 12/4/85
CHECKED BY ____ DATE ____
SCALE 1" = 100'



APPENDIX O

ORGANIC COMPOUNDS DETECTED IN GROUNDWATER SAMPLES COLLECTED FROM MARINO PROPERTY MONITORING WELLS AND ANALYZED BY ENVIRONMENTAL MONITORING LABORATORY, INC. ON DECEMBER 2, 1985

REPORT OF RESULTS

Your sample ID Middletown Date submitted 12-02-85

EML sample ID 51202-HEI Date analyzed 12-02-85

****ALL VALUES REPORTED IN ug/L****

Method 8010/8020 via GC-PID/HECD. NOTE: not detected = <1ppb

Compound	#1-JT	#2-JT	#3-JT
benzene	2.1	<1	1.0
chlorobenzene	<1		<1
dichlorobenzenes	<1		<1
ethylbenzene	27.1		1.3
toluene	11.1		1.8
xylenes	21.7		3.1
chloromethane	<1		<1
bromomethane			
dichlorofluoromethane			
vinylchloride			
chloroethane			
methylenechloride			
trichloroflouromethane			
11 dichloroethene			
11 dichloroethane			
t-12 dichloroethene			
chloroform			
12 dichloroethane			
111 trichloroethane			
carbon tetrachloride			
bromodichloromethane			
12 dichloropropane			
t-13 dichloropropene			
trichloroethylene			
dibromochloromethane			
112 trichloroethane			
c-13 dichloropropene			
2 chloroethylvinylether			
bromoform			
1122 tetrachloroethane			
PCE			

Jan D. Dunn PhD

PH-0508 CT DEPT HEALTH CERTIFICATION ENVIRONMENTAL MONITORING LABORATORY INC. MERIDEN CT

ENVIRONMENTAL MONITORING LABORATORY, INC.

100 RESEARCH PARKWAY
MERIDEN, CT 06450

REPORT OF RESULTS

Your sample ID Middletown Date submitted 12-02-85

EML sample ID 51202-HEI Date analyzed 12-02-85

****ALL VALUES REPORTED IN ug/L****

Method 8010/8020 via GC-PID/HECD. NOTE: not detected = <1ppb

Compound	#4-JT	#5-JT	8-JT
benzene	<1	4.1	1,956.7
chlorobenzene		<1	<1
dichlorobenzenes		<1	<1
ethylbenzene		5.9	282.1
toluene		27.1	11,660.9
xylenes		22.4	674.8
chloromethane		<1	<1
bromomethane			
dichlorofluoromethane			
vinylchloride			
chloroethane			
methylenechloride			
trichloroflouromethane			
11 dichloroethene			
11 dichloroethane			
t-12 dichloroethene			
chloroform			
12 dichloroethane			
111 trichloroethane			32.8
carbon tetrachloride			<1
bromodichloromethane			
12 dichloropropane			
t-13 dichloropropene		12.7	250.7
trichloroethylene		<1	<1
dibromochloromethane			
112 trichloroethane			
c-13 dichloropropene			
2 chloroethylvinylether			
bromoform			
1122 tetrachloroethane			
PCE		*	*

*Plus other mineral spirit hydrocarbons.

Jan D. Dunn Ph.D.

PH-0808 CT DEPT HEALTH CERTIFICATION ENVIRONMENTAL MONITORING LABORATORY INC. MERIDEN CT

ENVIRONMENTAL MONITORING LABORATORY, INC.

100 RESEARCH PARKWAY
MERIDEN, CT 06450