

**ADDENDUM TO THE REMOVAL PROGRAM
PRELIMINARY ASSESSMENT/
SITE INVESTIGATION
FOR
MARINO PROPERTY SITE
MIDDLETOWN, CONNECTICUT**

Prepared for:

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

CONTRACT NO. 68-W0-0036

TAT 01-N-00801

TDD #01-9103-05A

Prepared By:

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

May 1991

TABLE OF CONTENTS

- I. Introduction
- II. Field Chronological Summary
- III. Attachments
 - Appendix A - Site Location Map (Figure 1)
 - Appendix B - Site Diagram (Figure 2)
 - Appendix C - Property Deed/Tax Map
 - Appendix D - Excavation Work Plan
 - Appendix E - Site Health and Safety Plan
 - Appendix F - Air Monitoring Logs
 - Appendix G - Test Pit Logs
 - Appendix H - Site Sampling QA/QC Plan
 - Appendix I - Chain of Custody Documents
 - Appendix J - Photography Log Sheets
 - Appendix K - (Table One) Test Pit Locations

I. INTRODUCTION

The purpose of this report entitled *Addendum to the Removal Program Preliminary Assessment/Site Investigation for Marino Property Site, Middletown, Connecticut* is to document the subsurface investigation performed by the U.S. Environmental Protection Agency (EPA) Emergency Planning and Response Branch and the Roy F. Weston, Inc., Technical Assistance Team (TAT) during the period of April 15-17, 1991 at the Marino Property site in Middletown, CT. The site is located in an industrial area outside of downtown Middletown along the Connecticut River and the area of investigation consisted of the level gravel lot to the west of the facility buildings (Appendices A and B - Site Location Map, Figure 1 and Site Diagram, Figure 2). The initial Removal Program Preliminary Assessment/Site Investigation (PA/SI), performed from October 30, 1990 through November 1, 1990, involved a geophysical investigation and soil gas survey that identified several potential areas which may contain buried drums (1).

The objectives of the subsurface investigation included:

- Relocating the geophysical anomalies identified during the initial PA/SI.
- Establishing proper site control zones and site health and safety procedures to protect workers and nearby residents.
- Excavating up to ten test pits to locate buried drums. This objective included subcontracting of personnel and heavy equipment by TAT under special project TDD #01-9104-S1, PCS #0105.
- Air monitoring during the excavations to establish proper levels of personal protective equipment and to verify established site control zones.
- Collection of samples to determine the contents of any buried drums located during the excavation.
- Restoring the site to original grade following the excavation activities.

The Roy F. Weston, Inc. Region I Technical Assistance Team provided EPA with the support needed to complete the objectives of the subsurface investigation. A field chronological summary is included to provide a narrative account of site activities, which is supported by the appropriate attachments to the report.

(1) - Roy F. Weston, Inc., Removal Program PA/SI for Marino Property Site, Middletown, Connecticut, December 1990.

II. FIELD CHRONOLOGICAL SUMMARY

April 15, 1991

Weather: Cloudy/Rain 50 ° Fahrenheit

TAT members Timothy Jones and David Strzempko travelled with U.S. EPA Emergency Planning and Response Branch Site Investigator (SI) Mary Ellen Stanton to the Middletown, Connecticut City Hall. A tax map and property deed for the Marino Property Site were obtained (Appendix C - Property Deed/Tax Map) and the Middletown Water Department was paid for a hydrant hook-up to be utilized for the decontamination water supply during field activities at the Marino Property site.

Upon arriving at the Marino Property site, EPA and TAT personnel set up rain protection and calibrated the Geonics EM-31 conductivity meter for the site geophysical investigation. Once calibrated, the conductivity meter was brought to general site areas identified during the previous survey as potentially containing buried metal objects. The largest electromagnetic anomalies were initially relocated, and pin flags were placed to delineate the edges. A number of smaller electromagnetic anomalies that were not identified during the previous survey were also flagged. U.S. EPA On-Scene Coordinator (OSC) Dean Tagliaferro arrived at the site to participate in the investigation.

April 16, 1991

Weather: Sunny 70 ° Fahrenheit

OSC Tagliaferro, SI Stanton and TAT members Strzempko and Jones arrived at the Marino Property site and taped off exclusion areas, decontamination areas and the support zone with caution tape. The Ford 655A backhoe and equipment operator for the TAT subcontractor, National Oil Service, arrived at the site. As the backhoe was unloaded the National Oil Service support truck arrived. The subcontractor crew included:

Bill Cowles	-	Foreman
Jim Boyd	-	Operator
Mike Garrity	-	Cleanup Technician

Tom Botti and Mark McDaniel arrived at the site representing the Connecticut Department of Environmental Protection (CT DEP) Site Remediation Branch. Also, Frank Wacht, an inspector for the CT DEP arrived at the site.

Once the support zone and decontamination areas were completed, a safety meeting was held among all persons involved with site activities. During the safety meeting, each person's role, decontamination procedures and emergency contingencies were discussed.

Excavation was begun at the northeast end within the parking lot at the largest geophysical anomaly encountered during the survey. All persons within the exclusion zone were equipped with level B personal protective equipment (PPE) in accordance with the site work and safety plans (Appendices D and E). During test pit excavation, EPA and TAT personnel conducted air monitoring with the HNU Systems PI-101 photoionization detector (HNU PID) and the Foxboro Model 128 Organic Vapor Analyzer flame ionization detector (OVA FID) at the breathing zone, as well as over test pits that were being advanced. Each test pit was also screened for combustible gases, oxygen levels and radiation. The CT DEP personnel provided organic vapor monitoring at several areas spaced around the site

beyond the exclusion zone boundaries during the first day of test pitting. Organic vapor monitoring results can be found in Appendix F - Air Monitoring Logs. As test pits were advanced, TAT members completed test pit logs describing subsurface conditions that were encountered. These logs can be found in Appendix G. Samples were collected in accordance with the Site Sampling QA/QC Plan (Appendix H), and were transported by TAT to the EPA New England Regional Laboratory (NERL) for analyses. All samples were documented using EPA chain of custody procedures (Appendix I). Photographs were also taken of each test pit, any sampling locations, general site features and of the material excavated from each test pit (Appendix J).

TEST PIT #1

At test pit #1, two 55-gallon steel drums were encountered at approximately six inches beneath the ground surface. One of the drums was filled with rags, while the second drum was crushed to one-third of its original length and contained a red and white solid material. Several metal five-gallon pails were also uncovered near the surface during the excavation of test pit #1. The processed gravel parking surface was underlain by black incinerator waste mixed with glass, metal and other solid waste below 6 inches in test pit #1. The test pit continued in the area directly adjacent to the drums and pails to a depth of six feet where the same incinerator ash was observed. Elevated readings on both the HNU PID and the OVA FID were recorded over the test pit. Following the sampling activities discussed below, the excavated material including the drums, pails and the polyethylene sheeting (used to place excavated materials on) was backfilled into test pit #1.

Sample S001 was collected from the colored solid adjacent to the five-gallon pail located in test pit #1 and sample material was collected for volatile organic compound (VOC), base/neutral and acid extractable (BNA) and PCB/pesticide analyses. Sample S002 was collected from the black incinerator waste located below two feet in test pit #1 and sample material was collected for VOC, BNA, PCB/pesticide analyses and for X-Ray Fluorescence (XRF) metals screening. During the excavation, one of the five-gallon pails began leaking a viscous liquid and the liquid was collected as sample S003 to be screened for VOCs.

TEST PIT #2

Test pit #2 was located directly south of test pit #1 at a large electromagnetic anomaly located with the EM-31 conductivity meter. The material encountered was a processed gravel layer underlain by black incinerator waste as found in test pit #1. Several five-gallon pails and 55-gallon drum lids (lids only) were located at a depth of one to four feet, which explained the anomaly. At a depth of four feet, a viscous colored liquid began to flow into the base of the test pit from the wall of the trench. No container could be observed as the source of the liquid and the liquid filled the trench with an approximate one foot layer. Sample S004 was collected from the liquid that had been picked up in the bucket of the backhoe. Sample material was collected for VOC, BNA and PCB/pesticide analyses. The decision was made by OSC Tagliaferro and SI Stanton to backfill test pit #2 in order to reduce the levels of organic vapors that were being recorded. The resources to remove the liquid from the ground were not present at the site and the test pit was backfilled. Following the backfilling, levels of organic vapors were reduced considerably to peak levels up to ten units as measured on the HNU PID.

Due to the initial work area setup time, only two test pits were excavated on April 16, 1991. The backhoe bucket was decontaminated with a steam pressure washer and all personnel

departed the exclusion zone for the day. Samples were packaged as hazardous substances in paint cans and coolers and preserved with ice. All equipment was secured for the day and all personnel departed the site.

April 17, 1991

Weather: Partly Cloudy/Scattered AM Showers/Clearing by early PM 55-65 ° Fahrenheit

The support zone and decontamination area setup was completed on April 16, 1991 and site activities began with a safety meeting where heat stress monitoring and decontamination procedures were discussed. Test pits were to be excavated in the areas identified on April 15, 1991 along the west and center portions of the site. Similar trenching, air monitoring, sampling and documentation procedures were to be used. Additionally, information gathered from each test pit was to be relayed by two-way radio to the command post where more accurate test pit logs would be completed.

TEST PIT #3

Test pit #3 was located in the northwest corner of the site. The excavated material consisted of a brownish-red sand and gravel layer overlying the black incinerator waste encountered previously. A layer of empty five-gallon pails and laminated fiberglass material was located below a depth of six feet and no drums were located. Slightly elevated readings were recorded on the OVA FID, but a comparison with the HNU PID showed no elevated reading. This comparison was used to show that the compound being detected by the OVA FID was most likely methane gas produced by the landfilled incinerator waste. No samples were collected from test pit #3 and the test pit was backfilled and graded.

TEST PIT #4

Test pit #4 was located along the west side in the center of the site. Similar layers were found with the processed gravel overlying brownish-red soil and the black incinerator waste. The test pit was excavated to a depth of ten feet and no buried drums were located. Air monitoring again showed elevated readings on the OVA FID (300 units) and reduced levels with the HNU PID (4 units) which may have been caused by methane gas. No samples were collected from test pit #4 and the test pit was backfilled and graded.

TEST PIT #5

Test pit #5 was located adjacent to test pit #4 towards the center of the site and the materials excavated were also similar to test pit #4. No elevated readings were recorded on the HNU PID, no samples were collected and the test pit was backfilled and graded.

TEST PIT #6

Test pit #6 was located in the southwest corner of the site and the materials excavated were similar to the previous three test pits. A large area of scrap metal was uncovered but no drums were located. Air monitoring showed background levels only on the HNU PID, no samples were collected and the test pit was backfilled and graded.

TEST PIT #7

Test pit #7 was located towards the northwest corner of the site near test pit #3. Three crushed 55-gallon drums containing red and white solids were uncovered at a depth of five feet and sample S005 was collected from the colored solids. Sample material was collected for VOC, BNA, and PCB/pesticide analyses and XRF metals screening. No readings above background were recorded on the HNU PID at the location of sample S005. Black incinerator waste was uncovered to a depth of eight feet and sample S006 was collected from the last backhoe bucket that was removed from the test pit. Sample material was collected for VOC, BNA, and PCB/pesticide analyses and XRF metals screening. Air monitoring showed background levels only on the HNU PID and the test pit was backfilled and graded.

TEST PIT #8

Test pit #8 was located in the northwest corner of the site. The material excavated was similar to that excavated from the previous test pits and no drums were located. Air monitoring showed background levels only on the HNU PID. No samples were collected and the test pit was backfilled and graded.

Following the completion of test pit #8, the backhoe was thoroughly decontaminated over the last test pit, using the steam pressure washer. Decontamination included raising the vehicle into the air on its front and rear bucket and spraying off the tires. Air monitoring was then conducted with the HNU PID across the entire site and no readings above background were recorded. OSC Tagliaferro and TAT member Jones determined that level D PPE was now acceptable based on the final air monitoring results. The backhoe operator then began to cover the test pits with processed gravel and return each area to its original grade.

TAT members Jones and Strzempko measured the location of each test pit using a tape and compass in order to relocate the test pits at a future date. The initial point of reference, the distance to the test pit, the degrees from magnetic north, and the test pit numbers located are provided in Appendix K (Table One - Test Pit Locations). Demobilization of all personnel and equipment was conducted and the crew departed the Marino Property site.

APPENDIX A
SITE LOCATION MAP

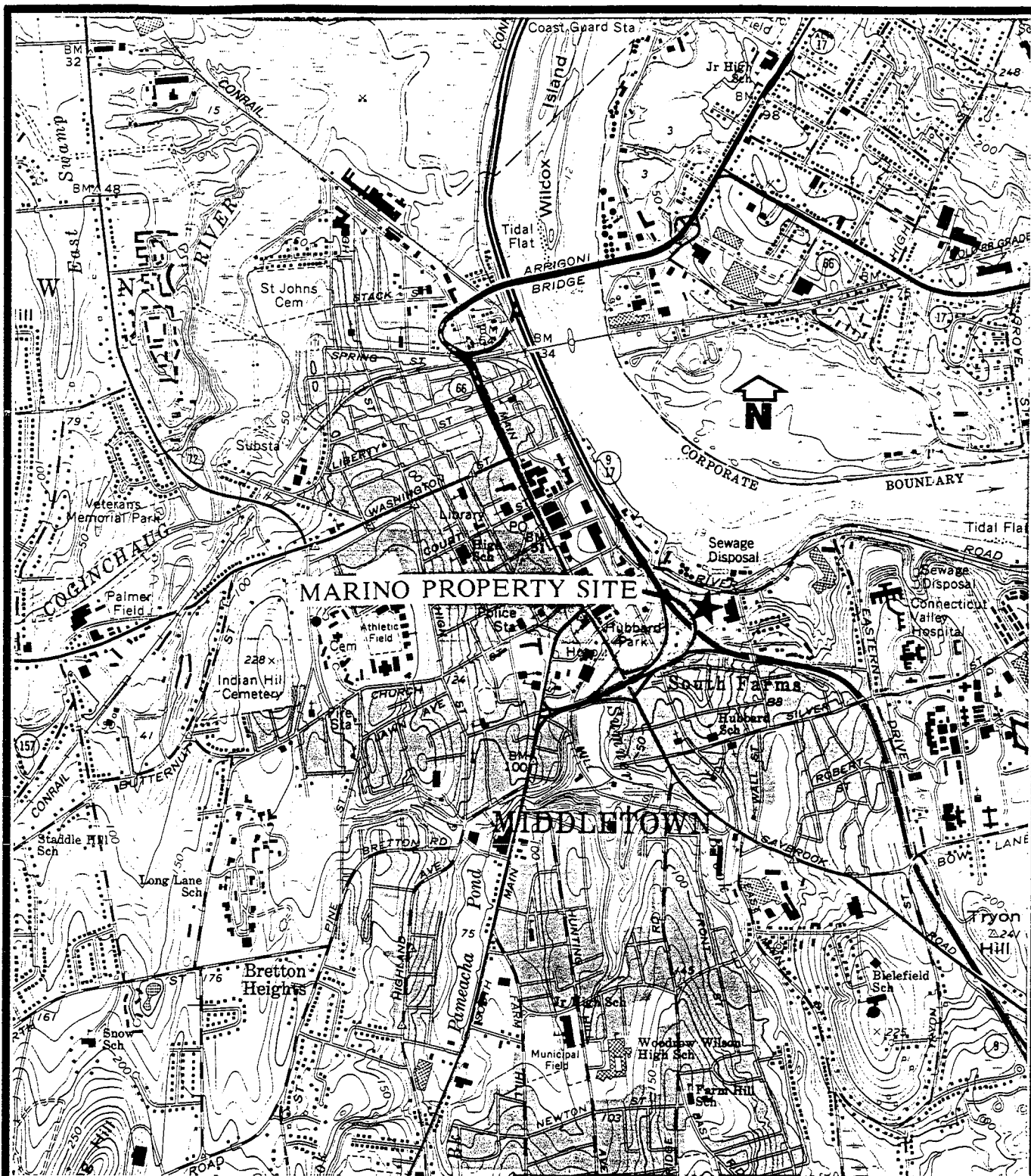
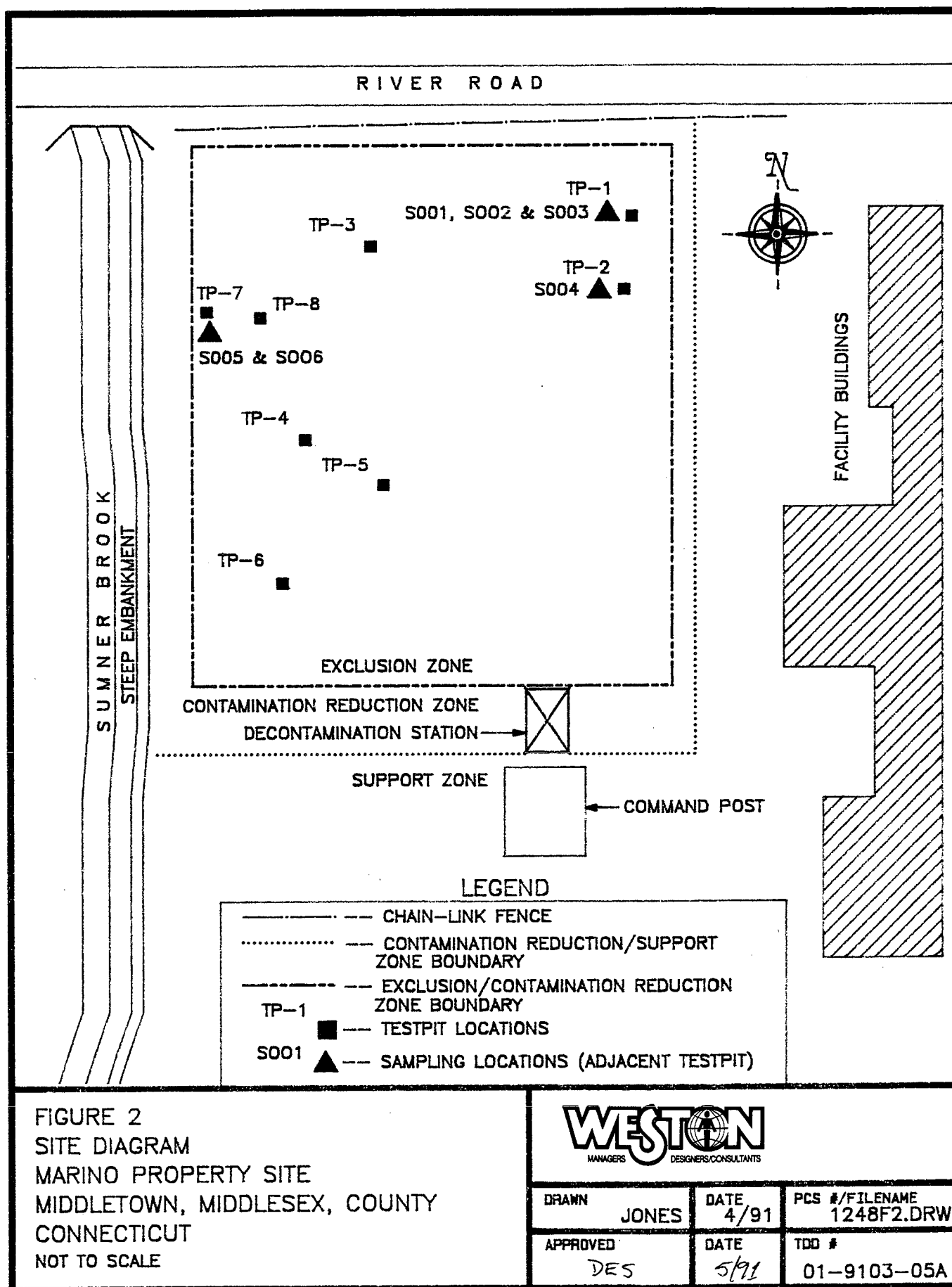


FIGURE 1
 SITE LOCATION MAP
 MARINO PROPERTY SITE
 MIDDLETOWN, MIDDLESEX COUNTY
 CONNECTICUT
 (USGS 7.5 min QUAD, MIDDLETOWN, CT)
 NOT TO SCALE



DRAWN	JONES	DATE	4/91	PCS #/FILENAME	1248F1.DRW
APPROVED	DES	DATE	4/91	TDD #	01-9103-05A

APPENDIX B
SITE DIAGRAM



APPENDIX C
PROPERTY DEED/TAX MAP

To all People to Whom these Presents shall Come Greeting:

Know Ye. That CONNECTICUT DEVELOPMENT COMMISSION, a body politic and corporate constituting a public instrumentality and political subdivision of the State of Connecticut, having an office at 210 Washington Street, Hartford, Connecticut,

for the consideration of One (\$1.00) Dollar and other valuable considerations,

received to its full satisfaction of SALVATORE J. MARINO and ANTOINETTE G. MARINO, husband and wife, both of the City of Middletown (Miner Street), County of Middlesex and State of Connecticut;

do remise, release, and forever QUIT CLAIM unto the said Salvatore J. Marino and Antoinette G. Marino, as joint tenants and not as tenants in common,

and unto the survivor of them, and unto the heirs and assigns of the survivor of them forever, all such right, title, interest, claim and demand whatsoever as it, the said Releasor has or ought to have in or to those premises described on Schedule A., together with all buildings and improvements, which Schedule A is attached hereto and made a part hereof.

"No Conveyance Tax collected

Louis F. Curran

Town Clerk of Middletown"

SCHEDULE A

three pieces or parcels of land situated in the Town of Middletown, County of Middlesex and State of Connecticut, with the buildings and all other improvements thereon, known as 50 and 52 Walnut Street and being bounded and described as follows:

PARCEL NO. I

A certain piece or parcel of land with all the buildings and improvements thereon, situate, lying and being on the West side of Walnut Street in the City of Middletown, County of Middlesex and State of Connecticut and shown on that map on file in the office of the City Clerk of said Middletown entitled: "Map of Property To Be Conveyed to Georgia-Bonded Fibers, Inc. Walnut St., Middletown, Conn. Scale 1"=40' March 25, 1968 L. Norman Germain Consulting Engineer and Land Surveyor", and more particularly bounded and described as follows:

Commencing at a point in the northerly line of Burbridge Avenue, which point is 146.8 feet westerly from the northwest corner of Walnut Street and said Burbridge Avenue; thence westerly in a straight line along said northerly line of Burbridge Avenue and its prolongation westerly for a distance of 225 feet, more or less, to a point in the northerly line of land of the State of Connecticut (CHD), which CHD line is shown on a map known as CHD R/W Map #82-11, sheet one of two sheets; thence westerly in a straight line 25 feet more or less, along said CHD line to a CHD monument; thence westerly, making an interior angle of $173^{\circ}38'10"$, a distance of 159.89 feet to another CHD monument in said CHD line; thence westerly on the arc of a curve having a radius of 2,475.00 feet for a distance of 46.84 feet to a boundstone; thence northerly on the arc of a curve concentric with the center line of the Acheson Expressway and 175.00 feet easterly therefrom for a distance of 578 feet, more or less, to a point in the southerly line of the right-of-way of the New York, New Haven and Hartford Railroad Company (Valley Division); thence easterly on the arc of a curve forming the southerly line of the right-of-way of said Railroad 481 feet, more or less, to a point which is the intersection of said southerly line of said Railroad and the southerly line of River Road; thence easterly in a straight line along said southerly line of River Road 150 feet, more or less, to the intersection of the westerly line of Walnut Street and said southerly line of River Road; thence southerly in a straight line along said westerly line of Walnut Street 342 feet to a point; thence westerly in a straight line 132.5 feet along the northerly line of land now or formerly of John and Victoria Kruvka (Kruvensky); thence southerly in a straight line along the westerly line of the land now or formerly of said John and Victoria Kruvka (Kruvensky) 298 feet to the point of beginning.

Said land is bounded:

- Northerly: in part by land of New York, New Haven and Hartford Railroad Company (Valley Division), and in part by River Road;
- Easterly: in part by Walnut Street and in part by land now or formerly of John and Victoria Kruvka (Kruvensky);
- Southerly: in part by Burbridge Avenue and in part by land of the State of Connecticut; and in part by said land now or formerly of John and Victoria Kruvka (Kruvensky);
- Westerly: by land of the State of Connecticut.

PARCEL NO. II

A certain piece or parcel of land, with all the buildings and improvements thereon, including a dwelling house known as No. 52 Walnut Street in the Town of Middletown, County of Middlesex, and State of Connecticut said premises being shown on Map No. 2204 on file in the office of the Middletown City Clerk entitled "Map of Alexandra Warzecha Property, Middletown, Conn. - July 1959, Scale 1 in. = 20 ft., As Conveyed to the Middletown Rubber Corporation," L. F. Quirk, Civil Eng. and bounded and described as follows: Commencing at a point in the east line of Walnut Street, which marks the southwest corner of land now or formerly of John Kruvensky and the northwest corner of the herein described premises; thence easterly along the south line of said land now or formerly of John Kruvensky one hundred fifty (150) feet, more or less to a point which marks the northeast corner of the herein described premises; thence southerly along land now or formerly of Sebastian and Vincenza Marino one hundred twenty-one (121) feet, more or less, to a point, which marks a southeast corner of the herein described premises; thence westerly along the north line of land now or formerly of Josephine S. Starr fifty (50) feet to a point, which marks a northwest corner of land now or formerly of Josephine S. Starr; thence southerly along the west line of said land now or formerly of Josephine S. Starr, forty-five and two-tenths (45.2) feet to a point, which marks a southeast corner of the herein described premises; thence westerly along the north line of land now or formerly of Josephine S. Starr one hundred one (101) feet to a point in said east line of Walnut Street, which marks the southwest corner of the herein described premises; and thence northerly along said east line of Walnut Street one hundred seventy (170) feet to the point or place of beginning.

PARCEL NO. III

A certain piece or parcel of land situated to the east of the east side of Walnut Street in said Town of Middletown, shown on Map No. 2364 on file in the Office of the Middletown City Clerk entitled "Map Showing Rear Portion of Josephine S. Starr property, Middletown, Conn. Aug. 1961, Scale 1 in. = 20 ft. as conveyed to the Middletown Rubber Corp. L. F. Quirk Civil Eng." and bounded: Beginning at a point in the northerly line of land shown on said map as land of Edward Zaklukiewicz, et ux., which point marks the southwest corner of the herein described premises, as shown on said map; thence northerly along a line separating the herein described premises from land now or formerly of Josephine S. Starr, as shown on said map, fifty-six (56) feet to a point which marks the northeast corner of said land now or formerly of Josephine S. Starr; thence continuing northerly along the east line of land now or formerly of The Middletown Rubber Corp. as shown on said map, forty-five and two-tenths (45.2) feet, more or less, to a point which marks the northwest corner of the herein described premises; thence easterly along the southerly line of land now or formerly of The Middletown Rubber Corp., fifty (50) feet, to a point; thence continuing easterly along the southerly line of land of S. & V. Marino, forty-nine and four-tenths (49.4) feet to a point which marks the northeast corner of the herein described premises, as shown on said map; thence southerly along land shown on said map as land of Sebastian & Vincenzo Marino ninety-eight and six-tenths (98.6) feet to a point which marks the northeast corner of land now or formerly of Edward Zaklukiewicz, et ux., as shown on said map; and thence westerly along the northerly line of said land now or formerly of Zaklukiewicz, as shown on said map, ninety-nine (99) feet to the point of beginning.

Together with all rights, easements, tenements, hereditaments and appurtenances thereunto appertaining and together with all buildings and improvements now or hereafter placed thereon, and it is agreed that all appliances and equipment now or hereafter installed, including, but not limited to, all gas and electrical fixtures and appliances, all heating, plumbing, lighting, water-heating, incinerating, ventilating, and air-conditioning equipment fixtures and appurtenances, all engines and machinery, elevators, motors, window screens, screen doors, storm windows, and awnings are and shall be deemed to be accessory to and a part of the realty.

Said premises are subject to:

- A. Right of entry in favor of Dewitt C. Sage and his heirs and assigns to lay down water pipes as reserved in Warranty Deed from Dewitt C. Sage to George H. Hurlburt dated August 21, 1866 and recorded in Volume 98, page 8 of the Middletown Land Records.
- B. Right of Way in favor of D. C. Sage and his heirs and assigns as reserved in Warranty Deed from George H. Hurlburt to The Middletown Plate Company dated November 20, 1866 and recorded in Volume 98, page 80 of the Middletown Land Records.
- C. Agreement to make and maintain fences on West Line as set forth in Warranty Deed from Elmore Penfield to The Stiles & Parker Press Company dated October 8, 1878 and recorded in Volume 110, page 349 of the Middletown Land Records.
- D. Water rights in favor of Peckheimer Rau & Company as set forth in Warranty Deed from Ira Y. Sage to The Stiles & Parker Press Company dated November 27, 1886 and recorded in Volume 116, page 109 of the Middletown Land Records.
- E. Right of way in favor of Ira Y. and John C. Sage as set forth in Warranty Deed from The Stiles & Parker Press Company to Middlesex Rubber Works Company dated November 10, 1893 and recorded in Volume 121, page 89 of the Middletown Land Records.
- F. Water rights in favor of Eugene O. Pratt as set forth in Warranty Deed from The Omo Manufacturing Company to Charles R. Flint et al dated April 26, 1897 and recorded in Volume 126, page 245 of the Middletown Land Records.
- G. Sewer obligations and easements as set forth in Agreement between Roger Kennedy and The Omo Manufacturing Company dated July 30, 1902 and recorded in Volume 137, page 403 of the Middletown Land Records.
- H. Flowage rights and easements in favor of The City of Middletown as set forth in Warranty Deed from Anastasia Kennedy to The Omo Manufacturing Company dated January 10, 1918 and recorded in Volume 151, page 650 of the Middletown Land Records.
- I. Pole line rights and easements in favor of The Connecticut Power Company as more fully set forth in the following grants from The Omo Manufacturing Company:
 - (a) Dated May 31, 1923 and recorded in Volume 167, at Page 272 of Middletown Land Records.
 - (b) Dated April 12, 1935 and recorded in Volume 191, at Page 535 of the Middletown Land Records.
 - (c) Dated May 29, 1946 and recorded in Volume 214, at Page 418 of the Middletown Land Records.
 - (d) Dated May 29, 1946 and recorded in Volume 214, at Page 420 of the Middletown Land Records.
 - (e) Dated April 8, 1949 and recorded in Volume ~~214~~²²⁸, at Page 78 of the Middletown Land Records.

J. Sewer line easement in favor of the City of Middletown as set forth in grant from The Omo Manufacturing Company dated November 1, 1935 and recorded in Volume 194, page 31 of the Middletown Land Records.

Being the same premises conveyed to Connecticut Development Commission by Warranty Deed from Union Trust Company dated March 16, 1973 and recorded in Volume 394, Pages 100-105 of the Middletown Land Records.

To Have and to Hold the premises, with the appurtenances thereof, unto them the said Releasees, and unto the survivor of them, and unto such survivor's heirs and assigns forever, to them and their own proper use and behoof, so that neither it, the said Releasor,

nor any other person or persons in its name and behalf, shall or will hereafter claim or demand any right or title to the premises or any part thereof, but they and every one of them shall by these presents be excluded and forever barred.

In Witness Whereof, // Connecticut Development Commission, acting herein by
have hereunto set its hand and seal

this 9th day of July A. D. 19 73.

Signed, Sealed and Delivered in Presence of: Connecticut Development Commission

John F. Shaw Jr.
Alex T. Sarecki

By James R. Collett
James R. Collett

State of Connecticut,
County of Middlesex

SS. Middletown

On this the 9th day of July, 1973, before me,
John K. Jepson, the undersigned officer, personally appeared
Connecticut Development Commission, acting herein by James R. Collett, Chair
known to me ~~as~~ ^{to be} ~~satisfactorily~~ ^{known} to be the person
whose name is subscribed to the within instrument and acknowledged that he
executed the same for the purposes therein contained, as his free act and deed,
and the free act and deed of Said Commission.

In Witness Whereof, I hereunto set my hand and official seal.
AS TO FORM

JUL 9 1973
Perrie Phillips
PERRIE PHILLIPS
DEP. ATTORNEY GENERAL

John K. Jepson
Commissioner
Title of Officer

Received for Record July 11, 1973 at 11:15 AM

Recorded by John F. Shaw Jr. Town Clerk

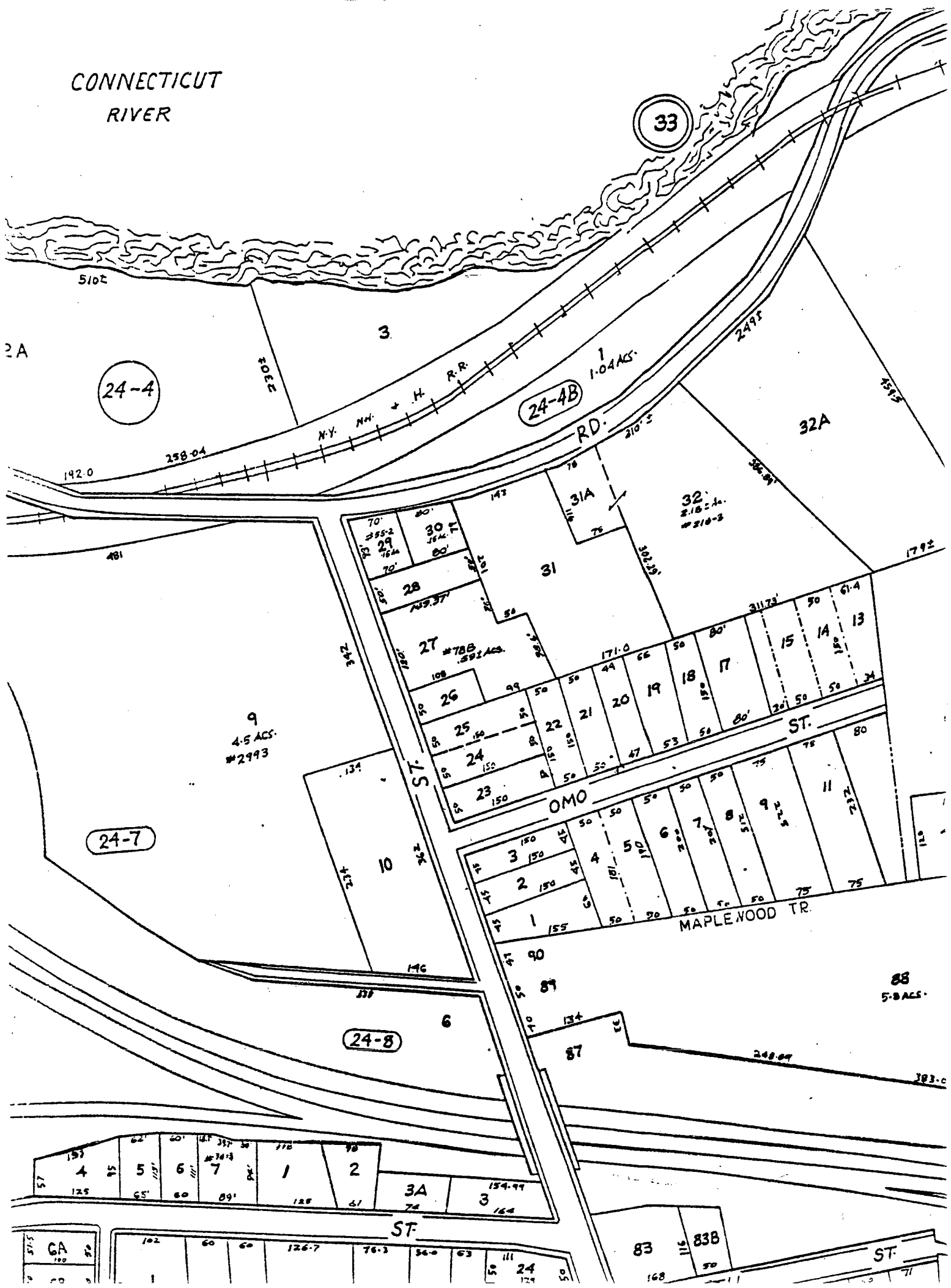
TAX CERTIFICATE
FOR LAND RECORDS
(Short Form)
PC-253 REV. 2/86
(PRC-50A)

STATE OF CONNECTICUT
COURT OF PROBATE
[Note: File certificate with town clerk
where real property is situated.]
[Type or Print]

VOL 887 PAGE 599

Court of Probate, District of Middletown		District No. 083	
ESTATE OF Antionette Marino		DATE OF DEATH 7/10/85	
DATE OF DEED 7/9/73		Vol. 401	Page 178
TOWN WHERE DEED IS RECORDED Middletown			
GRANTOR Connecticut Development Commission		GRANTEE Salvatore J. Marino and Antoinette G. Marino	
<p>This is to certify that, by the records and files of this Court, said deceased was a joint tenant with right of survivorship in, or retained an interest in, or made a conveyance of real property whereby the gross taxable estate of said deceased included the real property described in the deed(s) recorded in the above written volume and page of the land records of the town above written.</p> <p>THE COURT FINDS that:</p> <p><input checked="" type="checkbox"/> No succession tax is due the State of Connecticut in connection with the interest of said deceased.</p> <p><input type="checkbox"/> All succession taxes due the State of Connecticut have been fully paid.</p> <p>IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the Seal of this Court on this 24th day of January, 1989</p> <p>FOR TOWN CLERK'S USE ONLY</p> <p>FOR COURT USE ONLY</p> <p>ORIGINAL TO:</p> <p>DATE:</p>			
TAX CERTIFICATE FOR LAND RECORDS (Short Form)			

CONNECTICUT
RIVER



APPENDIX D
EXCAVATION WORK PLAN

**EXCAVATION WORK PLAN
MARINO PROPERTY
MIDDLETOWN, CONNECTICUT
March 1991**

Prepared For:

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

CONTRACT NO. 68-WO-0036

TAT 01-N-00772

TDD NO. 01-9103-05

Prepared By:

**Roy F. Weston, Inc.
Technical Assistance Team
Region I**

March 1991

INTRODUCTION

This excavation work plan will be implemented by all personnel at the Marino Property work site, Middletown, Connecticut.

The U.S. Environmental Protection Agency (EPA) is committed to providing a safe and healthful working environment for EPA employees and contractors during excavation activities at the Marino Property work site.

The intent of this work plan is for the sole use and guidance of the On-Scene Coordinator (OSC) in conducting the excavations at this site. This work plan is subject to modification as site conditions change, or if more efficient, cost effective methods are developed. Any deviations to this work plan must be approved by the EPA On-Scene Coordinator prior to implementation.

I. SITE OPERATIONS

A. Required Equipment and Manpower

1. Manpower

U.S. EPA

- 1 - On-Scene Coordinator
- 1 - Site Investigator
- 2 - Roy F. Weston Technical Assistance Team personnel

Subcontractor

- 1 - Foreman (competent person as defined by 29 CFR 1926 subpart P - Excavations)
- 1 - Equipment Operator (preferably with drum excavation experience)
- 1 - Cleanup Technician

2. Equipment

- 1 - mobile telephone
- 1 - excavator/backhoe (580 or equivalent capable of excavating to a depth of ten feet) with blast shield; bucket to have flat blade only
- 1 - remote drum punch attached to backhoe
- 1 - drum sling
- 3 - level B personnel protective equipment for contractor personnel including air supply and positive pressure, pressure demand supplied air respirators
- 6 - compressed gas supply cylinders of grade D air and cascade system for MSA 30-minute bottles
- 1 - water supply (minimum of 50 gallons) for decontamination and emergency use
- 1 - emergency eyewash ANSI Spec. Z358.1 (15 min) or equivalent
- 1 - emergency shower set-up
- 1 - steam pressure washer (appropriate water supply for assigned tasks) and generator to supply power with appropriate extension cords (GFI equipped)
- 3 - safety harnesses
- 3 - fire extinguishers (type ABC dry chemical 20 lb capacity)
- 4 - 85-gallon overpack drums
- 2 - 110-gallon overpack drums
- 4 - rolls of polyethylene sheeting (20 feet x 100 feet x 6 mil)
- 1 - first aid kit (Zee Medical #0170 or equivalent)
- 1 - 15 cubic yards fill material (processed gravel) not dumped, but mobile (may not be used - taken off site after operations)
- 2 - shovels

- 4 - air horns
- 4 - portable radios
- 1 - 100 pounds non-reactive absorbent
- 2 - pick axes
- 1 - camera
- 3 - spray paint cans
- 10 - wooden stakes

B. Pre-Site Preparation

1. Identify and flag underground utilities via dig safe.
2. Section off excavation area with caution tape (the location and order of test pits will be at the discretion of the OSC - see attached map).
3. Section off control zones with caution tape, i.e., exclusion, contamination-reduction, and support zones.
4. Set-up decontamination and emergency stations.
5. Identify test pit location areas via EM-31 screening. All locations will be flagged and documented by a grid system based on a bench mark. All distances will be measured by a tape and compass.

C. Excavation

1. Line two areas adjacent to each excavation test pit prior to excavation with polyethylene sheeting (double layers) to allow for segregation of contaminated soil. Line a third area as a contingency area for the removal of leaking containers. An overpack will be also staged next this area.
2. Excavate the top layer of clean fill and place on one of the lined areas.
3. Excavate potentially contaminated soil and place on the second lined area as follows:
 - Use excavator/backhoe to excavate along edge of grid within two feet of drum boundary to determine drum location and depth of one layer of drums.
 - Establish workpad area for the excavator/backhoe.
 - Excavate/backhoe trench wall at a maximum 1:1 slope. When, in the judgement of the foreman, shoring of the trench walls and ladders may be required.
 - Compact trench walls, workpad, etc. with excavator as necessary.

- Ensure trench wall slope stability and proceed with backhoe/excavation.
 - If buried drums are located, the excavator will cease operations and the foreman will assess wall slope stability. If needed, a support system will be emplaced and EPA and Weston personnel will enter the excavation to obtain documentation and samples if possible.
 - Excavation may continue or cease in a test area at the discretion of the OSC.
 - When excavation ceases at a test area, the potentially contaminated material will be replaced to establish original conditions.
 - The bucket will be decontaminated over the excavated area with the steam pressure washer, decon water will be allowed to flow into the excavation.
 - The clean fill will be placed back in the excavation. Additional fill may be added until the excavation area is restored to its original condition.
4. Prior to demobilization, the site shall be restored to its original condition.

D. Spill Containment and Drum Removal

All drums located will remain in the ground, however, if during the exploratory excavation, the backhoe accidentally damages a drum to cause a spill, the spill will be contained, the drum overpacked, the contaminated soil removed and placed in an overpack, and the drum will be staged. Any drum removal shall be conducted at the discretion of the OSC.

- The contractor will remove the drum using lifting chains or a drum sling and place the drum into an overpack using the backhoe.
- In the event that heavy equipment can not be used, laborers using shovels will dig out the drum until a chain or drum sling can be securely attached.
- A non-reactive absorbent and shovels may be required to contain and remove contaminated soil resulting from the leaking drum.

E. General Requirements

The equipment operator involved in the removal of the drums, including transport to staging areas, will have air supplied from cylinders secured to the

vehicle. If not within verbal communication, personnel working in the trench will have radio communication with the site supervisor, foreman, EPA OSC, and site safety officer. The equipment operator in the trench and the foreman will have air horns available to alert workers to dangerous situations. A continuous blast will signal a request for assistance. Intermittent blasts will signal all personnel to evacuate the area and assemble at the command post for further instruction. The command post will be located in an upwind location.

Any drums or barrels that have discernible information regarding shipper, manufacturer, etc. should be brought to the attention of the OSC for further examination and documentation via drum log sheets (attached) and photographs.

F. Sampling

Sampling at the Marino Property site may consist of the following:

1. Ambient Air Monitoring

The ambient air monitoring program can be designed to serve two purposes:

Environmental conditions - A minimum of three sampling sites shall be selected with locations dependent upon wind conditions. In general, the sampling sites should address upwind (background levels) and downwind measurements as well as measurements within the excavation areas. General environmental conditions (total organic vapors) will be monitored on site using direct-reading instruments. The measurements will assist in determining if health hazards are being created by the excavation and drum removal activities. All measurements will be recorded on air monitoring logs (attached).

Occupational conditions - Once the zones of contamination have been identified and appropriate safety equipment selected, direct reading instruments (OVA or HNU) can be used as an early warning device to detect changes in work conditions.

2. Drum Sampling

It is not the intent of this operation to conduct intrusive sampling, but rather to obtain samples from easily accessible drums and openings and/or from potentially contaminated material, which may have originated from leaking drums. However, if a drum is removed and overpacked, intrusive sampling of the drum via a drum punch will occur if necessary. Overpacked drum will be staged on site. Sampling protocol will be followed per the attached Sampling Quality Assurance/Quality Control Plan.

- Each excavation area will be outlined on a map and lettered sequentially.
- Drums found in each test area will be located by depth and grid point. The orientation of the drum will also be identified as best as possible by sketch.
- Drums in each test pit area will be numbered sequentially.
- Documentation of the type of drum will be recorded including material of construction, size, descriptive labels and content identification.

II. PERSONNEL PROTECTION

A. Emergency Contingency Plan

The following emergency contingency plan has been developed in order to deal with potentially dangerous situations that may occur at the work site. Prior to site work, the local police and fire departments will be notified of site activities by the OSC.

1. Personnel Injury

All injuries, skin contact with chemicals or unsafe procedures or conditions will be reported immediately to the foreman and the EPA OSC and/or Safety Officer. Ambulances are readily available from short distances away by calling 911.

2. On-Site Evacuation Plan

An emergency evacuation alarm (eg., air horn) will be on site at all times. This alarm should be of sufficient power to be heard by all personnel operating heavy equipment. (A series of intermittent blasts signals all personnel to evacuate the area and assemble at the command post for further instruction).

- a. Warning system - Criteria for alarm activation will be the first sign of any problem or emergency on site requiring assistance or evacuation.
- b. Fire or explosion - Should either a fire or explosion occur on site, all personnel will proceed to the command post and await further instruction. At this time the local fire and police departments will be called for assistance. Once on site, the acting officer in charge and the OSC will determine if further evacuation is necessary. This evacuation would include all

personnel and local residents of surrounding houses that are in immediate danger. The state police will be notified if the adjacent highway may be impacted.

3. Off-Site Evacuation Plan

Off-site evacuation will be executed by local police and fire personnel upon notification by the OSC. Site personnel will support their efforts as requested by the acting officer(s) in charge.

B. Safety Guidelines

1. Protective Clothing

Protective clothing must be worn by all personnel while on a hazardous waste site unless sufficient data has been obtained to enable the OSC to make an informed judgement that protective gear can be modified. In the absence of clear indication, required items include chemical-resistant coveralls, safety boots, gloves, hard hat, and a supplied air respirator.

Workers involved in the exploratory excavation will be required to wear as "minimum protection" SCBA with splash shield, splash protection, steel-toe boots, chemical resistant gloves, coveralls, bootcovers and a hard hat. A minimum of two workers will be required for the excavation of the drums. See attached Site Safety Plan for detailed explanation of guidelines.

2. Personal Hygiene

All personnel must wash the affected area immediately with copious amounts of water after obvious contact with a hazardous substance.

3. Undesirable Practices

The following practices during operations on a hazardous waste site are strictly forbidden: smoking, eating, drinking, chewing gum or tobacco, storing food or food containers while on site.

4. Protection Levels

Protection levels will be established on site, based upon available information (see Site Safety Plan).

5. Zones

Two or more zones must be established, clearly delineated, and posted (see Site Safety Plan).

- a. Exclusion zone - The area that contains hazardous materials must be clearly delineated and posted (hotline). Only personnel authorized by the OSC may enter a contaminated zone.
- b. Contamination reduction zone - An area should be established for decontamination of equipment and personnel and for access control just outside the area of suspected contamination.
- c. Support zone - An area should be designated where the command post, personnel vehicles and supplies may be located. While in this area, personnel need not wear protective clothing or respirators. Any non-hazardous activities should be carried out in this area.

C. Personnel Safety Guidelines

1. Monitoring

For immediate evaluation of potential health hazards, use direct reading instruments (DRI) such as portable combustible gas indicators, oxygen meters, organic vapor analyzers, photoionization detectors, and radiation meters. The OSC and his staff shall choose instruments based upon the limitations of these DRIs when attempting to characterize unknown chemicals at the site. An ambient air monitoring program shall be initiated to accumulate pertinent data and support levels of protection.

2. Respirator Protection

In all cases of respirator usage, each individual will be required to have been fit-tested for every respirator type prior to use on site.

3. Site Entry

Entry on site should be limited to authorized personnel only; all visitors must be accompanied by an authorized individual. All personnel entering the site will comply with proper protection levels as outlined in the Site Safety Plan.

4. Site Departure

Procedures for leaving the contaminated area shall be outlined in the Site Safety Plan. The contractor shall provide for decontamination of equipment and disposal of expendable items as directed by the OSC. Water shall be provided by the contractor for this decontamination procedures and for personnel hygiene use.

5. Safety Equipment

- a. Adequate First Aid Kit (1) (Zee Medical #0170 or equivalent)
- b. Adequate Emergency Eyewash Station (1) ANSI Spec. 2358.1 (15 minutes)
- c. Emergency Shower Set-up (1)
- d. Fire Extinguisher (type ABC Dry Chemical - 20 lb capacity) (3)
- e. Emergency Evacuation Alarm (air horn) (4)
- f. Portable Radios (6)

6. Training

- a. All site personnel will be fully trained as per 29 CFR 1910.120 (Hazardous Waste Operations and Emergency Response).
- b. At least one person (preferably the foreman) will be qualified as a competent person as per 29 CFR 1926 Subpart P.

D. Decontamination Zone

Through previous analysis, it has been established that the materials on site are of a hazardous nature. Due to this evidence, the execution of the prescribed decontamination procedures is extremely important to insure that all waste materials remain on site and adequate protection to all personnel is maintained.

Samples taken at the site shall be processed through the decontamination line, packaged and delivered to the EPA New England Regional Laboratory for analysis. Small pieces of equipment and tools can be handled in the same manner. If the decontamination of heavy equipment is necessary, it must be performed on the "hotside" of the site. Usually this requires washing and rinsing of the equipment by steam pressure washer, with drainage of the wash and rinse water into the contaminated excavation area.

Drum ID # _____

DRUM INVESTIGATION
DATA SHEET

Team: _____

1. Name of Site: _____ 2. Location on Site: _____

3. Date: _____ 4. Weather Conditions: _____

5. Drum Size:

- a. 83 gal _____
b. 55 gal _____
c. 30 gal _____
d. 5 gal _____
e. Other _____

6. Drum Type:

- a. Open Top (17H) _____
b. Closed Top (17E) _____
c. Lined (17D) _____
d. Carboy _____
e. Paint Can _____
f. Stainless Steel _____
g. Other _____

7. Drum Condition:

- a. Intact _____
b. Dented _____
c. Crushed _____

d. Rusted/Corroded _____
e. Leaking _____
f. Under Pressure _____

- g. Bungs Missing _____
h. Bungs Loose _____
i. Cover Missing _____
j. Cover Loose _____
k. Punctured _____

- l. Full _____
m. 3/4 full _____
n. 1/2 full _____
o. 1/4 full _____
p. < 1/4 full _____
q. empty _____

8. Drum Content Characteristics:

- | | | | |
|--------------|------------|-----------------|-----------------|
| a. Color | _____ | _____ | _____ |
| b. Viscosity | High _____ | Low _____ | Comments: _____ |
| c. Solid | _____ | % Solid _____ | Comments: _____ |
| d. Liquid | _____ | % Liquid _____ | Comments: _____ |
| e. Gases | _____ | Comments: _____ | _____ |
| f. Lab Pack | _____ | Comments: _____ | _____ |

9. Drum Information:

(check) or (list) and (show information here)

	Label	Stencil	Other	
Shipper				
Generator				
Product				
Other				

10. Drum Data/Characteristics:

HNU _____ ppm pH _____ Paper _____ Meter _____
OVA _____ ppm Radiation _____ mr

AIR MONITORING LOG

DATE: _____

MONITOR: _____

[illegible]

APPENDIX E
SITE HEALTH AND SAFETY PLAN

ORIGINAL FILE
COPY w/SIGNATURES

WESTON MAJOR PROGRAMS DIVISION
HEALTH AND SAFETY PLAN
EMERGENCY RESPONSE / SITE INVESTIGATION

TDD No. 01-9103-05 Site Name: Marino Property
Site Address: Street No. 50 Walnut Street
City Middletown
County/State Middlesex County, Connecticut
Site Contact / Phone No.: site owner - Salvatore Marino (203) 346-7400
CT DEP - Michael McDaniel (203) 566-7202
Directions to Site: (Att. Map) 128 South to 90 West to 86 south to 91
South to 9 South to 17 South, Left on River Road,
Marino Property is located at the corner of River
and Walnut. Property Entrance on right, before Walnut.

Historical/Current Site Information:

Property consists of rubber factory which is now utilized
as varied commercial space. Flat area adjacent to
facility was allegedly used as a landfill for municipal
and industrial wastes including drummed liquids. Site
investigations have shown magnetic anomalies, volatile soil
gas vapor and groundwater contaminated with BTEX compounds.

Incident Type: () Air Release - _____
() Spill - _____
() Fire - _____
(X) HW Site - industrial and municipal landfill

Location Class : (X) Industrial () Commercial (X) Urban/Residential () Rural

USEPA Contact: M.E. Stanton Date of Initial Site Activities: 10/31/90

Original HASP: Yes _____ Modification Number: 1

Lead TAT: JONES Site Health & Safety Coordinator: STEVEN P KO

Response Activities/Duration (fill in as applicable)

Emergency Response: () Perimeter Recon. _____
() Site Entry _____
NA () Visual Documentation: _____
() Multi-media Sampling: _____
() Decontamination: _____

Assessment: () Perimeter Recon. _____
(X) Site Entry COMPLETED UNDER TDD 01-910-57
(X) Visual Documentation: 11
(X) Multi-media Sampling: 2 DAYS (4/16-17/91)
(X) Decontamination: 2 DAYS (4/16-17/91)
(X) TEST PIT EXCAVATION 2 DAYS (4/16-17/91)

Physical Safety Hazards to Personnel

- ☐ Heat ☒ Cold ☐ Precipitation ☐ Confined Space ☐ Terrain
- ☒ Walking/Working Surfaces ☐ Fire & Explosion ☐ Oxygen Deficiency
- ☒ Underground Utilities ☐ Overhead Utilities ☒ Heavy Equipment
- ☒ Unknowns in Drums, Tanks, Containers ☐ Ponds, Lagoons, Impoundments
- ☐ Rivers, Streams ☐ Pressurized Containers, Systems ☐ Noise
- ☐ Illumination ☐ Nonionizing Radiation ☐ Ionizing Radiation
- ☒ Other Hazards - See Attachment 1

Biological Hazards to Personnel

- N/A ☐ Infectious/Medical/Hospital Waste ☐ Non-domesticated Animals ☐ Insects
☐ Poisonous Plants/Vegetation ☐ Raw Sewage

Training Requirements

- ☒ 40 Hour General Site Worker Course with three days supervised experience.
- ☐ 24 Hour Course for limited, specific tasks with one day supervised experience.
- ☐ 24 Hour Course for Level D Site with one day supervised experience.
- ☒ 8 Hour Annual Refresher Health and Safety Training.
- ☒ 8 Hour Management/Supervisor Training in addition to basic training course.
- ☐ Site Specific Health and Safety Training.
- ☐ Pre-entry training for emergency response skilled support personnel.

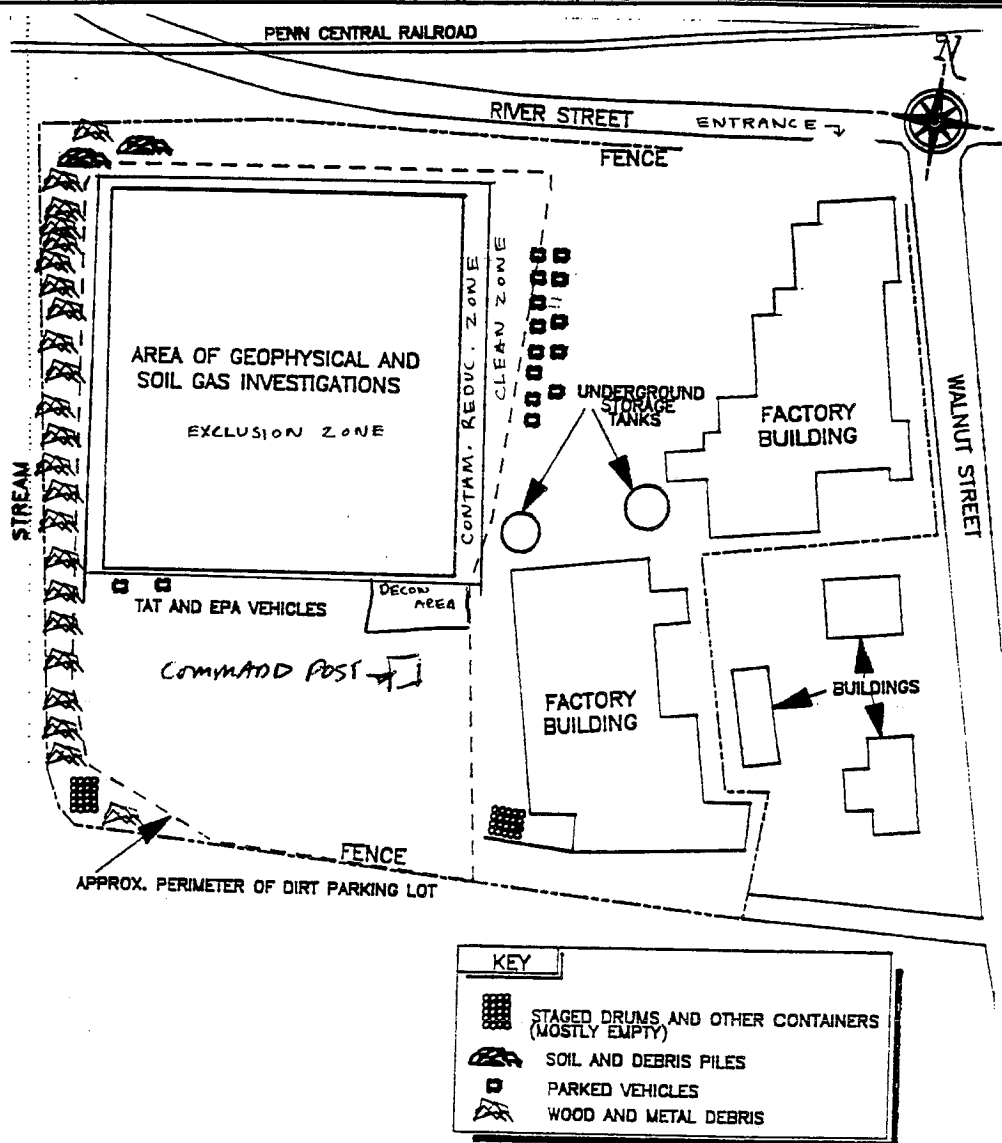
Medical Surveillance Requirements

- ☒ Baseline initial physical examination with physician certification.
- ☒ Annual medical examination with physician certification.
- ☐ Site Specific medical monitoring protocol (Radiation, Pesticide, PCB, Metals).
- ☐ Asbestos Worker medical protocol.
- ☐ Exempt from medical surveillance: _____.
- ☒ Examination required in event of chemical exposure or trauma.

Physical Parameters	Chemical Contaminant	Chemical Contaminant	Chemical Contaminant	Chemical Contaminant
	Benzene	ethyl benzene	Toluene	Xylenes (o,m,p)
Exposure Limits IDLH Level	1.0 ppm mg/m ³ PEL ppm mg/m ³ TLV 3000 ppm mg/m ³ IDLH Ca	100 ppm mg/m ³ PEL 100 ppm mg/m ³ TLV 2000 ppm mg/m ³ IDLH	100 ppm mg/m ³ PEL ppm mg/m ³ TLV 2000 ppm mg/m ³ IDLH	100 ppm mg/m ³ PEL ppm mg/m ³ TLV 1000 ppm mg/m ³ IDLH
Physical Form Sol. Liq. Gas Color	Solid <input checked="" type="checkbox"/> Liquid Gas <input type="checkbox"/> Color colorless	Solid <input checked="" type="checkbox"/> Liquid Gas <input type="checkbox"/> Color colorless	Solid <input type="checkbox"/> Liquid Gas <input checked="" type="checkbox"/> Color colorless	Solid <input type="checkbox"/> Liquid Gas <input checked="" type="checkbox"/> Color colorless
Odor	Aromatic	aromatic	sweet pungent	aromatic
Flash Point Flammable Limits	12 Degrees (F) or C UEL 1.3% LEL	55 Degrees (F) or C UEL 1.0% LEL	40 Degrees (F) or C UEL 1.2% LEL	63, 84, 81 Degrees (F) or C UEL 1.0% LEL
Vapor Press. Vapor Dens.	75 mm/Hg 2.7 Air = 1	10 mm/Hg 3.66 Air = 1	20 mm/Hg NA Air = 1	7/9/9 mm/Hg NA Air = 1
Specific Gravity	0.879 Water = 1	0.87 Water = 1	0.87 Water = 1	.88/.86/.86 Water = 1
Solubility	0.07%	0.01%	0.05%	insol
Incompatible Materials	strong oxidizers many fluorides + perchlorates, nitric acid	strong oxidizers	strong oxidizers	strong oxidizers
Route of Exposure	<input checked="" type="checkbox"/> Inh <input checked="" type="checkbox"/> Abs <input checked="" type="checkbox"/> Con <input checked="" type="checkbox"/> Ing	<input checked="" type="checkbox"/> Inh <input checked="" type="checkbox"/> Abs <input checked="" type="checkbox"/> Con <input checked="" type="checkbox"/> Ing	<input checked="" type="checkbox"/> Inh <input checked="" type="checkbox"/> Abs <input checked="" type="checkbox"/> Con <input checked="" type="checkbox"/> Ing	<input checked="" type="checkbox"/> Inh <input checked="" type="checkbox"/> Abs <input checked="" type="checkbox"/> Con <input checked="" type="checkbox"/> Ing
Symptoms of Acute Exposure	acute irrit eyes, nose resp sys, gidd, head, nausea stagger gait, fainting lass, derm, bone marrow	Irrit eyes, burns skin, resp irrit dermatitis	flg, weak, conf. euph dizz, head, dil pupils lac, nerv, must flg insom, derm	Dizziness, acute, drow inco, gait, irrit eyes, nose throat corneal vacuole, angr nau, vomit, ab, derm
First Aid Treatment	eyes: irrig immeel. skin: Soap wash breath: resp support swall: med attn. immeel	Eyes: irrig immeel. skin: water flush immeel breath: resp support swallow: med attn. immeel	Eyes: irrig immeel skin: soap wash breath: resp support swallow: med attn. immeel	Eyes: irrig immeel skin: soap wash breath: resp support swallow: med attn. immeel
Ion Potential	9.25 eV	8.76 eV	8.82 eV	8.56/8.56/8.44 eV
Instruments For Detection	<input checked="" type="checkbox"/> PID w/ 10.2 Probe <input checked="" type="checkbox"/> FID <input type="checkbox"/> CGI <input type="checkbox"/> RAD <input checked="" type="checkbox"/> Det Tube <input type="checkbox"/> Ph Other	<input checked="" type="checkbox"/> PID w/ 10.2 Probe <input checked="" type="checkbox"/> FID <input type="checkbox"/> CGI <input type="checkbox"/> RAD <input checked="" type="checkbox"/> Det Tube <input type="checkbox"/> Ph Other	<input checked="" type="checkbox"/> PID w/ 10.2 Probe <input checked="" type="checkbox"/> FID <input type="checkbox"/> CGI <input type="checkbox"/> RAD <input checked="" type="checkbox"/> Det Tube <input type="checkbox"/> Ph Other	<input checked="" type="checkbox"/> PID w/ 10.2 Probe <input checked="" type="checkbox"/> FID <input type="checkbox"/> CGI <input type="checkbox"/> RAD <input checked="" type="checkbox"/> Det Tube <input type="checkbox"/> Ph Other

Physical Parameters	Chemical Contaminant	Chemical Contaminant	Chemical Contaminant	Chemical Contaminant
	2-Butanone (Methyl Ethyl Ketone) (MEK)	lead	chromium	1,3-Dichloro propene
Exposure Limits: IDLH Level	<u>200</u> ppm <u> </u> mg/m ³ PEL <u> </u> ppm <u> </u> mg/m ³ TLV <u>3000</u> ppm <u> </u> mg/m ³ IDLH	<u> </u> ppm <u>0.050</u> mg/m ³ PEL <u> </u> ppm <u> </u> mg/m ³ TLV <u> </u> ppm <u>200</u> mg/m ³ IDLH	<u> </u> ppm <u> </u> mg/m ³ PEL <u> </u> ppm <u>0.5</u> mg/m ³ TLV <u>NE</u> ppm <u> </u> mg/m ³ IDLH	<u> </u> ppm <u> </u> mg/m ³ PEL <u> </u> ppm <u> </u> mg/m ³ TLV <u>NE</u> ppm <u> </u> mg/m ³ IDLH
Physical Form Sol:Liq:Gas Color:	<u> </u> Solid <u>✓</u> Liquid <u> </u> Gas <u> </u> Color colorless	<u>✓</u> Solid <u> </u> Liquid <u> </u> Gas <u> </u> Color grey	<u>✓</u> Solid <u> </u> Liquid <u> </u> Gas <u> </u> Color Blue/white, steel grey	<u> </u> Solid <u>✓</u> Liquid <u> </u> Gas <u> </u> Color colorless
Odor	moderately sharp, fragrant, mint - acetone like odor	NA	NA	sweet odor
Flash Point Flammable Limits	<u>16</u> Degrees $^{\circ}$ or C <u>11.4</u> % UEL <u>1.4</u> % LEL <u>200</u> $^{\circ}$ F	<u>NA</u> Degrees F or C <u>NA</u> % UEL <u>NA</u> % LEL	<u>NA</u> Degrees F or C <u>NA</u> % UEL <u>NA</u> % LEL	<u>95</u> Degrees $^{\circ}$ or C <u>NE</u> % UEL <u>NE</u> % LEL
Vapor Press: Vapor Dens:	<u>71</u> mm/Hg <u>2.5</u> Air = 1	<u>0</u> mm/Hg <u>NA</u> Air = 1	<u>0</u> mm/Hg <u>NA</u> Air = 1	<u>NA</u> mm/Hg <u>NA</u> Air = 1
Specific Gravity	<u>0.81</u> Water = 1	<u>11.34</u> Water = 1	<u>7.14</u> Water = 1	<u>1.2</u> Water = 1
Solubility	28%	insoluble	insoluble	NA
Incompatible Materials	strong oxidizers, amines ammonia, inorganic acids, caustics, copper isocyanates, pyridines	strong oxidizers hydrogen peroxide acids	strong oxidizers ie: hydrogen peroxide alkalis	NA
Route of Exposure	<u>X</u> Inh <u> </u> Abs <u>X</u> Con <u>X</u> Ing	<u>X</u> Inh <u> </u> Abs <u>X</u> Con <u>X</u> Ing	<u>X</u> Inh <u> </u> Abs <u> </u> Con <u>X</u> Ing	<u>X</u> Inh <u> </u> Abs <u>X</u> Con <u>X</u> Ing
Symptoms of Acute Exposure	irrit eyes, nose, throat dizz, vomit	Weak, lass, insom, facial pallor, pale eye, anor low wght, malnut constip. irrit eyes	Histologic fibrosis of lungs	irritates, nose, throat skin, derm, uncon convulsions
First Aid Treatment	Eye: irrig, immed. skin: water wash breath: fresh air swallow - med. attn	Eye: irrig immed skin: soap flush Breath: Resp support Swallow. med. attn.	Eye: irrig immed skin: soap wash breath: Resp support Swallow: med attn immed	Eye: irrig immed. skin: water wash breath: fresh air swallow immed. Attn immed
Ion Potential	<u>9.54</u> eV	<u>NA</u> eV	<u>NA</u> eV	<u>9.82</u> eV
Instruments For Detection	<u>✓</u> PID w/ <u>10.2</u> Probe <u>✓</u> FID <u> </u> CGI <u> </u> RAD <u> </u> Det Tube <u> </u> Ph Other <u> </u>	<u> </u> PID w/ <u> </u> Probe <u> </u> FID <u> </u> CGI <u> </u> RAD <u> </u> Det Tube <u> </u> Ph Other <u>NA</u>	<u> </u> PID w/ <u> </u> Probe <u> </u> FID <u> </u> CGI <u> </u> RAD <u> </u> Det Tube <u> </u> Ph Other <u>NA</u>	<u>✓</u> PID w/ <u>10.2</u> Probe <u> </u> FID <u> </u> CGI <u> </u> RAD <u> </u> Det Tube <u> </u> Ph Other <u> </u>

Site Map with work zones:



Decontamination Procedures

- () Wet Decontamination - using: _____
 (X) Dry Decontamination

Description of Site Specific Decontamination

Plan: Dry decontamination; removal and proper disposal of personal protective clothing. Wet decontamination utilizing soap and water with water rinse will be available on standby in case of gross contamination

* Decontamination Sketch - See Attachment 2

* BOOT WASH AND FIELD WASH SET UP BY TAT SUBCONTRACTOR 4/16-17/91 TJ
 Adequacy of decontamination determined by: visual inspection

TASK TO BE PERFORMED/AIR MONITORING REQUIRED	ANTICIPATED LEVEL OF PROTECTION	TYPE OF CHEMICAL PROTECTIVE COVERALL	INNER GLOVE OUTER GLOVE BOOT COVER	TYPE OF APR CARTRIDGE OR CANISTER
Subsurface Survey with EM-31 PID, RADM, CGI (screen ok)	level D	cotton coveralls	steel toe boots	N/A
Test Pit Excavation and air monitoring PID, RADM, CGI	level B	Saranex	latex inner nitrile outer "ROBARS" or equivalent	SCBA
Drum / Soil Sampling / overpacking PID, RADM, CGI	level B	Barricade™ or equivalent	silver shield inner nitrile outer "ROBARS" or equivalent	SCBA

Frequency and Types of Air Monitoring: (X) Continuous () Routine - _____ () Periodic - _____

DIRECT READING INSTRUMENTS	COMBUSTIBLE GAS/OXYGEN METER (1) (CGI)	RADIATION SURVEY METER/PROBE (2) (RADM)	PHOTOIONIZATION DETECTOR/PROBE (3) (PID)	FLAME IONIZATION DETECTOR (4) (FID)	CHEM. DETECTOR TUBE (5)
ID NUMBER	TAT #3	TAT #3	TAT #2	TAT #2	
CAL. DATE	4/15/91	4/15/91	4/15/91	4/15/91	
TAT MEMBER	T. JONES	T. JONES FACTORY	T. JONES	T. JONES	
ACTION LEVEL	≥ 20%LEL ≤ 19.5%, ≥ 23% O ₂ - LEAVE	3X BACKGRND - CAUTION; 1 MR/HR-LEAVE	UNKNOWN 0-5 UNITS:"C" 5-500:"B"	UNKNOWN 0-5 UNITS:"C" 5-500:"B"	PEL/TLV COMPARE W/PF

Emergency Phone Numbers

Emergency Contact	Location	Phone Number	Notified
Hospital	Middlesex Memorial 28 Crescent St, Middletown	203-347-9471	Y
Ambulance	Hunter's Ambulance Middletown	911	Y
Police	Church Street Middletown	911	Y
Fire Dept.	South Dist. F.D. Randolph Rd.	911 Bus-203-346-8623	Y

Chemical Trauma Capability? ☒ Yes () No If no, closest backup: _____ Phone: _____

Directions to Hospital (attach map) - Route verified by: TCS Date: 4/15/91
 From site, right on River, right onto Walnut, right on Silver, Right on Main Street extension,
 at first set of lights, left onto Crescent st. Hospital is 1/2 block on left at
 28 Crescent street.

Additional Emergency Phone Contacts

Contact	Phone Number
WESTON 24 hr. Hotline	215-524-1925 215-524-1926
WESTON Medical Emergency Service	513-421-3063
Chemtrec	800-424-9300
ATSDR	404-639-0615
ATF (explosives information)	800-424-9555
National Response Center	800-424-8802
National Poison Control Center	800-942-5969

HASP prepared by: Peter W. Vernon Date: 3/12/91
 Pre-Response/Entry Approval by: Peter W. Vernon Date: 3/13/91
 Verbal Approval/Modification to Original HASP by: _____ Date: / /

Physical Description of Site and Response Activities

Size of Site: 4 ACRES Terrain LEVEL Weather 4/15 - RAINY
 Distance to Nearest: Residence 100 yds School 100 yds Hospital 1/4 mile
 Public Building _____ Other _____
 Evacuation: () Yes ☒ No By Whom: _____
 Nearest Waterway: SUMNER BROOK Distance from Site: PONDERS SITE TO WEST

Condition	Observed	Potential	None	Comments/Observations
Surface Water Contamination		<input checked="" type="checkbox"/>		CONTAMINATION IDENTIFIED DURING TEST PITS (CULD INGESTATE TO STREAM)
Ground Water Contamination		<input checked="" type="checkbox"/>		CONTAMINATION IN SOIL WAS IDENTIFIED
Drinking Water Contamination			<input checked="" type="checkbox"/>	NO NEARBY DRINKING WATER SUPPLIES
Air Release		<input checked="" type="checkbox"/>		VOLATILE ORGANICS MAY BE RELEASED IF SOIL IS DISTURBED/EXCAVATED
Soil Contamination	<input checked="" type="checkbox"/>			
Stressed Vegetation			<input checked="" type="checkbox"/>	
Dead Animal Species			<input checked="" type="checkbox"/>	

Actions Taken On-Site:

Perimeter Monitoring:

☒ Yes

() No

- CT DEP CONDUCTED PERIMETER MONITORING

Site Entry by TAT:

☒ Yes

() No

Tasks Conducted	Level of Protection/Specific PPE Used
EM-31 SURVEY (4/15/91)	LEVEL D w/ STEEL TOE BOOTS AND RAIN GEAR
TEST PIT MONITORING (4/16-17/91)	LEVEL B w/ SARANEX, VINYL/SILVER SHIELD/NITRILE, VINYL BOOTES SCBA -
SOIL SAMPLING (4/16-17/91)	LEVEL B - AS ABOVE

Air Monitoring Summary Log

Date: 4/16/91Data Collected by: JONES, STAMON (EPA SE) TALLIAFERRO (EPA OSC)

Data to be summarized by a "Range of readings, i.e., - Low to High" and/or "Average" by location.

Station/Location	CGI/O ₂ Meter	Radiation Meter	PID/Probe 10.2	FID/OVA	Detector Tube
TEST PIT EXCAVATION #1	0% LEL 20.5% O ₂	0.01 mR/hr BACKGROUND	UP TO 50 UNITS during EXCAVATION	UP TO 150 UNITS during EXCAVATION	NA
TEST PIT EXCAVATION #2	0% LEL 20.5% O ₂	0.01 mR/hr BACKGROUND	UP TO 17 UNITS during EXCAVATION	UP TO 70 UNITS during EXCAVATION	NA
DOWN WIND OF TP-2 FOLLOWING BACKFILL	NO READING TAKEN	NO READING TAKEN	NO READING TAKEN	UP TO 10 UNITS AFTER BACKFILLING	NA
PERIMETER MONITORING BY CT DEP	CONNECTICUT DEP USED OUM PID 580A TO MONITOR PERIMETER		UP TO 26 UNITS DURING TP-1 UP TO 11 UNITS DURING TP-2	NA } PEAK LEVELS RECORDED FOR INSTANTEOUS READINGS	NA / 15

Summary/Comments: BOTH TEST PITS HAD VISUAL SIGNS OF CONTAMINATION (5 GAL PAILS OR DISCOLORED LIQUIDS) AIR MONITORING RESULTS ABOVE WERE TAKEN IN WORKER BREATHING ZONES, HIGHER READINGS WERE RECORDED INSIDE THE TOP EDGE OF TEST PITS. CT DEP OUM PID 580A HAD PEAK READING MEMORY USED TO DOCUMENT INSTANTANEOUS READINGS.

Air Monitoring Summary Log

Date: 4/17/91

(TAT)

Data Collected by: JONES, STANTON (GPASE), DELLAFERRA (EPAOSC)

Data to be summarized by a "Range of readings, i.e., - Low to High" and/or "Average" by location.

Station/Location	CGI/O ₂ Meter	Radiation Meter	PID/Probe 10.206	FID/OVA	Detector Tube
TEST PIT EXCAVATION #3	0% LEL 20.5% O ₂	0.01 mR/hr BACKGROUND	UP TO 2 UNITS during EXCAVATION	UP TO 20 UNITS during EXCAVATION	NA
TEST PIT EXCAVATION #4	0% LEL 20.5% O ₂	0.01 mR/hr BACKGROUND	UP TO 4 UNITS during EXCAVATION	UP TO 300 UNITS during EXCAVATION	PEAKS IN TRENCH
TEST PIT EXCAVATION #5	0% LEL 20.5% O ₂	0.01 mR/hr BACKGROUND	BACKGROUND READINGS ONLY	OVA NOT USED - MAL- FUNCTION	
TEST PIT EXCAVATION #6	0% LEL 20.5% O ₂	0.01 mR/hr BACKGROUND	BACKGROUND READINGS ONLY	NO READINGS TAKEN	READINGS IN
TEST PIT EXCAVATION #7	0% LEL 20.5% O ₂	0.01 mR/hr BACKGROUND	BACKGROUND READINGS ONLY	NO READINGS TAKEN	TWO KEYS BREAKING ZONES
TEST PIT EXCAVATION #8	0% LEL 20.5% O ₂	0.01 mR/hr BACKGROUND	BACKGROUND READINGS ONLY	NO READINGS TAKEN	

Summary/Comments: IT APPEARS THAT SOME METHANE WAS DETECTED IN TEST PIT #4 DUE TO COMBINATION BETWEEN HAN PID/OVA FID LOWER READINGS AT EXCAVATION REQUIRED NEED FOR PERIMETER MONITORING.

Hazardous Waste Site and Environmental Sampling Activities

Off Site: () Yes (X) No
On Site: (X) Yes () No

Describe types of samples and methods used to obtain

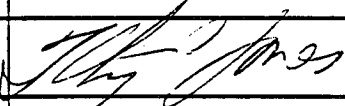


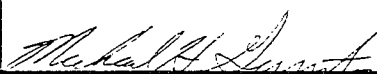
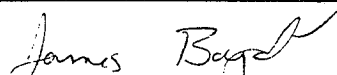
samples: SAMPLES WERE COLLECTED FOR LOG, BNA PCB AND METALS
GLASS THIEVES ON STAINLESS STEEL OR PLASTIC SPATULAS
WERE USED. DECON FOLLOWED FROM D40L PLAN

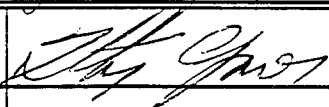
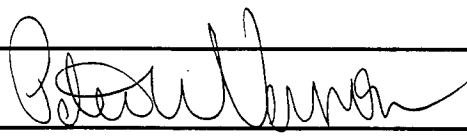
Was Laboratory notified of Potential Hazard Level Of Samples? (X) Yes () No

Note: The nature of the work assignment may require the use of the following procedures/programs which will be included as Attachments to this HASP as applicable: Emergency Response Plan, Confined Space Entry Procedures, Spill Containment Program.

Disclaimer: This Health and Safety Plan (HASP) was prepared for work to be conducted under the Technical Assistance Team (TAT) Contract 68-WO-0036 for Zone I. Use of this HASP by WESTON and its subcontractors is intended to fulfill the OSHA requirements found in 29 CFR 1910.120. Items not specifically covered in this HASP are included by reference to 29 CFR 1910 and 1926.

The signatures below indicate that the individuals have read and understood this Health and Safety Plan.

PRINTED NAME	SIGNATURE	AFFILIATION	DATE
TIMOTHY C. JONES		Weston TAT	4/15/91
DAVID E. STRZEMPKO		WESTON TAT	4/15/91
William B. Conley		NATIONAL OIL SERVICE INC	4/15/91
Michael H. Carney		National Oil Serv.	4/15/91
James Boyd		National O. I. Ser	4-15-91

Final Submission of HASP by:		Date
Post Response Review by:		
Post Response Approval by:		5/1/91
TAT HSO Review by:		

COMMENTS/FOLLOWUP

MIDDLETOWN QUADRANGLE
CONNECTICUT
7.5 MINUTE SERIES (TOPOGRAPHIC)

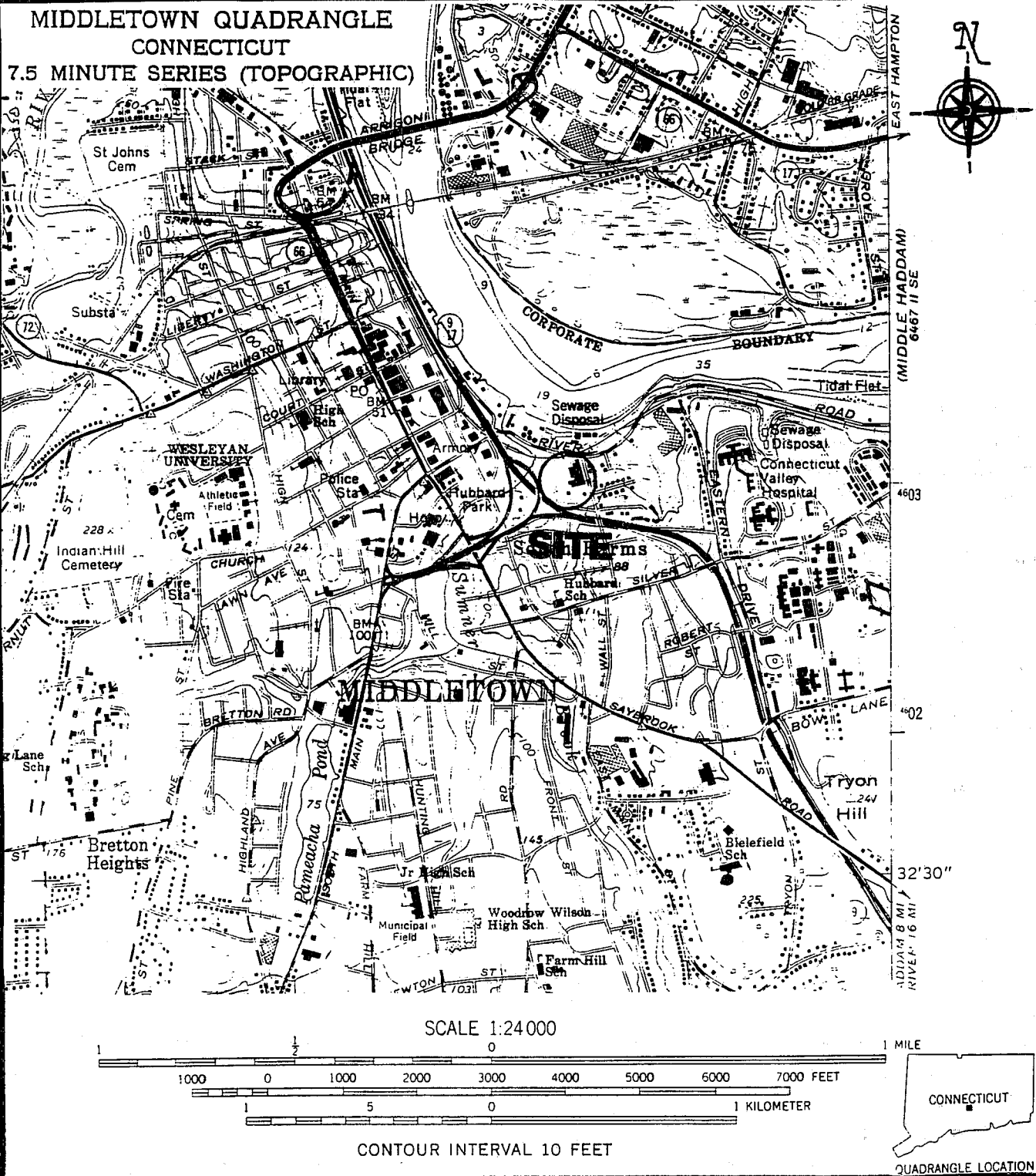


FIGURE 1

SITE LOCATION MAP
MARINO PROPERTY
MIDDLETOWN, MIDDLESEX COUNTY
CONNECTICUT

WESTON

MANAGERS

DESIGNERS/CONSULTANTS

DRAWN VERNON

DATE 3/91

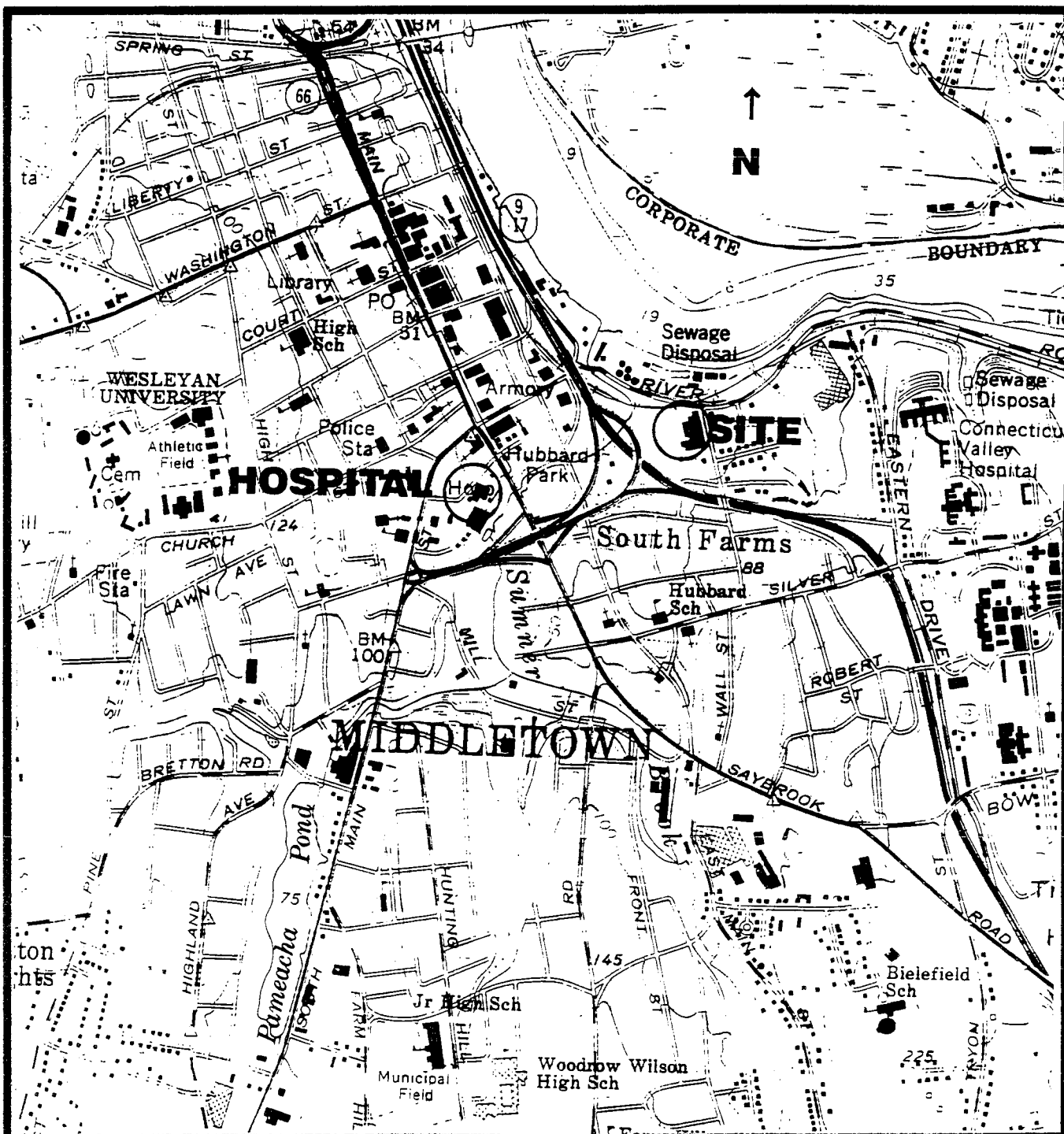
PCS # 1209

APPROVED

[Signature]

DATE 3/91

TDD # 01-9103-05



DIRECTIONS TO HOSPITAL: FROM SITE, RIGHT ON RIVER, RIGHT ON WALNUT, RIGHT ON SILVER, RIGHT ON MAIN STREET EXTENSION, AT FIRST SET OF LIGHTS, LEFT ON CRESCENT STREET, HOSPITAL IS 1/2 BLOCK ON LEFT AT 28 CRESCENT STREET. MIDDLESEX MEMORIAL HOSPITAL. (SCALE=1:24000)

FIGURE 2

HOSPITAL LOCATION MAP
MARINO PROPERTY
MIDDLETOWN, MIDDLESEX COUNTY
CONNECTICUT

WESTON

MANAGERS

DESIGNERS/CONSULTANTS

DRAWN

VERNON

DATE

3/91

PCS #

1209

APPROVED

sm

DATE

3/91

TDD #

01-9103-05

ATTACHMENT 1

SAFETY OPERATING GUIDELINES

INTRODUCTION

The safety operating guidelines in this document are meant to provide information of health and safety to complement professional judgment and experience. The appropriateness of the information presented should always be evaluated in light of site-specific conditions. Actual incidents which arise from site-specific conditions may require modifications to these safety operating guidelines. Individuals who are responsible for the health and safety of workers at hazardous waste sites should obtain and comply with the most recent federal, state, and local regulations relevant to these sites, and are urged to consult with OSHA, EPA, and the appropriate federal, state, and local agencies.

Specific Site Concerns

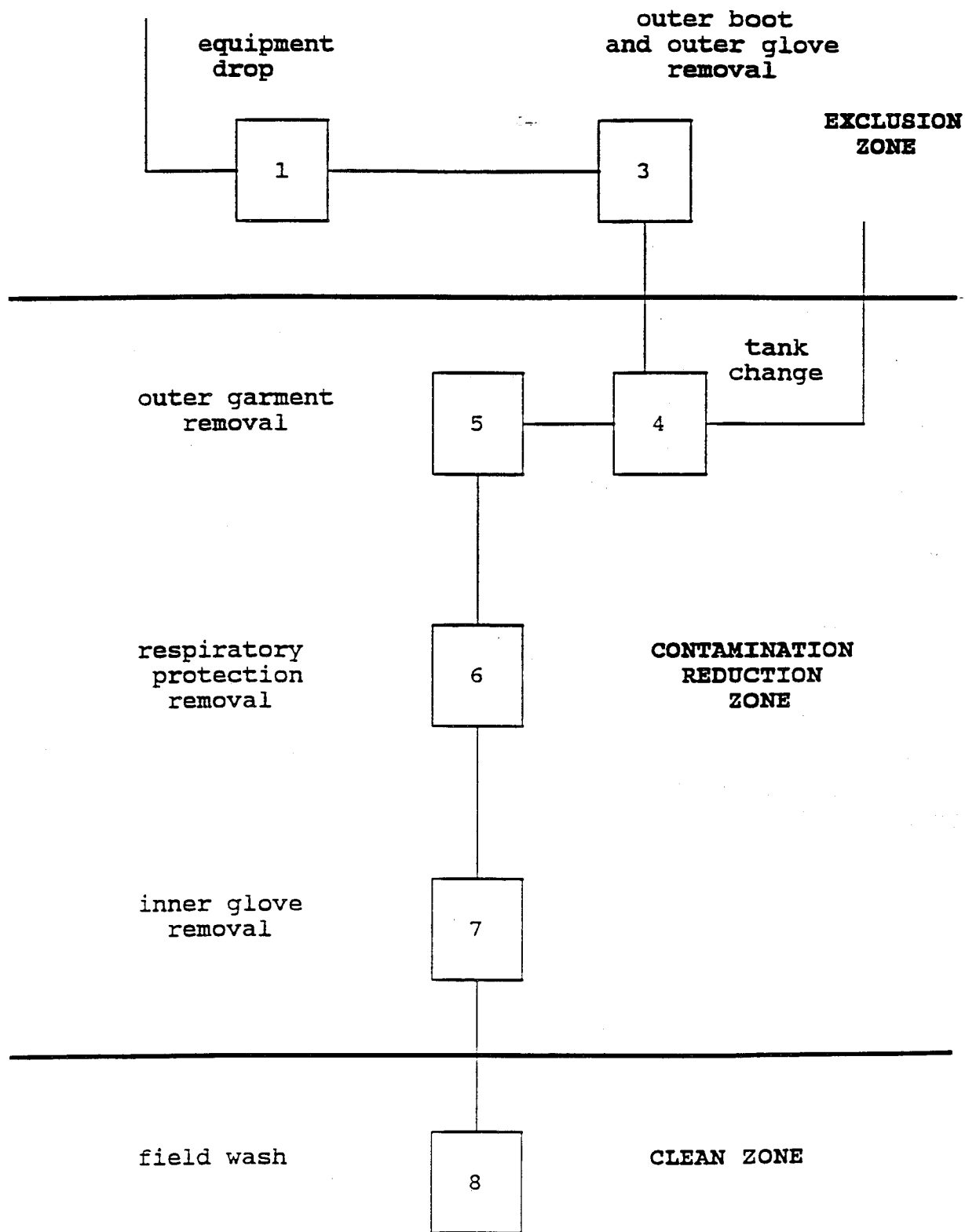
Heavy Equipment Hazards:

- Equipment backing up.
- Above and below ground utility lines.
- Unstable slopes and open pits.
- Cylinders under pressure or containing hazardous contents.
- Personnel in the area of swinging booms.
- Rupture of drums/containers

General Safety Rules:

- All equipment must have operational back up alarms.
- Personnel must make eye-to-eye contact with the operator before approaching the machine.
- Operators must be aware of personnel in the area and use proper hand signals when communicating.
- Operators must use caution when handling compressed gas cylinders or containers of hazardous materials.
- Operators must wear hard hats when any machine does not have an enclosed cab or cage cover.
- Operators must wear their hard hats when going to and from their machines.
- Avoid and provide contingencies for the rupture of drums/containers where appropriate.

Personnel Decontamination Sketch



COLD STRESS

Persons working in temperatures at or below freezing may be frostbitten. Experiencing extreme cold for a short time may cause severe injury to exposed body surfaces or result in profound generalized cooling, causing death. Areas of the body which have high surface-area-to-volume ratios, such as fingers, toes, and ears, are the most susceptible.

Two factors influence the development of a cold injury: ambient temperature and the velocity of the wind. Wind chill describes the chilling effect of moving air in combination with low temperature. For instance, 10 degrees Fahrenheit and a wind speed of 15 miles per hour (mph) is equivalent in chilling effect to still air at -18 degrees Fahrenheit.

As a general rule, the greatest incremental increase in wind chill occurs when a wind of 5 mph increases to 10 mph. Additionally, water conducts heat 240 times faster than air. Thus, the body cools suddenly when chemical-protective equipment is removed if the clothing underneath is perspiration-soaked.

Frostbite includes local injuries resulting from cold. There are several degrees of damage. Frostbite of the extremities can be categorized into:

- Frost nip or incipient frostbite: Characterized by sudden blanching or whitening of the skin.
- Superficial frostbite: Skin has a waxy or white appearance and is firm to the touch, but tissue beneath is resilient.
- Deep frostbite: Tissues are cold, pale, and solid; extremely serious injury.

Systemic hypothermia is caused by exposure to freezing or rapidly dropping temperature. Its symptoms are usually exhibited in five stages: 1) shivering; 2) apathy, listlessness, sleepiness, and sometimes a rapid cooling of the body to less than 95 degrees Fahrenheit; 3) unconsciousness, glassy stare, slow pulse, and slow respiratory rate; 4) freezing of the extremities; and 5) death.

1. Treatment

- a. Give artificial respiration, if necessary.
- b. Bring the victim into a warm room as quickly as possible.
- c. Remove wet or frozen clothing and anything that is constricting.
- d. Rewarm the victim rapidly by wrapping in warm blankets or by placing in a tub of water that is warm, but not hot to the hand or forearm.
- e. If the victim is conscious, give hot liquids (not alcohol) to drink.

- f. Dry the victim thoroughly if water was used to rewarm.
- g. Carry out appropriate procedures as described for frostbite.

NOTE: Frostbite can be prevented by limiting exposure to extreme cold, avoiding personal practices that may contribute to the freezing of tissue, wearing proper protective covering, and recognizing early symptoms of frostbite. The danger of frostbite is increased if a person is tired or the body's resistance is low from a recent illness. When outside in cold air, keep moving; exercise fingers and toes if necessary, but avoid overexertion.

HEAT STRESS

It is the duty of each employer to see that heat stress does not occur to their site personnel. Monitoring of personnel wearing protective clothing should commence when the ambient temperature is 70 degrees Fahrenheit or above. Frequency of monitoring should increase as the ambient temperature increases or if slow recovery rates are indicated. When temperatures exceed 80 degrees Fahrenheit, workers must be monitored for heat stress after every work period. Following the guidelines below will greatly minimize the possibility of heat stress. However, personnel will be aware of the symptoms of the various forms of heat stress, and be able to readily carry out treatments, also noted below:

1. Prevention

- a. Provide plenty of liquids. Available will be a 50% solution of fruit juice or the like in water, or plain water.
- b. Work in pairs. Any activity that will take more than a couple of minutes should not be accomplished alone. In any circumstance, no person will be alone in area requiring protective clothing without notifying another.
- c. Provide cooling devices. On-site showers will be provided to reduce body temperature and/or cool protective clothing.

The amount and type of undergarments worn will be left to the preference of each individual, unless prone to heat stress, especially heat rash. In this case, the worker will be required to wear "long john" type underwear to keep skin off chemical resistant clothing.

- d. Adjustment of the work schedule. When practicable, the most labor-intensive tasks should be carried out during the coolest part of the day.
- e. Medical Surveillance. Shall be provided to employees who have been exposed to hazardous substances above established permissible exposure limits for 30 days or more in a 12-month period or who wear respirators 30 days during the year.

2. Monitoring

Monitoring of personnel will commence at regular intervals. One or more of the following methods will be employed:

- a. Heart rate (HR) will be measured by the radial pulse for 30 seconds as early as possible in the resting period.

Variation in this space of time from one period to the next will be within one (1) minute. Should two work periods occurring in succession each end with more than a one minute variation in this space of time, the following rest period only will be increased by five (5) minutes. The HR at the beginning of the rest period should not exceed 110 beats per minute. If the HR is higher, the next work period will be shortened by 10 minutes, or 33%, which ever is greater, while the length of the rest period will remain the same.

If the pulse rate is 100 beats per minute at the beginning of the next work period, the following work period will be shortened by 33%.

- b. Body Temperature will be measured orally with a clinical thermometer, in accordance with manufacturer's instructions, as early as possible in the resting period. Oral temperature (OT) at the beginning of the rest period should not exceed 99° Fahrenheit. If it does, the next work period will be shortened by 10 minutes, or 33%, whichever is greater. However, if the OT exceeds 99.7° Fahrenheit at the beginning of the following work period, the next cycle will be shortened by another 33%. OT will be measured again at the end of the rest period to make sure that it has dropped to below 99° Fahrenheit.
- c. Body water loss (BWL) due to sweating will be measured by weighing the worker at the start of his or her work day, and again at the end of it. The clothing worn should be similar at both weighings. The scale must be accurate to plus or minus 1/4 pound. BWL should not exceed 1.5% of the total body weight. If it does, workers will increase their daily intake of fluids by the amount of weight lost.

3. Recognition and Treatment

Any personnel who observes any of the following forms of heat stress, either in themselves or in another worker, will report this information to his or her immediate safety supervisor.

a. Heat Rash (or Prickly Heat)

Cause: Continuous exposure to hot and humid air; aggravated by chafing clothing.

Symptoms: Eruption of red pimples around sweat ducts accompanied by intense itching and tingling.

Treatment: Remove sources of irritation and cool the skin with water or wet cloths.

b. Heat Cramps (or Heat Prostration)

Cause: Profuse perspiration accompanied by inadequate replenishment of body water and electrolytes.

Symptoms: Sudden development of pain and/or muscle spasms in the abdominal region.

Treatment: Remove the worker to the decontamination reduction zone. Remove protective clothing. Decrease body temperature and allow a period of rest in a cool location.

c. Heat Exhaustion - SERIOUS

Cause: Overexertion in a hot environment and profuse perspiration accompanied by inadequate replenishment of body water and electrolytes.

Symptoms: Muscular weakness, staggering gait, nausea, dizziness, shallow breathing.

Treatment: Perform the following while simultaneously making arrangements for transport to a medical facility.

Remove the worker to the decontamination reduction zone. Remove protective clothing. Lie the worker down on his or her back, in a cool place, and raise the feet 6 to 12 inches. Keep warm, but loosen all clothing. If conscious, provide sips of a salt water solution being one teaspoon in a 12 ounces. Transport the worker to a medical facility.

d. Heat Stroke - EXTREMELY SERIOUS

Cause: Same as heat exhaustion.

Symptoms: No perspiration, dry mouth, pain in the head, dizziness, nausea.

Treatment: Perform the following while making arrangements for transport to a medical facility.

Remove the worker to the decontamination reduction zone. Remove protective clothing. Lie the worker down in a cool place and raise the head and shoulders slightly. Cool without chilling. Apply ice bags or cold wet cloth to the head. Sponge bare skin with cool water or rubbing alcohol. If possible, place the worker in a tub of cool water. Do not give stimulants. Transport to a medical facility.

CONFINED SPACE ENTRY

1. Purpose

To establish requirements for safe entry into, continued work in, and safe exit from confined spaces.

2. Definitions

- a. **Confined Space**: A space or work area not designed or intended for normal human occupancy, having limited means of egress and poor natural ventilation; and/or any structure, including buildings or rooms, which have limited means of egress.
- b. **Confined Space Entry Permit**: A document to be initiated by the supervisor of personnel who are to enter into or work in a confined space. The Confined Space Entry Permit (CSEP) will be completed by the Response Manager or supervisor before personnel will be permitted to enter the confined space. The CSEP shall be valid only for the performance of the work identified and for the location and time specified. The beginning of a new shift with change of personnel will require the issuance of a new CSEP. A copy of the CSEP is attached for reference purposes.
- c. **Confined Space Observer**: An individual assigned to monitor the activities of personnel working within a confined space. The confined space observer monitors and provides external assistance to those inside the confined space. The confined space observer summons rescue personnel in the event of emergency and assists the rescue team.

3. General

- a. The Response Manager, with the concurrence of the On- Scene Coordinator (OSC), has the responsibility to issue the CSEP, to evaluate and monitor work performed within a confined space for possible hazards, and to determine the safety procedures, PPE, and rescue equipment required.
- b. When possible, confined spaces should be identified with a posted sign which reads: "Caution - Confined Space."
- c. Only personnel trained in and knowledgeable of the requirements of these Confined Space Entry Procedures will be authorized to enter a confined space or be a confined space observer.
- d. A Confined Space Entry Permit (CSEP) must be issued prior to the performance of any work within a confined space. The CSEP will become a part of the permanent and official record of the site.

- e. Natural ventilation shall be provided for the confined space prior to initial entry and for the duration of the CSEP. Positive/forced mechanical ventilation may be required; however, care should be taken not to spread contamination outside of the enclosed area.
- f. If flammable liquids may be contained within the confined space, explosion-proof equipment will be used. All equipment shall be positively grounded.
- g. The contents of any confined space shall, when necessary, be removed prior to entry. All sources of ignition must be removed prior to entry.
- h. Hand tools used in confined spaces shall be in good repair, explosion-proof, spark-proof, and selected according to intended use. When possible, pneumatic power tools are to be used.
- i. Hand-held lights and other illumination utilized in confined spaces shall be equipped with guards to prevent contact with the bulb and must be explosion-proof.
- j. Compressed gas cylinders, except cylinders used for self-contained breathing apparatus, shall not be taken into confined spaces. Gas line hoses shall be removed from the space and the supply turned off at the cylinder valve when personnel exit the confined space.
- k. A ladder is required in all confined spaces deeper than the employee's shoulders. The ladder shall be secured and not removed until all employees have exited the space.
- l. Only a self-contained breathing apparatus or NIOSH approved airline respirators equipped with a 5-minute emergency air supply (egress bottle) shall be used in untested confined spaces or in any confined space with conditions determined immediately dangerous to life and health.
- m. Where air-moving equipment is used to provide ventilation, chemicals shall be removed from the vicinity to prevent introduction into the confined space.
- n. Vehicles shall not be left running near confined space work or near air-moving equipment being used for confined space ventilation.
- o. Smoking in confined spaces will be prohibited at all times.
- p. Any deviation from these Confined Space Entry Procedures requires the prior permission of the OSC.

4. Procedures for Confined Space Entry Permits (CSEP)

The Response Manager shall:

- a. Evaluate the job to be done and identify the potential hazards before a job in a confined space is scheduled.
- b. Ensure that all process piping, mechanical and electrical equipment, etc., have been disconnected, purged, blanked-off or locked, and tagged as necessary.
- c. If possible, ensure removal of any standing fluids that may produce toxic or air-displacing gases, vapors or dust.
- d. Initiate a CSEP in concurrence with the OSC.
- e. Ensure that any hot work (welding, burning, open flames, or spark producing operation) that is to be performed in the confined space has been approved by the OSC and is indicated on the CSEP.
- f. Ensure that the space is ventilated before starting work in the confined space and for the duration of work to be performed in the space.
- g. Ensure that the personnel who enter the confined space and the confined space observer is familiar with the contents and requirements of this instruction.
- h. Ensure remote atmospheric testing of the confined space prior to employee entry and before validation/revalidation of a CSEP to ensure the following:
 - Oxygen content between 19.5% - 23.0%.
 - No concentration of combustible gas in the space. Sampling will be done throughout the confined space and specifically at the lowest point in the space.
 - The absence of other atmospheric contaminants, if the space has contained toxic, corrosive, or irritant material.
 - If remote testing is not possible, a minimum of Level B PPE is required.
- j. Designate whether hot or cold work will be allowed.
- k. Ensure that a copy of the CSEP is posted at the work site, a copy is filed with the project supervisor, and a copy is furnished to the On-Scene Coordinator.

The CSEP posted at the work site shall be removed at the completion of

the job or at the end of the shift, whichever is first. The date and time shall be recorded on the form and the form filed with the OSC at the command post.

5. Confined Space Observer

- a. While personnel are inside the confined space, a confined space observer will monitor the activities and provide external assistance to those in the space. The observer will have no other duties which may take attention away from the work or require leaving the vicinity of the confined space at any time while personnel are in the space.
- b. The confined space observer shall maintain at least voice contact with all personnel in the confined space. Visual contact is preferred.
- c. The supervisor shall instruct the observer on how to contact rescue personnel in an emergency.
- d. If irregularities within the space are detected by the observer, personnel within the space will be ordered to exit.
- e. In an emergency, the observer must NEVER enter the confined space prior to contacting and receiving assistance from a helper. Prior to this time, the observer should attempt to remove personnel with the lifeline and to perform all other rescue functions from outside the space.
- f. A helper shall be designated to provide assistance to the confined space observer in case the observer must enter the confined space to retrieve personnel.

- This will avoid the spread of further contamination to the environment.
- e. Drums of poor or questionable integrity should be overpacked or have the liquid contents transferred to a new drum. Follow liquid transfer safety procedures including bonding and grounding. Overpacked drums can then be moved to a designated staging area.
 - f. Use non-sparking hand tools and excavation equipment.
 - g. When using slings, yokes, or other lifting equipment, workers must stand well away from the work area while the lift is being made.
 - h. Do not handle or excavate badly swollen drums until the pressure is relieved.
 - i. Vehicle cabs must have splash and blast protection for the operator.
 - j. Gas cylinders must not be dragged, allowed to strike other objects, or lifted by the valve. Assume cylinders are under pressure and contain a hazardous gas.
 - k. Where explosive, shock-sensitive, or high-pressure materials are known or expected, the drum should be handled remotely. Workers must be protected from a potential blast by bunkers, blast shields, or other suitable blast containment or barriers.
 - l. Monitor the atmosphere frequently or continuously to detect changing conditions and when in proximity to containers with unknown contents.

3. Drum Staging and Sampling

- a. Use remote drum handling equipment as much as practical.
- b. Stage gas cylinders in a cool, shaded area. All cylinders must have valve covers in place. Secure them in an upright or horizontal position. Store acetylene cylinders in an upright position only.
- c. Stage potentially explosive or shock-sensitive containers in diked, bunkered areas, clearly posted with warnings and protected from heat and physical damage.
- d. Stage compatible liquid wastes within containment dikes or structures to hold spilled materials. Have emergency absorbent and recovery equipment on hand.
- e. Clean up spills promptly. Do not use sampling equipment on consecutive containers unless they are thoroughly decontaminated.
- f. Stage drums to minimize the possibility of chain reactions. Do not stack drums unless secured on pallets and only if necessary. Leave adequate aisle spaces for emergency evacuation and access.
- g. Use only non-sparking hand tools if drums are to be opened manually.

4. Consolidation and Storage

- a. Perform compatibility testing before bulking or mixing wastes. Seal drums after sampling.
- b. Segregate wastes according to compatibility class.
- c. Inspect storage areas routinely.
- d. Maintain adequate aisle space for access and emergency exit.
- e. Keep the storage area well drained. Keep explosives, gas cylinders, and reactive materials in dry, cool, shaded areas.

5. Fire Protection

- a. Have chemical fire fighting equipment on hand (i.e., dry chemical fire extinguishers, A-triple-F foam, etc.).
- b. Have an emergency plan prepared before beginning drum handling activities. Contact and coordinate with local emergency services.
- c. Use non-sparking tools. Be aware of other potential ignition sources (i.e., lights, vehicular engines, electrical tools, etc.). Use grounding and bonding cables.
- d. Ventilate confined spaces to minimize accumulation of volatile or toxic vapors.

6. Personal Protective Equipment

- a. In situations where the contents of drums or containers are unknown, Level B personal protective equipment, at a minimum, is required, until such time as the contents of the drums are positively identified or determined to be non-hazardous.
- b. Sampling of drums of unknown contents is always done in Level B or Level A personal protective equipment.
- c. Operators must be protected by splash and blast protection, and they must wear respiratory protection comparable to ground personnel.
- d. Airline respiratory systems must be protected from contamination and physical damage.
- e. Where appropriate, employees will handle drums from behind blast shields. Use of remote handling equipment is preferred.
- f. An emergency alarm system and continuous communications are required when handling unknown, explosive, or shock sensitive wastes.

CONFINED SPACE ENTRY PERMIT

DATE: _____ TIME ISSUED: _____ LOCATION: _____
VALIDATION PERIOD: _____ TASK TO BE PERFORMED: _____

HAZARDS AND SOPS ASSOCIATED WITH THIS TASK: _____

REQUIRED AIR MONITORING:

<u>Yes/No</u>	<u>Type</u>	<u>Reading</u>
_____	Oxygen	_____ %
_____	Combustible Gas	_____ % LEL
_____	Organics	_____ % ppm
_____	Other	_____ %

NAME OF PERSON CONDUCTING AIR MONITORING: _____
() SAFETY PRECAUTIONS REQUIRED:

_____ Standby Observer	_____ Release Equipment
_____ Confined Space Cleaned	_____ Lifelines/Harness
_____ of Hazardous Materials	_____ Electrical Power
_____ Confined Space Ventilated	_____ Disconnected
_____ Continuous Monitoring	_____ Special Lighting
_____ Spark-Proof Equipment/Tools	_____ Other
_____ Other	

PROTECTIVE EQUIPMENT:

Level A _____ Additional Equipment _____ Level B _____
Additional Equipment _____
Level C _____ Additional Equipment _____

ADDITIONAL COMMENTS/REQUIREMENTS: _____

NAME OF PERSONS INVOLVED: _____

ERCS SUPERVISOR SIGNATURE: _____ TIME: _____
DATE: _____

U.S. EPA OSC SIGNATURE: _____ TIME: _____
DATE: _____

SUMMARIZE CONFINED SPACE ACTIVITIES UPON COMPLETION: _____

ERCS SUPERVISOR SIGNATURE: _____ TIME: _____
DATE: _____

U.S. EPA OSC SIGNATURE: _____ TIME: _____
DATE: _____

DRUM AND CONTAINER HANDLING

Drums and containers on hazardous waste sites present a number of safety hazards to site personnel which could result in injury, illness or death and could cause fires, explosions, spills, or emissions of toxic liquids or gases. It is important that those persons responsible for handling the drums or containers are aware of these hazards and take precautions to prevent accidents.

1. Location and Inventory of Drums

- a. Drums should be considered to contain extremely flammable, reactive, or highly toxic material until positive identification has been made. Level B personal protective equipment at a minimum is mandatory until such identification is made.
- b. Background information on the site, which includes analyses of soil, surface water and groundwater samples, and such analyses of random drum samples should be considered in planning site entry and drum handling activities.
- c. Direct-reading air monitoring equipment (combustible gas indicator, oxygen meter, organic vapor analyzer, radiation meter) must be used to assist in locating leaking drums, areas of contamination, or other potential health and safety hazards.
- d. Approach drums and containers cautiously, and visually inspect for identification information and physical damage. Do not approach swollen drums. Use equipment with a drum grappler and explosion protection to isolate them and relieve pressure remotely. Use binoculars or remote handling equipment to inspect containers regarded as unsafe.
- e. Personnel shall not stand upon or work from drums or containers.

2. Drum Excavation and Handling

- a. Buried drums and containers must be considered to contain extremely flammable, reactive, or toxic materials until positive identification has been made. Level B personal protective equipment is required during drum excavation activities.
- b. To the maximum extent possible, buried drums should be located with ground penetrating sensors.
- c. Excavation should proceed carefully to avoid unnecessary damage to drums and spillage of the contents. Remote handling grapplers are recommended. Large excavators with buckets should be equipped with flat blades to avoid puncturing buried drums.
- d. A temporary containment area adjacent to the excavation should be established as a contingency for exhumed drums/containers that are leaking.

SAMPLING DRUMS AND CONTAINERS

Sampling of containers and drums shall be done in Level B personal protective equipment in accordance with EPA Standard Operating Safety Guidelines.

- Research background information about the waste contained in the drums or containers to be sampled, if possible.
- Develop a sampling plan which includes, but is not limited to, the selection of sampling devices and containers; the number, volume, and locations of samples to be collected; the standard operating procedures for specific sampling operations; and the appropriate personal protection utilized during all phases of the sampling operation.
- Stage all drums and containers in an appropriate area to conduct sampling activities. Mark or label all drums with a unique identification number to refer to after the completion of sampling activities. Prepare a drum log which identifies the location and description of each staged drum/container.

When manually sampling from a drum, use the following techniques:

- Keep sampling personnel at a safe distance while drums are being opened. Sample only after opening operations are complete. Reseal drums after samples are collected.
- Do not lean over other drums to reach the drums being sampled, unless absolutely necessary.
- Cover drum tops with plastic sheeting or other suitable noncontaminated materials to avoid excessive contact with the drum tops.
- Never stand on drums. This is extremely dangerous. Use mobile steps or another platform to achieve the height necessary to safely sample from the drums.
- Obtain liquid samples from the drums with either glass rods, dippers, or vacuum pumps. Do not tip drums to obtain sample material. Never lift drums or pour material from the drums to collect a sample. Do not use contaminated items such as discarded rags to sample. The contaminants may contaminate the sample and may not be compatible with the waste in the drum. Glass rods should be removed prior to pumping to minimize damage to pumps.
- Obtain solid samples from the drums with scoops or dippers. Avoid reaching into the drum to collect a sample. Use appropriate decontamination procedures between sample locations. Use disposable or dedicated items to collect and handle the samples.
- Once the sample is collected, complete all marking and labelling procedures and maintain proper chain-of-custody. Store and package samples in appropriate containers for transport to respective laboratories.

EXCAVATION, TRENCHING, AND SHORING

1. General Protection Requirements

- a. Walkways, runways, and sidewalks shall be kept clear of excavated material or other obstructions; and no sidewalks shall be undermined unless shored to carry a minimum load of 125 pounds per square foot.
- b. If planks are used for raised walkways, runways, or sidewalks, they shall be:
 - laid parallel to the length of the walk and fastened together against displacement.
 - uniform in thickness, and exposed ends provided with beveled cleats.
 - provided with plank steps on strong stringers.
 - provided with cleats when used in lieu of steps.
- c. All employees shall be protected with personal protective equipment for the protection of the head, eyes, respiratory organs, hands, feet, and other parts of the body as set forth in OSHA Safety and Health Standards, 29 CFR 1926 Subpart E, and/or in the site health and safety plan.
- d. Reflectorized warning vests shall be worn by employees exposed to vehicular traffic.
- e. Prior to entering an excavation, the atmosphere shall be tested for hazardous dusts, gases fumes, mists, and/or oxygen deficiency. Employees subject to hazardous atmospheres shall then be equipped with proper respiratory protection as stated in 29 CFR 1926 Subpart D and/or the site health and safety plan.
- f. No person shall be permitted under loads handled by power shovels, derricks, or hoists.
- g. Daily inspections of excavations shall be made by a competent person. If a hazard exists, work shall be stopped until the necessary precautions are taken.

2. Specific Excavation Requirements

- a. Prior to opening an excavation, underground installations that may be encountered shall be identified. Proper supports shall be provided when/if the installations are exposed. Utility companies should be contacted prior to the start of actual excavation if underground installations are expected.
- b. Trees, boulders, and other surface encumbrances that create a hazard shall be removed or made safe before excavation is begun.
- c. Excavations shall be inspected daily or more often, as conditions warrant, by a competent person.

- d. The determination of the angle of repose and design of the supporting system shall be based on these factors: depth of cut; possible variation in water content of the material while the excavation is open; anticipated changes from exposure to air, sun, water, or freezing; loading imposed by structures, equipment, overlying material, or stored material; and vibration from equipment, blasting traffic or other sources. The ultimate determination of the slope and configuration shall be determined in accordance with the conditions set forth in 29 CFR 1926.652, Appendices A and B.
- e. Supporting systems, i.e. piling, cribbing, shoring, etc., shall be designed by a qualified person and meet accepted engineering requirements.
- f. All slopes should be excavated to at least the angle of repose except for solid rock areas. The angle of repose shall be flattened when an excavation has water conditions, silty materials, loose boulders, and areas where erosion, deep frost action, and slide planes appear.
- g. Excavated or other materials shall be stored and retained at least two feet from the edge of the excavation unless barriers are utilized.
- h. Excavations may be entered/exited by use of ladders or ramps. The use of buckets, forklifts, or any other machinery not designed for personnel transportation is prohibited.
- i. Sides, slopes, and faces of all excavations shall meet accepted engineering requirements. Special attention should be given to slopes which may be adversely affected by weather or moisture content.
- j. Support system shall be planned and designed by a qualified person when excavation is in excess of 20 feet in depth, adjacent to structures, or subject to vibration or groundwater.
- k. Materials used for sheeting, sheet piling, cribbing, bracing, and underpinning shall be in good serviceable condition.
- l. Special precautions shall be taken in sloping or shoring the sides of excavations adjacent to a previously backfilled excavation of fill.
- m. Except in hard rock, excavations below the level of the base of the footing of any foundation or retaining wall shall not be permitted unless the wall is underpinned and all other precautions taken to ensure the stability of the adjacent walls; or the excavation is in stable rock; or a registered professional engineer has approved the determination that the structure is sufficiently removed from the excavation so as to be unaffected by the excavation activity.
- n. Diversion ditches, dikes, or other suitable means shall be used to prevent water from entering an excavation and for drainage of the excavation.

- o. The side of the excavation must be sheet-piled, shored, and braced as necessary to resist the extra pressure of any superimposed loads.
- p. Blasting and the use of explosives shall be performed in accordance with 29 CFR 1926 Subpart U.
- q. When mobile equipment is utilized or allowed adjacent to excavations, stop logs or barricades shall be installed. The grade should always be away from the excavation.
- r. All wells, pits, shafts, etc., shall be barricaded or covered. Upon completion of exploration and similar operations, temporary wells, pits, shafts, etc. shall be backfilled.
- s. Dust conditions shall be kept to a minimum. Excavations containing hazardous soils shall be evaluated, and the proper precautions shall be taken. Wetting agents may be necessary.
- t. In locations where oxygen deficiency or gaseous conditions are possible, air in the excavations shall be tested. Controls shall be established to ensure acceptable atmospheric conditions. If the situation lends itself, Confined Space Entry Procedures shall be followed. Emergency rescue equipment shall be readily available where adverse atmospheric conditions may exist or develop in an excavation.
- u. Where ramps, walkways, or bridges are used for employees or equipment, they shall be designed and constructed by a qualified person in accordance with accepted engineering requirements. When personnel are requested to be in trenches four feet deep or more, an adequate means of exit, such as a ladder or steps, shall be provided.
- v. All ladders used on excavation operations shall be in accordance with the requirements of 29 CFR 1926 Subpart L.

3. Specific Trenching Requirements

- a. Expected hazardous ground movement areas and banks more than five feet high shall be shored, laid back to a stable slope, or equivalent.
- b. Sides of trenches in unstable or soft material five feet or more in depth shall be shored, sheeted, braced, sloped, or equivalent in accordance with 29 CFR 1926.652, and Appendices A and B to Subpart P.
- c. Sides of trenches in hard compact soil, including embankments, shall be shored or otherwise supported when the trench is more than five feet in depth and eight feet or more in length.
- d. Materials used for sheeting and sheet piling, bracing, shoring, and underpinning shall be in good serviceable condition. Care should be taken to not overstress the lumber being used at an excavation.

- e. Additional precautions by way of shoring and bracing shall be taken to prevent slides or cave-ins when excavations of trenches are made in locations adjacent to backfilled excavations or where excavations are subjected to vibrations.

APPENDIX F
AIR MONITORING LOGS

AIR MONITORING LOG

SITE: MARINO PROPERTY SITE EXCAVATION
TDD/PCS: 01-9103-05A/1248
DATE: APRIL 16, 1991

TIME	INSTRUMENT	MONITOR	STATION	READING/COMMENTS
1200	OVA/FID	T.Jones	Support Zone - BACKGROUND	1 UNIT - CAL ADJUST
1215	OVA/FID	T.Jones	Test Pit #1 - 55 GAL DRUM	+1000 UNITS - INSIDE DRUM
1230	HNU/PID	ME Stanton	Support Zone - BACKGROUND	0.2 UNIT - BACKGROUND
1300	OVA/FID	T.Jones	Test Pit #1 - INSIDE PIT	150 UNITS - PEAK READING
1300	HNU/PID	ME Stanton	Test Pit #1 - INSIDE PIT	50 UNITS - PEAK READING
1305	OVA/FID	T.Jones	Test Pit #1 - PERIMETER	7 UNITS - PEAK READING
1305	HNU/PID	ME Stanton	Test Pit #1 - PERIMETER	5 UNITS - PEAK READING
1500	OVA/FID	T.Jones	Test Pit #1 - BACKFILL	LOW FLUCTUATIONS W/WIND SHIFT
1500	HNU/PID	ME. Stanton	Test Pit #1 - BACKFILL	LOW FLUCTUATIONS W/WIND SHIFT
1530	OVA/FID	T.Jones	Test Pit #2 - PERIMETER	70 UNITS - PEAK READING
1530	HNU/PID	ME. Stanton	Test Pit #2 - PERIMETER	17 UNITS - PEAK READING
1600	OVA/FID	T.Jones	Test Pit #2 - COLORED LIQUID	OFF SCALE OVER PIT
1600	HNU/PID	ME. Stanton	Test Pit #2 - COLORED LIQUID	200-300 UNITS OVER PIT
1700	OVA/FID	D. Tagliaferro	Test Pit #2 - BACKFILL	10 UNITS - PEAK READING

AIR MONITORING LOG

SITE: MARINO PROPERTY SITE EXCAVATION
TDD/PCS: 01-9103-05A/1248
DATE: APRIL 17, 1991

TIME	INSTRUMENT	MONITOR	STATION	READING/COMMENTS
0930	OVA/FID	T.Jones	Test Pit #3 - BACKGROUND	1 UNIT - CAL ADJUST
0945	OVA/FID	T.Jones	Test Pit #3 - 0-6 FEET	BACKGROUND READINGS ONLY
0945	HNU/PID	ME Stanton	Test Pit #3 - BACKGROUND	0.2 UNITS BACKGROUND
0955	OVA/FID	T.Jones	Test Pit #3 - 6-12 FEET	20 UNITS - PEAK READING
0955	HNU/PID	ME Stanton	Test Pit #3 - 6-12 FEET	2 UNITS - PEAK READING
1000	OVA/FID	T.Jones	Test Pit #3 - BREATH. ZONE	BACKGROUND READINGS ONLY
1000	HNU/PID	ME Stanton	Test Pit #3 - BREATH. ZONE	BACKGROUND READINGS ONLY
1030	OVA/FID	T.Jones	Test Pit #4 - BREATH. ZONE	BACKGROUND READINGS ONLY
1030	HNU/PID	ME Stanton	Test Pit #4 - BREATH. ZONE	BACKGROUND READINGS ONLY
1045	OVA/FID	T.Jones	Test Pit #4 - 1-8 FEET	300 UNITS - PEAK READING
1045	HNU/PID	ME Stanton	Test Pit #4 - 1-8 FEET	4 UNITS - PEAK READING
1100	OVA/FID	T.Jones	Test Pit #4 - BREATH. ZONE	BACKGROUND READINGS ONLY
1100	HNU/PID	ME Stanton	Test Pit #4 - 8-10 FEET	5 UNITS - PEAK READING
1215	OVA/FID	T.Jones	Test Pit #5 - BREATH. ZONE	BACKGROUND READINGS ONLY
1215	HNU/PID	ME. Stanton	Test Pit #5 - BREATH. ZONE	BACKGROUND READINGS ONLY
1230	OVA/FID	T.Jones	Test Pit #5 - OVER TEST PIT	BACKGROUND READINGS ONLY
1230	HNU/PID	ME. Stanton	Test Pit #5 - OVER TEST PIT	BACKGROUND READINGS ONLY
1415	OVA/FID	T.Jones	Test Pit #6 - BREATH. ZONE	BACKGROUND READINGS ONLY
1415	HNU/PID	ME. Stanton	Test Pit #6 - BREATH. ZONE	BACKGROUND READINGS ONLY
1430	OVA/FID	T.Jones	Test Pit #6 - OVER TEST PIT	NO READING - OVA MALFUNCTION
1430	HNU/PID	ME. Stanton	Test Pit #6 - OVER TEST PIT	BACKGROUND READINGS ONLY
1540	HNU/PID	ME. Stanton	Test Pit #7 - BREATH. ZONE	BACKGROUND READINGS ONLY
1550	HNU/PID	ME. Stanton	Test Pit #7 - OVER TEST PIT	BACKGROUND READINGS ONLY
1600	HNU/PID	ME. Stanton	Test Pit #8 - BREATH. ZONE	BACKGROUND READINGS ONLY
1620	HNU/PID	ME. Stanton	Test Pit #8 - OVER TEST PIT	BACKGROUND READINGS ONLY
1630	HNU/PID	D. Tagliaferro	EXCLUSION ZONE - BACKFILL	BACKGROUND READINGS ONLY

CT DEP PERIMETER AIR MONITORING LOG

SITE: MARINO PROPERTY SITE EXCAVATION

TDD/PCS: 01-9103-05A

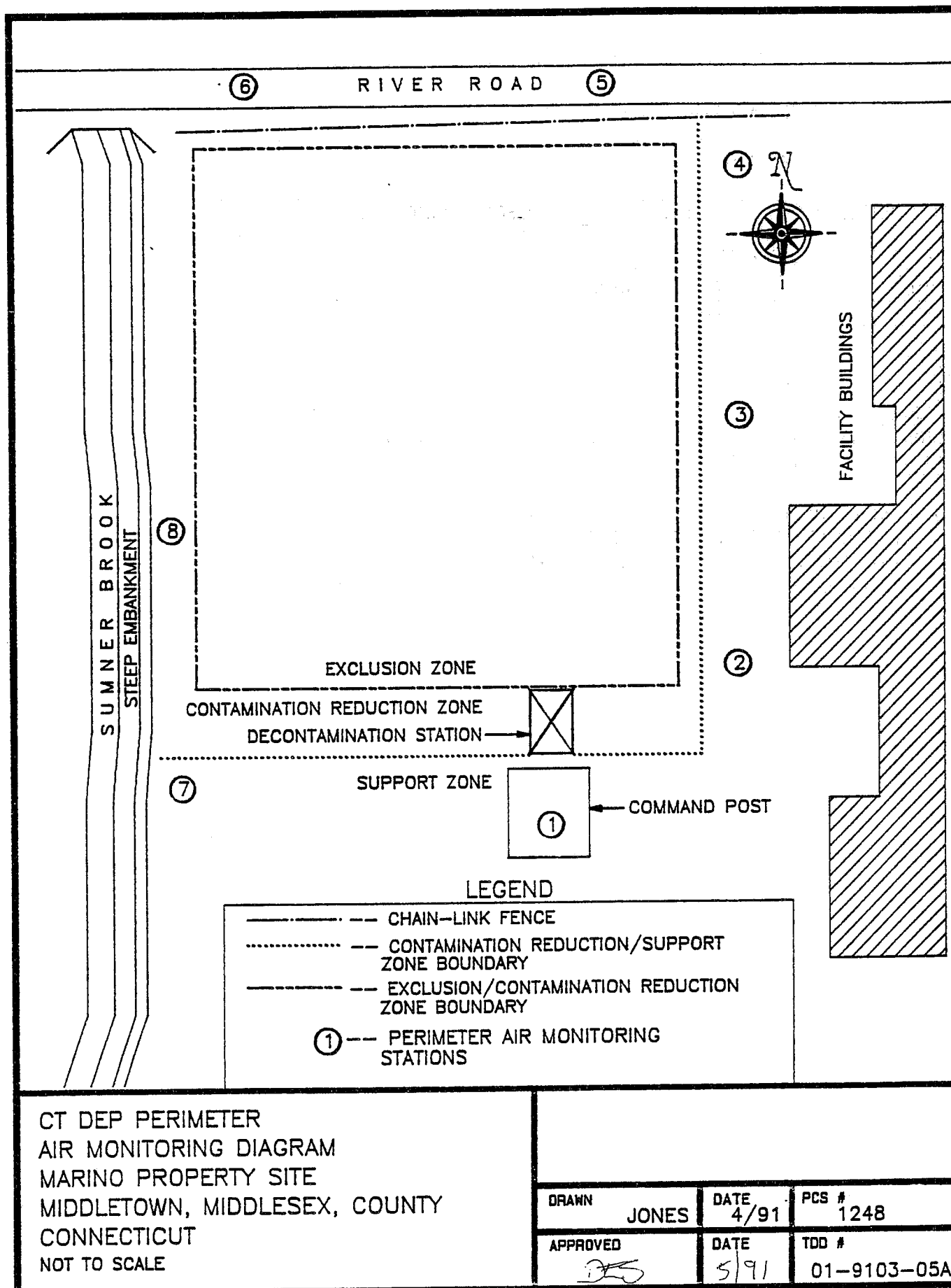
DATE: APRIL 16, 1991

TIME	INSTRUMENT	MONITOR	STATION/READING (1)							
			1	2	3	4	5	6	7	8
1138	OVM/PID*	F. WACHAT (DEP)	0	0	0	0	0	0	0	0
1215	OVM/PID*	F. WACHAT (DEP)	0	0	0	0	0	0	0	0
1240	OVM/PID*	F. WACHAT (DEP)	0	0	2	0	0	0	0	0
1250	OVM/PID*	F. WACHAT (DEP)	0	0	18	26	---	---	0	0
1315	OVM/PID*	F. WACHAT (DEP)	---	---	3	7	---	---	---	---
1330	OVM/PID*	F. WACHAT (DEP)	0	0	5	10	3	---	---	---
1420	OVM/PID*	F. WACHAT (DEP)	0	12	0	2	5	---	---	---
1505	OVM/PID*	F. WACHAT (DEP)	0	0	2	13	10	---	---	---
1510	OVM/PID*	F. WACHAT (DEP)	---	---	11	---	---	---	---	---

(1) - SEE ATTACHED AIR MONITORING STATION LOCATION MAP

* - THERMO ENVIRONMENTAL INSTRUMENTS, ORGANIC VAPOR METER
PID WITH 10.2 eV LAMP CALIBRATED TO 250 PPM ISOBUTYLENE

--- - NO READING COLLECTED AT STATION



APPENDIX G
TEST PIT LOGS

PROJECT: MARINO PROPERTY SITE

SHEET / OF 8

CLIENT: US EPA EMERGENCY PLANNING AND RESPONSE BRANCH

CONTRACTOR: NATIONAL OIL SERVICE EQUIPMENT: FORD 655 A

DEPTH TO WATER: NA

INSPECTOR: *JONES*

LOG OF TEST PIT No. 7

DATE: 4/16/91 ELEVATION: NA

DEPTH FT.	SAMPLE No. DEPTH	CLASSIFICATION	TEST RESULTS
0.5'		PROCESSED CHIMEL DRIVEWAY &	OVA - BACKGROUND
	5001/1A	BLACK/BROWN CIGARS AND DEBRIS	
	5002/2A	INCINERATION WASTES	
	5003/2A	SEVERAL 5-GAL DRUM AT SURFACE	OVA - 150 PEAK HAU - 50 PEAK
-5-		PAILS UNCOVERED (CRUSHED)	
6'		(5003)	
		BOTTOM OF EXCAVATION AT 6'	
-10-			
-15-			
-20-			

DIMENSIONS

COMMENTS SAMPLES COLLECTED FROM VISUALLY CONTAMINATED SOILS (S001, S002) AND FROM LIQUID IN 5 GAL PAIL (S003)

FIGURE No. *A-1*



PROJECT No.

01-9103-05A, 1248

TEST PIT LOGS

PROJECT: MARINO PROPERTY SITE

SHEET 2 OF 8

CLIENT: U.S. EPA EMERGENCY PLANNING AND RESPONSE BRANCH

CONTRACTOR: NATIONAL OIL SERVICE EQUIPMENT: FORD 655A

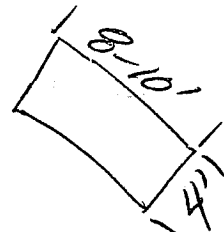
DEPTH TO WATER: NA

INSPECTOR: JONES

LOG OF TEST PIT No. 2

DATE: 4/16/91 ELEVATION: NA

DEPTH FT.	SAMPLE No. DEPTH	CLASSIFICATION	TEST RESULTS
6"		PROCESSED GRAVEL DRIVEWAY	OWA BACKGROUND
		CINDERS / PEBBLES	HAN BACKGROUND
		SEVERAL 5 GALLON PAILS	OWA - 70 UNITS
4'			HAN - 17 UNITS
5'	5004	COLORLESS LIQUID FLOWED INTO	OWA - OFF SCALE
6'		TEST PIT AT 4-5 FEET, NO	200-300 ON HAN
		VISIBLE CONTAMINANT	
		BOTTOM OF EXCAVATION AT 6'	
10'			
15'			
20'			

DIMENSIONS 

COMMENTS HIGH INSTRUMENT READINGS DURING EXCAVATION,

SAMPLE 5004 OF COLORLESS LIQUID; OWA READINGS

FLUCTUATED FROM 1-10 FOLLOWING BACKFILL.

FIGURE No. H-2

PROJECT: *MANITO PROPERTY SITE*

SHEET 3 OF 8

CLIENT: U.S. EPA EMERGENCY PLANNING AND RESPONSE BRANCH

CONTRACTOR: NATIONAL OIL SERVICE EQUIPMENT: FORD 655A

DEPTH TO WATER: *NA*

INSPECTOR: *JONES*

LOG OF TEST PIT No. 3

DATE: 4/17/91 ELEVATION: NA

DEPTH FT.	SAMPLE No. DEPTH	CLASSIFICATION	TEST RESULTS
0'		RED TO BROWN FINE SAND AND SOME SILT, TRACE GRAVEL	OVA BACKGROUND
2'		BLACK TO BROWN CINDERS - INCINERATION WASTE	OVA BACKGROUND
-5-			
6'		BLACK TO BROWN CINDERS, INCINERATION WASTE WITH DEBRIS INCLUDING FIBERGLASS LAMINATED BOARD AND EMPTY 5 GALLON PAILS	OVA 20 UNITS } OVER HAD 2 UNITS } PIT
-10-			BACKGROUND READINGS IN BREATHING ZONE
12'		BOTTOM OF EXCAVATION AT 12'	DIMENSIONS A N
-15-			
-20-			

COMMENTS NO SAMPLES WERE COLLECTED

FIGURE No. *H-3*

FIGURE No. *H-4*



PROJECT No.

01-9103-05A, 1248

TEST PIT LOGS

PROJECT: MARINO PROPERTY SITE

SHEET 5 OF 8

CLIENT: USEPA EMERGENCY PLANNING AND RESPONSE BRANCH

CONTRACTOR: NATIONAL OIL SERVICE EQUIPMENT: FORD 655A

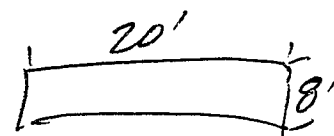

DEPTH TO WATER: NA

INSPECTOR: D. TAGLIARENO

LOG OF TEST PIT No. 5

DATE: 4/17/91 ELEVATION: NA

DEPTH FT.	SAMPLE No. DEPTH	CLASSIFICATION	TEST RESULTS
2'		TAN FINE SAND AND SILT, LITTLE FINE GRAVEL	HAV BACKGROUND ONLY
5'		DARK BROWN TO BLACK CINDERS FINE SAND AND SILT, SOME FINE GRAVEL, GLASS AND DEBRIS	HAV BACKGROUND ONLY
8'		BOTTOM OF EXCAVATION AT 8'	
10'			
15'			
20'			

DIMENSIONS 

COMMENTS NO SAMPLES COLLECTED

FIGURE No. H-5



PROJECT No.

01-9103-05A, 1248

TEST PIT LOGS

PROJECT: MARINO PROPERTY

SHEET 7 OF 8

CLIENT: US EPA EMERGENCY PLANNING AND RESPONSE BRANCH

CONTRACTOR: NATIONAL OIL SERVICE EQUIPMENT: FOND 655A

DEPTH TO WATER: NA

INSPECTOR: D. TAGLIAFERRO-OSL

LOG OF TEST PIT No. 7

DATE: 4/17/91 ELEVATION: NA

DEPTH FT.	SAMPLE No. DEPTH	CLASSIFICATION	TEST RESULTS
2'		RED FINE SAND, LITTLE FINE TO MEDIUM GRAVEL	HNU BACKGROUND ONLY
5'	S005	RED FINE SAND AND SILT, FINE TO COARSE GRAVEL, GLASS DEBRIS — RED/WHITE SOLID IN 3 CRUSHED 55 GAL DRUMS	HNU BACKGROUND ONLY
8'	S006	SOIL FROM BASE OF EXCAVATION BOTTOM OF EXCAVATION AT 8'	
10'			
15'			
20'			

DIMENSIONS N

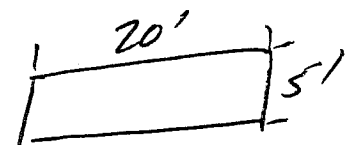
COMMENTS SAMPLES S005 - COMPOSITE FROM 3 DRUMS
SAMPLE S006 - SOIL AT BASE OF PIT

FIGURE No. H-7

APPENDIX H
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-W0-0036

TAT-01-N-00773

TDD NO. 01-9103-05

Prepared By:

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

March 1991

TABLE OF CONTENTS

	<u>PAGE</u>
List of Figures	iii
List of Tables	iv
1.0 Background	1
2.0 Objectives	5
3.0 Quality Assurance Objectives	5
4.0 Approach & Sampling Methodologies	5
4.1 Soil Sampling	5
4.2 Drum Sampling	6
5.0 Project Organization & Responsibilities	7
6.0 Quality Assurance Requirements	7
7.0 Deliverables	7
8.0 Data Validation	7
9.0 References	8

LIST OF FIGURES

	<u>PAGE</u>
FIGURE 1 - Site Location Map	2
FIGURE 2 - Site Diagram	3
FIGURE 3 - Possible Test Pit Locations	4

LIST OF TABLES

	<u>PAGE</u>
TABLE 1 - Sampling Summary, Analytical Methods & QA/QC Samples	9

1.0 BACKGROUND

The Marino Property site is located at 50 Walnut Street in Middletown, Connecticut (Figure 1). The site is bounded to the north by the Connecticut River, to the east by Walnut Street and to the south and west by industrial properties. According to the Connecticut Department of Environmental Protection (CT DEP), the site is comprised of a former rubber manufacturing factory that is currently utilized by several small businesses and a large level filled-in area, which is located to the west of the factory buildings (Figure 2).

According to Edward C. Parker, Director of the Site Remediation and Closure Division (SRCD) Waste Management Bureau, CT DEP, SRCD received an anonymous complaint on August 14, 1990 concerning a drum that was uncovered and damaged during excavation activities in the center of the previously mentioned filled-in area at the site during March of 1990. The complaint indicated that a dark, thick liquid was leaking from the drum and that the surrounding soil had a purplish color. The drum was subsequently reburied at a depth of approximately six feet. The complaint also indicated that a former employee at the rubber company witnessed the disposal of five to ten liquid chemicals on a weekly basis over a period of twenty to thirty years.

During review of the CT DEP Waste Engineering and Enforcement Division files by CT DEP personnel, identified a previous complaint of hazardous waste dumping at the site was discovered. Investigations were 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 area. No further actions were undertaken at that time.

The groundwater classification in the immediate area is GB. Therefore, its designated use is for process water and cooling water and is 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.

On September 31, 1990 and November 1, 1990, a Removal Program Preliminary Assessment/ Site Investigation (PA/SI) was conducted by U.S. EPA Environmental Services Division and Technical Assistance Team (TAT) personnel. Details of the PA/SI may be found in the report entitled, *Removal Program Preliminary Assessment/Site Investigation of the Marino Property, Middletown, Connecticut*, submitted under TDD #01-9010-57. During the PA/SI, six stations within the aforementioned filled-in area were identified as possible locations for buried metal objects (Figure 3). The stations were identified by TAT members using a terrain conductivity meter and portable magnetometer.

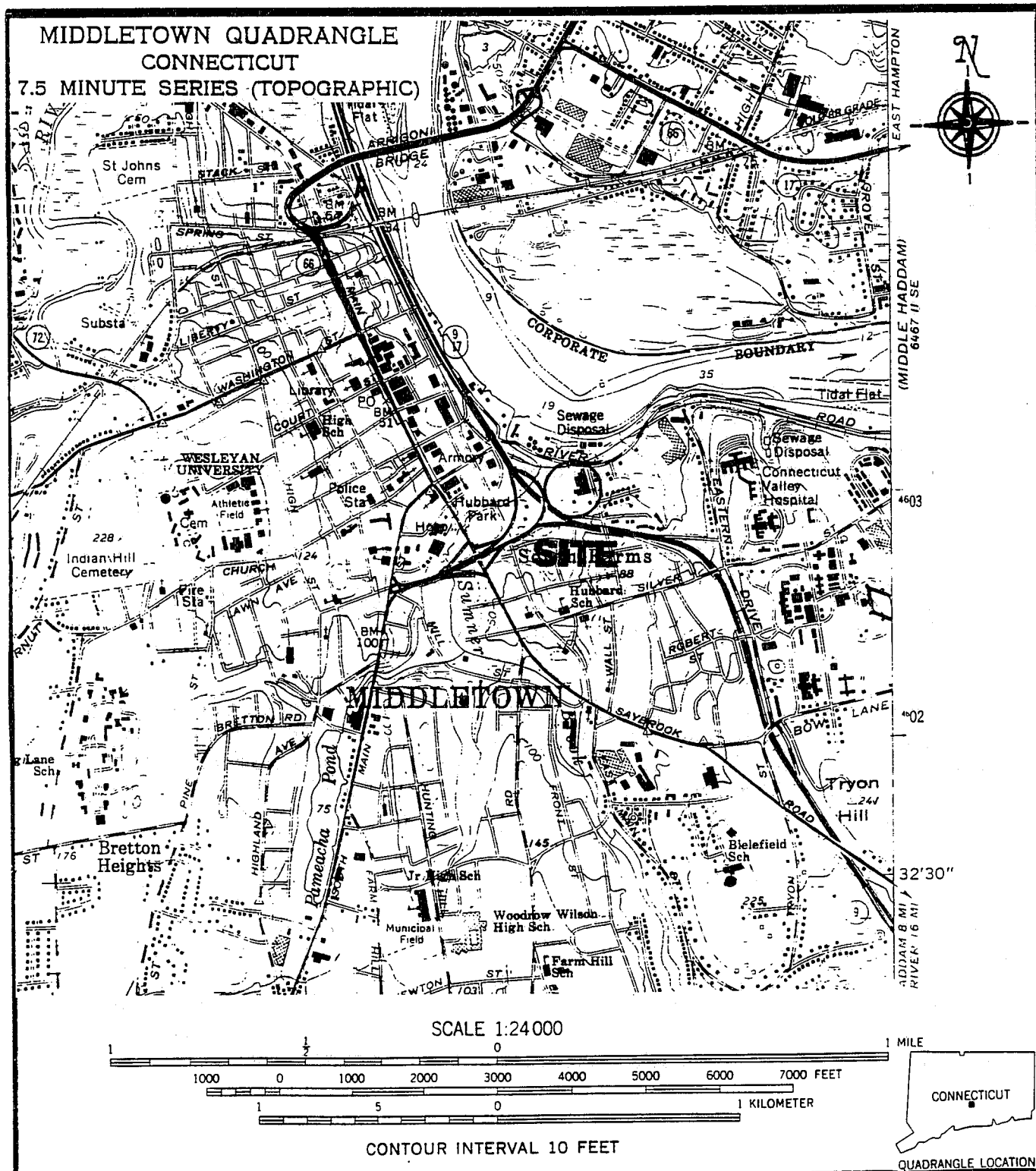


FIGURE 1

SITE LOCATION MAP
MARINO PROPERTY SITE
MIDDLETOWN, MIDDLESEX COUNTY
CONNECTICUT

WESTON

MANAGERS

DESIGNERS/CONSULTANTS

DRAWN

KIRKPATRICK

DATE

3/91

PCS #

1209

APPROVED

[Signature]

DATE

3/91

TDD #

01-9103-05

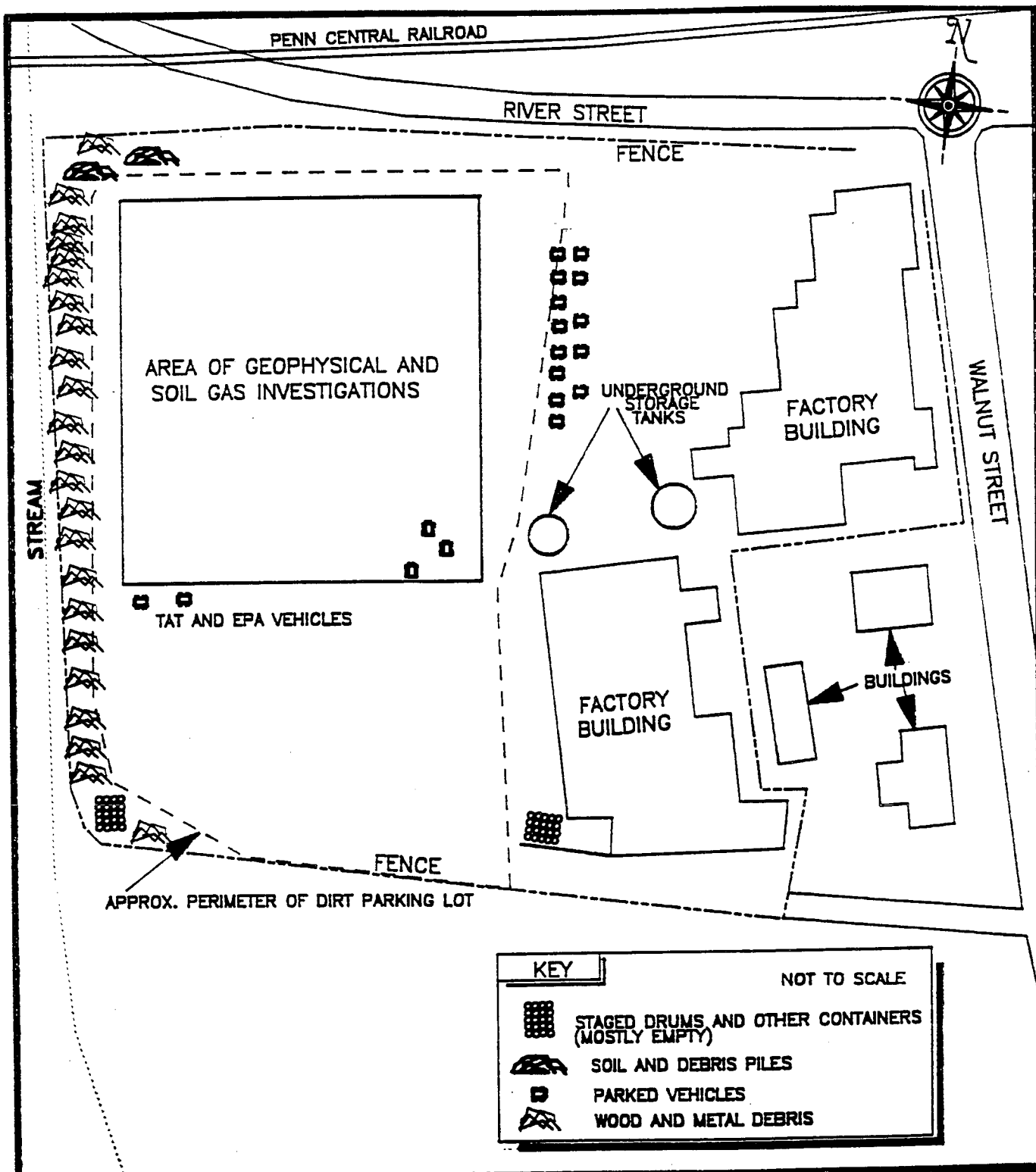


FIGURE 2

SITE DIAGRAM
MARINO PROPERTY SITE
MIDDLETOWN, MIDDLESEX COUNTY
CONNECTICUT

WESTON

MANAGERS

DESIGNERS/CONSULTANTS

DRAWN
KIRKPATRICK

DATE
3/91

PCS #
1209

APPROVED

mw

DATE
3/91

TDD #
01-9103-05

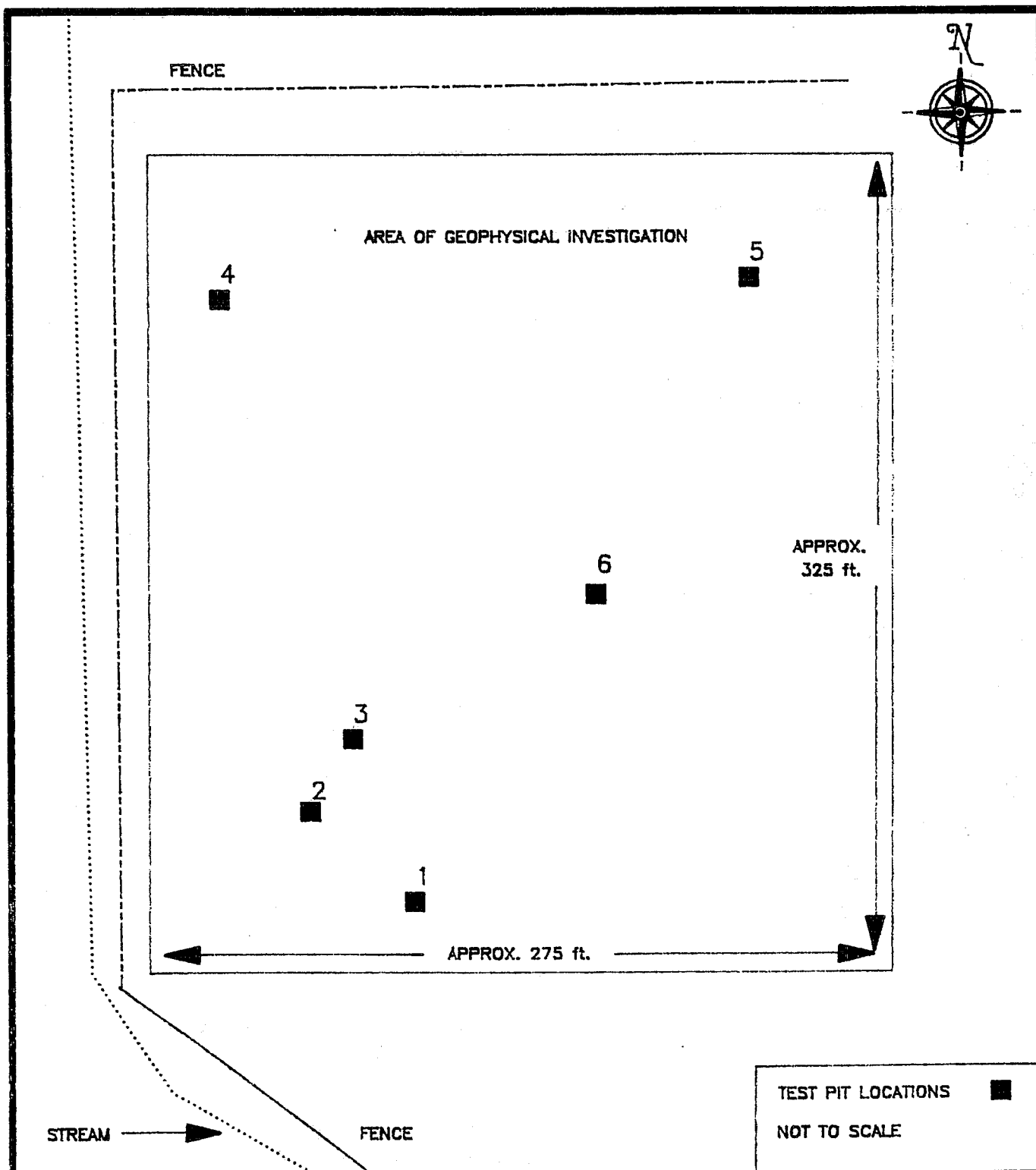


FIGURE 3

POSSIBLE TEST PIT LOCATIONS
MARINO PROPERTY SITE
MIDDLETOWN, MIDDLESEX COUNTY
CONNECTICUT

WESTON

MANAGERS

DESIGNERS/CONSULTANTS

DRAWN
KIRKPATRICK

DATE
3/91

PCS #
1209

APPROVED

[Signature]

DATE
3/91

TDD #
01-9103-05

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 U.S. EPA Emergency Planning and Response Branch 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:

Chlor-n-Soil PCB test kits (10)

MSA Combustible Gas/Oxygen Meter (CGI)

HNu Photoionization Detector (HNU)

OVA Flame Ionization Detector (OVA)

Victoreen Radiation Meter

pH paper

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

See Section 6.0 for details.

4.0 APPROACH AND SAMPLING METHODOLOGIES

The sampling survey will be conducted on or about April 6, 1991. Samples will be collected for, but will not be limited to volatile organic compound (VOC), base/neutral and acid-extractable (BNA) compound and polychlorinated biphenyl (PCB) analyses. Both soil and drum samples will be collected from up to ten test pits excavated on site. Field screening of either media will be performed with an HNU/OVA and CGI. The samples will be containerized, preserved, and analyzed in accordance with Table 1. U.S. EPA chain of custody procedures will be utilized for all sampling activities. The samples and all contaminated sampling materials will be disposed of by the U.S. EPA New England Regional Laboratory (NERL).

4.1 Soil Sampling

Up to ten sets of soil samples will be collected for VOC, BNA and PCB analyses. The samples will be collected from varying depths of two to eight feet. Due to the required depth of sample collection, a backhoe will be used to excavate up to ten test pits. If the walls of the test pits can be properly sloped per 29 CFR 1956.652, the samples will be collected from the bottom of the test pit by EPA/TAT personnel. If it is not feasible to properly slope the walls of the excavation, the backhoe will retrieve soil from an appropriate location and the samples will be collected from the bucket of the backhoe. Care will be taken to obtain soil that has not come in

contact with the sides of the bucket. If drum, are encountered, soil samples will be collected to the extent practical, under or close to the drums.

In either case, the samples will be collected by pushing an open 40-ml VOC vial into the soil until the vial is full. Both the BNA and PCB samples will be collected using metals spatulas to fill the appropriate glassware.

The decontamination procedure for the metal BNA spatula is as follows:

- remove loose soil
- soap and water wash
- distilled water rinse
- methanol rinse
- distilled water rinse
- air dry

The decontamination procedure for the metal PCB spatula is as follows:

- remove loose soil
- soap and water wash
- distilled water rinse
- hexane rinse
- distilled water rinse
- air dry

The methanol and hexane will be obtained from NERL personnel prior to the site visit. Decontamination liquids will be retained and returned to NERL for disposal.

4.2 Drum Sampling

If drums or containers are encountered during excavations, these may also be sampled. However, the drum must be situated such that it is accessible and a sample readily obtainable. If these conditions are not met, the drum will not be sampled.

Up to ten sets of samples will be collected for VOC, BNA and PCB analyses. Sample collection will proceed as follows:

- open the drum with a spark resistant bung wrench
- insert a hollow glass drum thief for sample collection
- fill appropriate glassware directly from the drum thief
- return the drum thief to the drum
- replace the bung on the drum

Additional drum sampling procedures are listed in the health and safety plan.

5.0 PROJECT ORGANIZATION AND RESPONSIBILITIES

U.S. EPA Emergency Planning and Response Branch:

Dean Tagliafero	On-Scene Coordinator
Mary Ellen Stanton	Site Investigator

Roy F. Weston Technical Assistance Team Members:

Michael Lombardi	Sampler
James Kirkpatrick	Sampler

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. EPA-approved methods will be used to verify at least 10% of the field screening results.

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, 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 gas chromatograms and/or mass spectra.

7.0 DELIVERABLES

A formal report documenting all project 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.

The modified QA level 2 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. Roy F. Weston, Inc. Technical Assistance Team, *Removal Program Preliminary Assessment/Site Investigation For Marino Property Site, Middletown, Connecticut, December, 1990,*

TABLE 1

SAMPLING SUMMARY, ANALYTICAL METHODS, AND QA/QC SAMPLES

MATRIX	#SAMPLES	ANALYTICAL PARAMETER	VOLUME	CONTAINER	PRESERVATIVE	METHOD	TRIP BLANKS
Soil	10	VOC	40 ml	40 ml VOA vial	ice	8240	3 40-ml org. free H2O
Soil	10	BNA	8 oz	8 oz glass	ice	8270	none
Soil	10	PCB	8 oz	8 oz glass	ice	8080	none
Drum Liquid/Sludge	10	VOC	40 ml	40 ml VOA vial	ice	8240	none
Drum Liquid/Sludge	10	BNA	40 ml	40 ml VOA vial	ice	8270	none
Drum Liquid/Sludge	10	PCB	40 ml	40 ml VOA vial	ice	8080	none

APPENDIX I
CHAIN OF CUSTODY DOCUMENTS

CHAIN OF CUSTODY RECORD

[illegible]

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time
	11/09/91 1100						

Distribution: Original Accompanies Shipments; Copy to Coordinator Field Files

NOAEC

Precautionary Measures Against Hidden Hazards in Laboratory Samples

Notice to Laboratory Personnel

*MAJINO PROPERTIES
PA/SI II*

Background

Under the authority of Section 104 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund) of 1980, Section 311 of the Clean Water Act, and Subtitle I of the Resource Conservation and Recovery Act (RCRA), EPA has been delegated the responsibility to undertake response actions with respect to the release or potential release of oil, petroleum, or hazardous substances that pose a substantial threat to human health or welfare, or the environment. In addition, EPA provides technical assistance to help mitigate endangerment of the public health, welfare or environment during other emergencies and natural disasters.

EPA's successful implementation of these emergency response action responsibilities requires that technical support capabilities be provided in the form of contracted Technical Assistance Teams (TAT) for each EPA Region. The WESTON TAT Contract 68-WO-0036 provides support to EPA Regions I, II, III, IV, ERT - Edison, and Headquarters - Washington, DC.

Hazard Communication

The samples which accompany this notice have been shipped to your laboratory for analysis in accordance with applicable D.O.T. or IATA Regulations and were collected by the WESTON TAT and were tentatively designated by the field response team as either environmental or hazardous material samples.

In general, *Environmental Samples* are collected from streams, farm ponds, small lakes, wells, and off-site soils that are not reasonably expected to be contaminated with hazardous materials. Samples of on-site soils or water, and materials collected from drums, bulk storage tanks, obviously contaminated ponds, impoundments, lagoons, pools, and leachates from hazardous waste sites are considered *Hazardous Samples*. Samples which are obtained from a known radioactive material contamination site or which demonstrate beta or gamma activity greater than three times average background as scanned with a Geiger-Mueller radiation survey meter are considered *Radioactive Samples*.

The samples which accompany this notice have been tentatively classified by the field response team as:

___ Environmental ___ Hazardous *K* Comb. (Envir. & Haz.) ___ Radioactive

The field team which collected the samples used the following Level(s) of personal protection as designated by EPA and OSHA conventions to provide protection against possible radiological or chemical exposure:

___ Level A *K* Level B ___ Level C ___ Level D

This information is intended for use as a guide for the safe handling of these laboratory samples in accordance with EPA and OSHA regulations. The sample classification(s) and Levels of personal protection used by the WESTON TAT are not represented to be, nor are they adequate or applicable in all situations, nor are they intended to serve as substitutes for professional/personal judgement.

This form was prepared by: *DMOTHY C. JONES* *4/18/91*

Analytical Services TDD No. *OR 9103-05A* Date *4/18/91*

WESTON Office: *REGION I TAT* Phone: *229-6430* FAX: *222-3619*

Laboratory Name: *USEPA NERL*

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION I

PROJECT Marino Property (excavation) STATE Middletown, CT

COLLECTOR Dave Strampko

FIELD OBSERVATIONS: CLEAR, OVERCAST, RAIN, SNOW, FOG
PARTIAL CLOUDS (CIRCLE ONE)

AIR TEMP °C TIDE: HIGH, EBB, LOW, FLOOD

PARAMETERS (CHECK APPROPRIATE)

Bacti ☐
BOD ☐
TSS ☐
Turb ☐
Organics ☐
VOA's ☒ 3-48 ml

NH₃ ☐
NO₂ + 3 ☐
TKN ☐
T-P ☐
O & G ☐

COD ☐
PCB ☐
X-Ray ☐
Other _____

TRIP BLANKS

METALS

Total

Dissolved

Cd ☐
Cu ☐
Cr (T) ☐
Cr (+6) ☐

Fe ☐
Hg ☐
Mn ☐
Ni ☐

Pb ☐
Sn ☐
Zn ☐
Other _____

EPA R-1 7500-30

*Unpreserved Sample

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION I

PROJECT Marino Property (excavation) STATE Middletown, CT

COLLECTOR Timothy Jones

FIELD OBSERVATIONS: CLEAR, OVERCAST, RAIN, SNOW, FOG
PARTIAL CLOUDS (CIRCLE ONE)

AIR TEMP °C TIDE: HIGH, EBB, LOW, FLOOD

PARAMETERS (CHECK APPROPRIATE)

Bacti ☐
BOD ☐
TSS ☐
Turb ☐
Organics ☐
VOA's ☒ mid level

NH₃ ☐
NO₂ + 3 ☐
TKN ☐
T-P ☐
O & G ☐

COD ☐
PCB ☒ mid level
X-Ray ☐
Other BNA mid level

METALS

Total

Dissolved

Cd ☐
Cu ☐
Cr (T) ☐
Cr (+6) ☐

Fe ☐
Hg ☐
Mn ☐
Ni ☐

Pb ☐
Sn ☐
Zn ☐
Other _____

EPA R-1 7500-30

*Unpreserved Sample

LAB CODE N^o 80541

PROJECT # 1248

STATION # 5000

Y Y M M D D

DATE 9/10/95

COLLECTION TIME 1015

SAMPLE TEMP °C ☐

PROBE-D.O. (mg/l) ☐ . ☐

pH - S.U. ☐ . ☐

CONDUCTIVITY (micromhos/cm) ☐ . ☐

SALINITY (0/00) ☐ . ☐

TOTAL DEPTH (ft) ☐

SAMPLING DEPTH (ft) ☐ . ☐

LAB CODE N^o 80542

PROJECT # 1248

STATION # 5001

Y Y M M D D

DATE 9/10/96

COLLECTION TIME 1445 1430

SAMPLE TEMP °C ☐

PROBE-D.O. (mg/l) ☐ . ☐

pH - S.U. ☐ . ☐

CONDUCTIVITY (micromhos/cm) ☐ . ☐

SALINITY (0/00) ☐ . ☐

TOTAL DEPTH (ft) ☐

SAMPLING DEPTH (ft) ☐ . ☐

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION I

PROJECT Marino Property (excavation) STATE Middletown, CT

COLLECTOR Timothy Jones

FIELD OBSERVATIONS: CLEAR, OVERCAST, RAIN, SNOW, FOG
PARTIAL CLOUDS (CIRCLE ONE)

AIR TEMP °C TIDE: HIGH, EBB, LOW, FLOOD

PARAMETERS (CHECK APPROPRIATE)

Bacti	<input type="checkbox"/>	NH ₃	<input type="checkbox"/>	COD	<input type="checkbox"/>
BOD	<input type="checkbox"/>	NO ₂ + 3	<input type="checkbox"/>	PCB	<input checked="" type="checkbox"/> mid level
TSS	<input type="checkbox"/>	TKN	<input type="checkbox"/>	X-Ray	<input type="checkbox"/>
Turb	<input type="checkbox"/>	T-P	<input type="checkbox"/>	Other	<u>BNA</u> mid level
Organics	<input type="checkbox"/>	O & G	<input type="checkbox"/>		
VOA's	<input checked="" type="checkbox"/> mid level				

METALS

Total Screen Dissolved

Cd	<input type="checkbox"/>	Fe	<input type="checkbox"/>	Pb	<input type="checkbox"/>
Cu	<input type="checkbox"/>	Hg	<input type="checkbox"/>	Sn	<input type="checkbox"/>
Cr (T)	<input type="checkbox"/>	Mn	<input type="checkbox"/>	Zn	<input type="checkbox"/>
Cr (+6)	<input type="checkbox"/>	Ni	<input type="checkbox"/>	Other	

EPA R-1 7500-30

*Unpreserved Sample

LAB CODE No 80543

PROJECT # 1248

STATION # 5002

Y Y M M D D

DATE 9/10/91

COLLECTION TIME 1445

SAMPLE TEMP °C ☐

PROBE-D.O. (mg/l) ☐ . ☐

pH - S.U. ☐ . ☐

CONDUCTIVITY (micromhos/cm) ☐ . ☐

SALINITY (0/00) ☐ . ☐

TOTAL DEPTH (ft) ☐

SAMPLING DEPTH (ft) ☐ . ☐

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION I

PROJECT Marino Property (exc.) STATE Middletown, CT

COLLECTOR Timothy Jones

FIELD OBSERVATIONS: CLEAR, OVERCAST, RAIN, SNOW, FOG
PARTIAL CLOUDS (CIRCLE ONE)

AIR TEMP °C TIDE: HIGH, EBB, LOW, FLOOD

PARAMETERS (CHECK APPROPRIATE)

Bacti	<input type="checkbox"/>	NH ₃	<input type="checkbox"/>	COD	<input type="checkbox"/>
BOD	<input type="checkbox"/>	NO ₂ + 3	<input type="checkbox"/>	PCB	<input type="checkbox"/>
TSS	<input type="checkbox"/>	TKN	<input type="checkbox"/>	X-Ray	<input type="checkbox"/>
Turb	<input type="checkbox"/>	T-P	<input type="checkbox"/>	Other	
Organics	<input type="checkbox"/>	O & G	<input type="checkbox"/>		
VOA's	<input checked="" type="checkbox"/> <u>SCREEN</u>				

METALS

Total

Dissolved

Cd	<input type="checkbox"/>	Fe	<input type="checkbox"/>	Pb	<input type="checkbox"/>
Cu	<input type="checkbox"/>	Hg	<input type="checkbox"/>	Sn	<input type="checkbox"/>
Cr (T)	<input type="checkbox"/>	Mn	<input type="checkbox"/>	Zn	<input type="checkbox"/>
Cr (+6)	<input type="checkbox"/>	Ni	<input type="checkbox"/>	Other	

EPA R-1 7500-30

*Unpreserved Sample

LAB CODE No 80544

PROJECT # 1248

STATION # 5003

Y Y M M D D

DATE 9/10/91

COLLECTION TIME 1455

SAMPLE TEMP °C ☐

PROBE-D.O. (mg/l) ☐ . ☐

pH - S.U. ☐ . ☐

CONDUCTIVITY (micromhos/cm) ☐ . ☐

SALINITY (0/00) ☐ . ☐

TOTAL DEPTH (ft) ☐

SAMPLING DEPTH (ft) ☐ . ☐

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION I

PROJECT Marino Property (exc.) STATE Middlebury, CT

COLLECTOR Timothy Jones

FIELD OBSERVATIONS: CLEAR OVERCAST, RAIN, SNOW, FOG
PARTIAL CLOUDS (CIRCLE ONE)

AIR TEMP °C TIDE: HIGH, EBB, LOW, FLOOD

PARAMETERS (CHECK APPROPRIATE)

Bacti	<input type="checkbox"/>	NH ₃	<input type="checkbox"/>	COD	<input type="checkbox"/>
BOD	<input type="checkbox"/>	NO ₂ + 3	<input type="checkbox"/>	PCB	<input checked="" type="checkbox"/> mid
TSS	<input type="checkbox"/>	TKN	<input type="checkbox"/>	X-Ray	<input type="checkbox"/>
Turb	<input type="checkbox"/>	T-P	<input type="checkbox"/>	Other	<u>BNA</u> mid
Organics	<input type="checkbox"/>	O & G	<input type="checkbox"/>		
VOA's	<input checked="" type="checkbox"/> mid				

METALS

Total

Dissolved

Cd ☐
Cu ☐
Cr (T) ☐
Cr (+6) ☐

Fe ☐
Hg ☐
Mn ☐
Ni ☐

Pb ☐
Sn ☐
Zn ☐
Other ☐

EPA R-1 7500-30

*Unpreserved Sample

LAB CODE N^o 80545

PROJECT # 1248

STATION # 5004

Y Y M M D D

DATE 9/10/16

COLLECTION TIME 1622

SAMPLE TEMP °C ☐

PROBE-D.O. (mg/l) ☐ . ☐

pH - S.U. ☐ . ☐

CONDUCTIVITY (micromhos/cm) ☐ . ☐

SALINITY (0/00) ☐ . ☐

TOTAL DEPTH (ft) ☐

SAMPLING DEPTH (ft) ☐ . ☐

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION I

PROJECT Marino Property (excavation) STATE Middlebury, CT

COLLECTOR Mary Ellen Stanton

FIELD OBSERVATIONS: CLEAR, OVERCAST, RAIN, SNOW, FOG
PARTIAL CLOUDS (CIRCLE ONE)

AIR TEMP °C TIDE: HIGH, EBB, LOW, FLOOD

PARAMETERS (CHECK APPROPRIATE)

Bacti	<input type="checkbox"/>	NH ₃	<input type="checkbox"/>	COD	<input type="checkbox"/>
BOD	<input type="checkbox"/>	NO ₂ + 3	<input type="checkbox"/>	PCB	<input checked="" type="checkbox"/> /pesticides
TSS	<input type="checkbox"/>	TKN	<input type="checkbox"/>	X-Ray	<input type="checkbox"/> mid
Turb	<input type="checkbox"/>	T-P	<input type="checkbox"/>	Other	<u>BNA</u> mid
Organics	<input type="checkbox"/>	O & G	<input type="checkbox"/>		
VOA's	<input checked="" type="checkbox"/> mid				

METALS

Total

XRF Screen Dissolved

Cd ☐
Cu ☐
Cr (T) ☐
Cr (+6) ☐

Fe ☐
Hg ☐
Mn ☐
Ni ☐

Pb ☐
Sn ☐
Zn ☐
Other ☐

EPA R-1 7500-30

*Unpreserved Sample

LAB CODE N^o 80546

PROJECT # 1248

STATION # 5005

Y Y M M D D

DATE 9/10/17

COLLECTION TIME 1550

SAMPLE TEMP °C ☒

PROBE-D.O. (mg/l) ☒ . ☐

pH - S.U. ☐ . ☐

CONDUCTIVITY (micromhos/cm) ☐ . ☐

SALINITY (0/00) ☐ . ☐

TOTAL DEPTH (ft) ☐

SAMPLING DEPTH (ft) ☐ . ☐

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION I

PROJECT Marino Property (excavation) STATE Middlebury, CT

COLLECTOR Mary Ellen Stanton

FIELD OBSERVATIONS: CLEAR, OVERCAST, RAIN, SNOW, FOG
PARTIAL CLOUDS (CIRCLE ONE)

AIR TEMP °C TIDE: HIGH, EBB, LOW, FLOOD

PARAMETERS (CHECK APPROPRIATE)

Bacti ☐
BOD ☐
TSS ☐
Turb ☐
Organics ☐
VOA's ☒ mid

NH₃ ☐
NO₂ + 3 ☐
TKN ☐
T-P ☐
O & G ☐

COD ☐
PCB ☒ Pesticide ☐ mid
X-Ray ☐
Other BA A mid

METALS

Total

Dissolved

Cd ☐
Cu ☐
Cr (T) ☐
Cr (+6) ☐

Fe ☐
Hg ☐
Mn ☐
Ni ☐

Pb ☐
Sn ☐
Zn ☐
Other ☐

EPA R-1 7500-30

*Unpreserved Sample

LAB CODE **Nº** 80547

PROJECT # 1248

STATION # 5006

Y Y M M D D

DATE 9 7 0 4 1 7

COLLECTION TIME 1600

SAMPLE TEMP °C ☐

PROBE-D.O. (mg/l) ☐ . ☐

pH - S.U. ☐ . ☐

CONDUCTIVITY (micromhos/cm) ☐ . ☐

SALINITY (0/00) ☐ . ☐

TOTAL DEPTH (ft) ☐

SAMPLING DEPTH (ft) ☐ . ☐

APPENDIX J
PHOTOGRAPHY LOG SHEETS

APPENDIX K

TABLE ONE - TEST PIT LOCATIONS

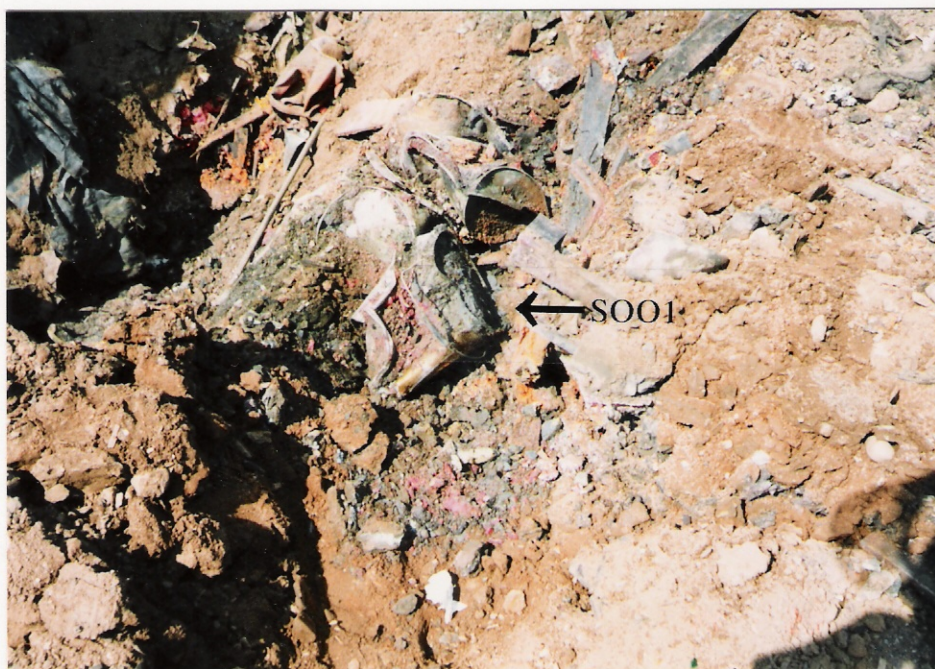
TABLE ONE
TEST PIT LOCATIONS

INITIAL POINT	DISTANCE (feet)	DEGREES FROM NORTH	TEST PIT#
Red Rock wood fire bell On side of site building	198	300	Test Pit #1
On side of site building	181	248	Test Pit #2
Site Telephone Pole #4966	122	330	Test Pit #6
Test Pit #6	104	226	Test Pit #5
Test Pit #5	67	120	Test Pit #4
Test Pit #4	121	142	Test Pit #8
Site Telephone Pole #3466	101	198	Test Pit #7
Site Telephone Pole #3466	64	132	Test Pit #3

PHOTOGRAPHY LOG SHEET



SCENE: MATERIAL REMOVED FROM TESTPIT #1, INCINERATOR WASTE, 5-GAL PAILS
SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
FRAME NUMBER: 3 DATE: 04/16/91 TIME: 1308 SKY CONDITION: CLEAR
PHOTO BY: T. JONES WITNESSES: ME. STANTON ,D. TAGLIAFERRO
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 035028

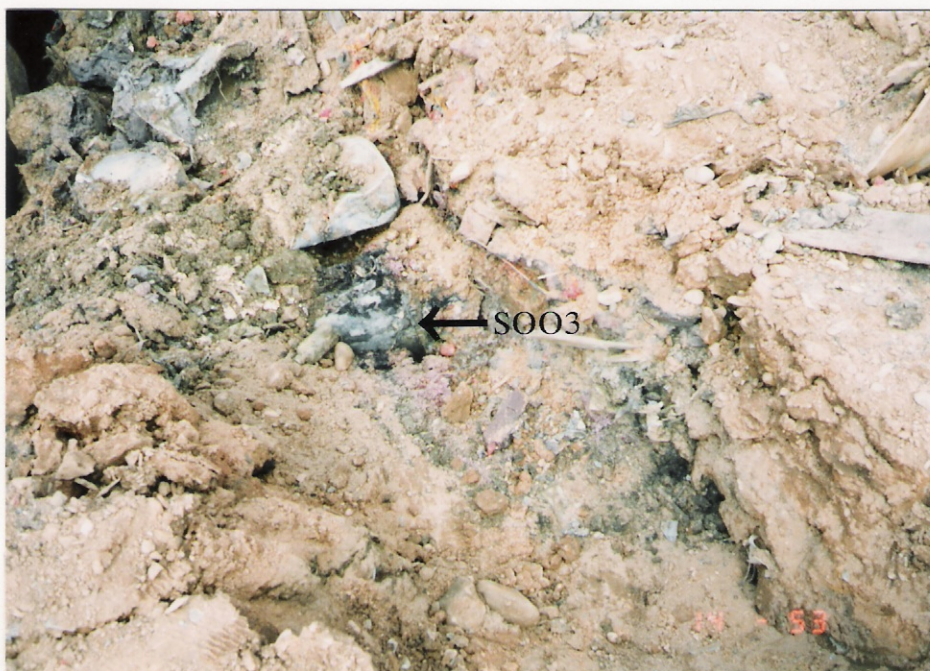


SCENE: 5-GAL PAILS LOCATED IN TESTPIT #1, SAMPLE S001 (ARROW)
SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
FRAME NUMBER: 4 DATE: 04/16/91 TIME: 1323 SKY CONDITION: CLEAR
PHOTO BY: T. JONES WITNESSES: ME. STANTON ,D. TAGLIAFERRO
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 035028

PHOTOGRAPHY LOG SHEET



SCENE: BLACK INCINERATOR WASTE LOCATED AT THE BASE OF TESTPIT #1
SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
FRAME NUMBER: 6 DATE: 04/16/91 TIME: 1453 SKY CONDITION: CLEAR
PHOTO BY: T. JONES WITNESSES: ME. STANTON ,D. TAGLIAFERRO
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 035028



SCENE: 5-GAL PAIL LOCATED IN TESTPIT #1, SAMPLE S003 (ARROW)
SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
FRAME NUMBER: 7 DATE: 04/16/91 TIME: 1453 SKY CONDITION: CLEAR
PHOTO BY: T. JONES WITNESSES: ME. STANTON ,D. TAGLIAFERRO
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 035028

PHOTOGRAPHY LOG SHEET



SCENE: BLACK INCINERATOR WASTE FROM TESTPIT #1, SAMPLE S002 (ARROW)
SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
FRAME NUMBER: 8 DATE: 04/16/91 TIME: 1454 SKY CONDITION: CLEAR
PHOTO BY: T. JONES WITNESSES: ME. STANTON, D. TAGLIAFERRO
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 035028



SCENE: VISCOUS COLORED LIQUID THAT FLOWED FROM THE WALL OF TESTPIT #2
SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
FRAME NUMBER: 10 DATE: 04/16/91 TIME: 1625 SKY CONDITION: CLEAR
PHOTO BY: T. JONES WITNESSES: ME. STANTON, D. TAGLIAFERRO
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 035028

PHOTOGRAPHY LOG SHEET



SCENE: VISCOUS LIQUID FILLING THE BASE OF TESTPIT #2
SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
FRAME NUMBER: 11 DATE: 04/16/91 TIME: 1625 SKY CONDITION: CLEAR
PHOTO BY: T. JONES WITNESSES: ME. STANTON ,D. TAGLIAFERRO
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 035028



SCENE: INCINERATOR WASTE, 5-GAL PAILS AND DEBRIS LOCATED IN TESTPIT #2
SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
FRAME NUMBER: 12 DATE: 04/16/91 TIME: 1644 SKY CONDITION: CLEAR
PHOTO BY: T. JONES WITNESSES: ME. STANTON ,D. TAGLIAFERRO
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 035028

PHOTOGRAPHY LOG SHEET



SCENE: VISCOUS LIQUID REMOVED FROM TESTPIT #2, SAMPLE S004 (ARROW)
SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
FRAME NUMBER: 14 DATE: 04/16/91 TIME: 1644 SKY CONDITION: CLEAR
PHOTO BY: T. JONES WITNESSES: ME. STANTON, D. TAGLIAFERRO
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 035028



SCENE: BASE OF TESTPIT #3, CLEAN FILL OVER INCINERATOR WASTE
SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
FRAME NUMBER: 15 DATE: 04/17/91 TIME: 1043 SKY CONDITION: CLEAR
PHOTO BY: T. JONES WITNESSES: ME. STANTON, D. TAGLIAFERRO
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 035028

PHOTOGRAPHY LOG SHEET



SCENE: MATERIAL EXCAVATED FROM TESTPIT #3
SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
FRAME NUMBER: 17 DATE: 04/17/91 TIME: 1043 SKY CONDITION: CLEAR
PHOTO BY: T. JONES WITNESSES: ME. STANTON ,D. TAGLIAFERRO
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 035028



SCENE: VIEW OF EXCAVATION OPERATIONS AT TESTPIT #3
SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
FRAME NUMBER: 18 DATE: 04/17/91 TIME: 1044 SKY CONDITION: CLEAR
PHOTO BY: ME. STANTON WITNESSES: T. JONES ,D. TAGLIAFERRO
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 035028

PHOTOGRAPHY LOG SHEET



SCENE: VIEW OF NORTHWEST CORNER FROM CENTER OF INVESTIGATION AREA
SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
FRAME NUMBER: 19 DATE: 04/17/91 TIME: 1055 SKY CONDITION: CLEAR
PHOTO BY: ME. STANTON WITNESSES: T. JONES ,D. TAGLIAFERRO
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 035028



SCENE: VIEW OF SET UP AREA FOR TESTPIT #4
SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
FRAME NUMBER: 20 DATE: 04/17/91 TIME: 1056 SKY CONDITION: CLEAR
PHOTO BY: ME. STANTON WITNESSES: T. JONES ,D. TAGLIAFERRO
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 035028

PHOTOGRAPHY LOG SHEET



SCENE: VIEW OF SOUTHWEST CORNER FROM THE CENTER OF THE SITE
SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
FRAME NUMBER: 21 DATE: 04/17/91 TIME: 1056 SKY CONDITION: CLEAR
PHOTO BY: ME. STANTON WITNESSES: T. JONES ,D. TAGLIAFERRO
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 035028

TOP ↗



SCENE: EXCAVATION ACTIVITIES AT TESTPIT #4 (VERTICAL PHOTO)
SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
FRAME NUMBER: 22 DATE: 04/17/91 TIME: 1206 SKY CONDITION: CLEAR
PHOTO BY: ME. STANTON WITNESSES: T. JONES ,D. TAGLIAFERRO
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 035028

PHOTOGRAPHY LOG SHEET



SCENE: ADDITIONAL VIEW OF EXCAVATION ACTIVITIES AT TESTPIT #4
SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
FRAME NUMBER: 23 DATE: 04/17/91 TIME: 1206 SKY CONDITION: CLEAR
PHOTO BY: ME. STANTON WITNESSES: T. JONES ,D. TAGLIAFERRO
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 035028

TOP ↗



SCENE: VIEW OF TESTPIT #4, CLEAN FILL OVER INCINERATOR WASTE
SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
FRAME NUMBER: 24 DATE: 04/17/91 TIME: 1208 SKY CONDITION: CLEAR
PHOTO BY: T. JONES WITNESSES: ME. STANTON ,D. TAGLIAFERRO
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 035028

PHOTOGRAPHY LOG SHEET



SCENE: PREPARATION OF AREA FOR TESTPIT #5
SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
FRAME NUMBER: 25 DATE: 04/17/91 TIME: 1220 SKY CONDITION: CLEAR
PHOTO BY: T. JONES WITNESSES: ME. STANTON, D. TAGLIAFERRO
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 035028

Date: 4/17/91

Subject: MARINO PROPERTY SITE
NEGATIVES ROLL # 035028

ERITZ CAMERA

SCENE: *** NEGATIVES ***
SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
FRAME NUMBER: 26 DATE: 04/17/91 TIME: SKY CONDITION: CLEAR
PHOTO BY: T. JONES WITNESSES: ME. STANTON, D. TAGLIAFERRO
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 035028

PHOTOGRAPHY LOG SHEET



SCENE: EXCAVATION OF TESTPIT #5, CLEAN FILL OVER INCINERATOR WASTE
SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
FRAME NUMBER: 1 DATE: 04/17/91 TIME: 1250 SKY CONDITION: CLEAR
PHOTO BY: T. JONES WITNESSES: ME. STANTON ,D. TAGLIAFERRO
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 35030



SCENE: FINAL DEPTH OF TESTPIT #5
SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
FRAME NUMBER: 2 DATE: 04/17/91 TIME: 1250 SKY CONDITION: CLEAR
PHOTO BY: T. JONES WITNESSES: ME. STANTON ,D. TAGLIAFERRO
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 35030

PHOTOGRAPHY LOG SHEET



SCENE: MATERIAL REMOVED FROM TESTPIT #5

SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT

FRAME NUMBER: 3 DATE: 04/17/91 TIME: 1250 SKY CONDITION: CLEAR

PHOTO BY: T. JONES WITNESSES: ME. STANTON, D. TAGLIAFERRO

CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 35030



SCENE: PREPARATION OF TESTPIT #6 IN SOUTHWEST CORNER OF SITE

SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT

FRAME NUMBER: 4 DATE: 04/17/91 TIME: 1419 SKY CONDITION: CLEAR

PHOTO BY: T. JONES WITNESSES: ME. STANTON, D. TAGLIAFERRO

CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 35030

PHOTOGRAPHY LOG SHEET



SCENE: BASE OF TESTPIT #6, CLEAN FILL OVER LANDFILL MATERIAL
SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
FRAME NUMBER: 6 DATE: 04/17/91 TIME: 1445 SKY CONDITION: CLEAR
PHOTO BY: T. JONES WITNESSES: ME. STANTON ,D. TAGLIAFERRO
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 35030



SCENE: ADDITIONAL VIEW OF TESTPIT #6
SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
FRAME NUMBER: 7 DATE: 04/17/91 TIME: 1445 SKY CONDITION: CLEAR
PHOTO BY: T. JONES WITNESSES: ME. STANTON ,D. TAGLIAFERRO
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 35030

PHOTOGRAPHY LOG SHEET



SCENE: MATERIAL REMOVED FROM TESTPIT #6, SCREENING SOIL WITH HNU PID
SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
FRAME NUMBER: 8 DATE: 04/17/91 TIME: 1446 SKY CONDITION: CLEAR
PHOTO BY: T. JONES WITNESSES: ME. STANTON ,D. TAGLIAFERRO
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 35030



SCENE: PREPARATION FOR TESTPIT #7, NORTHWEST CORNER OF SITE
SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
FRAME NUMBER: 9 DATE: 04/17/91 TIME: 1501 SKY CONDITION: CLEAR
PHOTO BY: T. JONES WITNESSES: ME. STANTON ,D. TAGLIAFERRO
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 35030

PHOTOGRAPHY LOG SHEET



SCENE: ADDITIONAL VIEW OF THE LOCATION OF TESTPIT #7
SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
FRAME NUMBER: 10 DATE: 04/17/91 TIME: 1501 SKY CONDITION: CLEAR
PHOTO BY: T. JONES WITNESSES: ME. STANTON , D. TAGLIAFERRO
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 35030



TOP
⇩

SCENE: BASE OF EXCAVATION OF TESTPIT #7, CLEAN FILL OVER LANDFILL DEBRIS
SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
FRAME NUMBER: 11 DATE: 04/17/91 TIME: 1555 SKY CONDITION: CLEAR
PHOTO BY: ME. STANTON WITNESSES: D. TAGLIAFERRO ,
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 35030

PHOTOGRAPHY LOG SHEET



SCENE: ADDITIONAL VIEW OF TESTPIT #7
SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
FRAME NUMBER: 12 DATE: 04/17/91 TIME: 1556 SKY CONDITION: CLEAR
PHOTO BY: ME. STANTON WITNESSES: D. TAGLIAFERRO ,
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 35030



SCENE: START OF TESTPIT #8 LOCATED IN NORTHWEST CORNER OF THE SITE
SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
FRAME NUMBER: 13 DATE: 04/17/91 TIME: 1611 SKY CONDITION: CLEAR
PHOTO BY: ME. STANTON WITNESSES: D. TAGLIAFERRO ,
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 35030

PHOTOGRAPHY LOG SHEET



SCENE: TESTPIT #8, CLEAN FILL, LANDFILL DEBRIS, AND WHITE SOLID
SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
FRAME NUMBER: 14 DATE: 04/17/91 TIME: 1620 SKY CONDITION: CLEAR
PHOTO BY: ME. STANTON WITNESSES: D. TAGLIAFERRO ,
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 35030



SCENE: EXCAVATION ACTIVITIES AT TESTPIT #8
SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
FRAME NUMBER: 15 DATE: 04/17/91 TIME: 1621 SKY CONDITION: CLEAR
PHOTO BY: ME. STANTON WITNESSES: D. TAGLIAFERRO ,
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 35030

PHOTOGRAPHY LOG SHEET



SCENE: TAT VEHICLE USED AS SITE COMMAND POST
 SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
 FRAME NUMBER: 16 DATE: 04/17/91 TIME: 1718 SKY CONDITION: CLEAR
 PHOTO BY: D. STRZEMPKO WITNESSES: T. JONES
 CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 35030

Date: 4/17/91

Subject: MARINO PROPERTY SITE
 NEGATIVES ROLL # 35030

ERITZ CAMERA

SCENE: *** NEGATIVES ***
 SITE NAME: MARINO PROPERTY SITE LOCATION: MIDDLETOWN, CT
 FRAME NUMBER: 17 DATE: 04/17/91 TIME: SKY CONDITION: CLEAR
 PHOTO BY: D. STRZEMPKO WITNESSES: T. JONES
 CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: ASA 100FILM ROLL: 35030