SITE SAMPLING CHRONOLOGICAL SUMMARY
FOR
STAMINA MILLS SITE
NORTH SMITHFIELD, RHODE ISLAND

Prepared For:

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

CONTRACT NO. 68-01-7367

TAT-01-N-00612

TDD NO. 01-9005-13A

Prepared By:

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

July 1990

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF APPENDICES

1.0 INTRODUCTION

The Roy F. Weston Inc. Technical Assistance Team (TAT) was tasked by the United States Environmental Protection Agency (U.S. EPA) Emergency Planning and Response Branch (EPRB), under Technical Direction Document #01-9005-13, to collect one sample from an aboveground tank at the Stamina Mills Site in North Smithfield, Rhode Island, on May 18, 1990. It was also requested that TAT and arrange for combination incineration/landfill disposal analyses through a subcontract laboratory.

2.0 BACKGROUND

The Stamina Mills Site is located in the town of North Smithfield, Rhode Island (Figure 1) on the property of a former mill which burned down in 1977. The fire, which destroyed the mill, and a previous spill at the mill resulted in the release of approximately 900 gallons of trichloroethylene (TCE) from the facility. In addition, from 1969 to 1974 approximately 20,000 gallons of still bottoms derived from the mill's solvent recovery system were landfilled at the site. These events led to wells in the area being contaminated with TCE at concentrations above the Safe Drinking Water Act Maximum Contaminant Levels (MCLs). The site was placed on the National Priorities List (NPL) in December 1982 and a removal action, which extended the municipal water supply to the affected area, was initiated by the U.S. Environmental Protection Agency (EPA) Oil and Hazardous Materials Section (now the Emergency Planning and Response Branch (EPRB)) in November 1984.

During subsequent EPA remedial investigations in 1988, two abandoned, deteriorated and potentially leaking underground storage tanks were located. The tanks were found to contain hazardous substances such as toluene, ethylbenzene and xylene. Due to the threat of these tanks introducing additional contaminants to the groundwater and surface water of the area, a second removal action was undertaken by the EPA EPRB in August 1988. This action resulted in the excavation and disposal of the two tanks and their contents.

In July 1989, as the remedial investigation continued, a 2,500-gallon aboveground storage tank marked "Acid Tank" was observed to have corroded holes on two sides. A solid/liquid mixture of unknown composition was observed inside the tank. The EPA remedial personnel requested assistance from the EPA EPRB. The tank contents were sampled by Roy F. Weston Technical Assistance Team (TAT) personnel at the request of the EPA in 1990. The contents of the tank were at a pH between 0 and 1. The tank was subsequently sampled and analyzed for volatile organic compounds (VOCs), metals, semi-volatile organic compounds (SVOCs) and flash point in February 1990. No VOCs or SVOCs were detected in the samples, and the sample material yielded no flash at 60°C during flash point analysis. Results from X-Ray Fluorescence (XRF) metals screening indicated that no metals were detected in the samples above natural soil background levels. In addition to the aboveground storage tank, drums of unknown contents and a partially buried storage tank were observed on the site by TAT personnel.

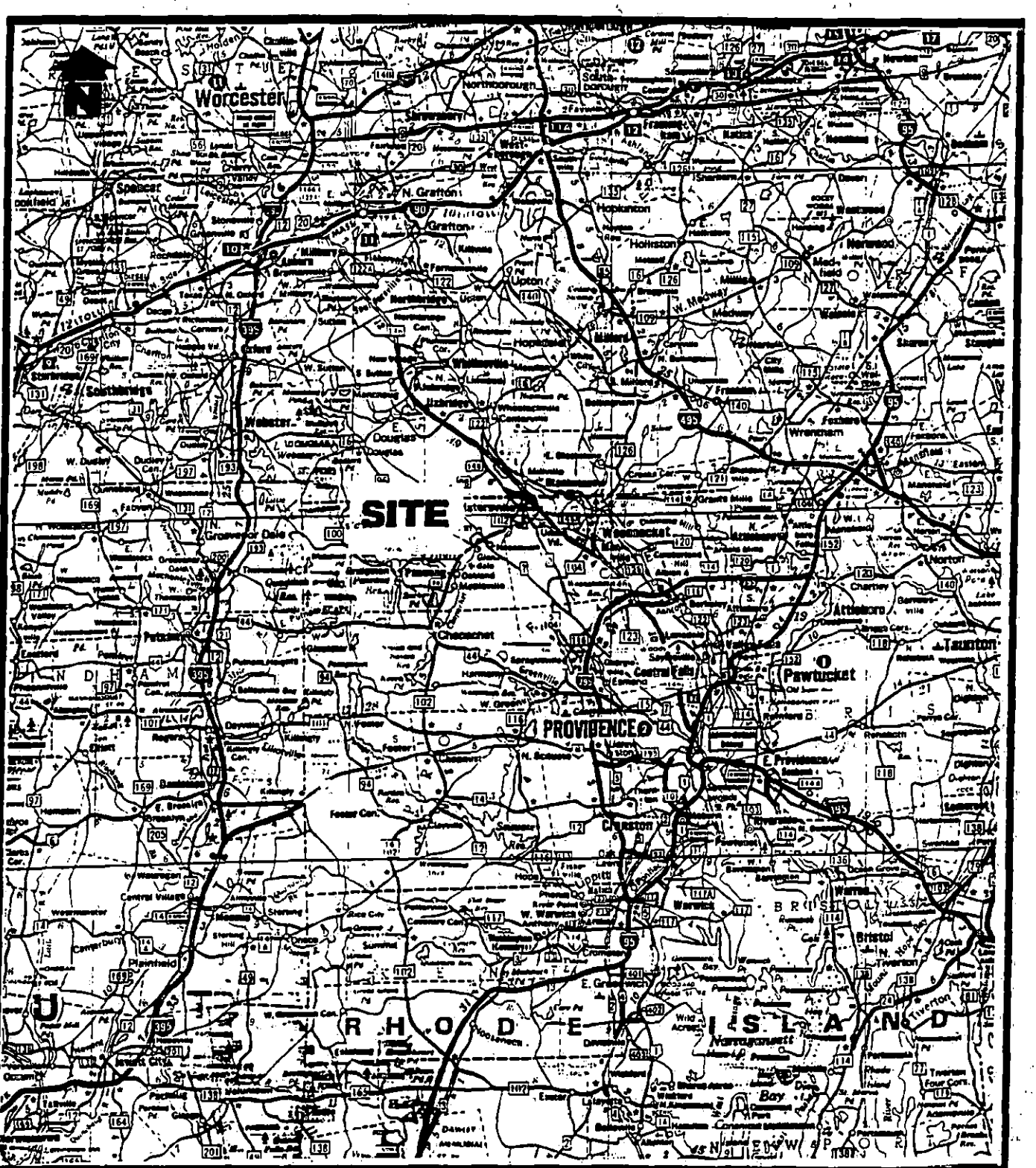


FIGURE 1

SITE LOCATION MAP
STAMINA MILLS SITE
NORTH SMITHFIELD, RHODE ISLAND

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN E. FAHLE	DATE 07/90	PCS # 2405
APPROVED PWV	DATE 07/90	TDD # 01900205

On May 18, 1990, TAT members Eric Fahle, Paul Smart and Thomas Saccoccio proceeded to the Stamina Mills Site. On-site activities performed by TAT under EPA direction included air monitoring, sample collection and photo-documentation of the above activities.

3.0 CHRONOLOGICAL SUMMARY

Friday, June 18, 1990
Weather: Partly cloudy, 60°F

0605 hrs: Technical Assistance Team (TAT) members Eric Fahle, Paul Smart and Thomas Saccoccio departed the TAT office located in Burlington, Massachusetts for the Stamina Mills Site located in North Smithfield, Rhode Island.

0830 hrs: TAT members Fahle, Smart and Saccoccio arrived at the Stamina Mills Site. Upon arrival, TAT personnel discovered that the entrance gate was locked. The TAT members entered the site from a path that existed along the edge of the Branch River. The TAT members then proceeded to calibrate air monitoring instrumentation.

0900 hrs: TAT members Fahle, Smart and Saccoccio donned level B personal protective equipment (PPE) in preparation for the sampling activities.

0915 hrs: While TAT members were donning level B PPE, a photographer from the Rhode Island Times Magazine arrived. He inquired as to the nature of the activities and began to take photographs of the site.

0945 hrs: TAT members Fahle, Smart and Saccoccio proceeded to the aboveground tank location (Figure 2). The Rhode Island Times Magazine photographer exited the premises.

0950 hrs: TAT members Fahle, Smart and Saccoccio arrived at the aboveground tank location. No radiation was detected above background levels and no explosive concentrations of gasses were present. A reading of four units was detected in the vicinity of the aboveground tank utilizing the HNu photoionization detector.

0953 hrs: TAT member Paul Smart proceeded to fill two 32-ounce jars and three 40-ml VOA vials with material contained within the aboveground tank. TAT members Fahle and Saccoccio continued to provide air monitoring and photo-documentation of the sampling activities.

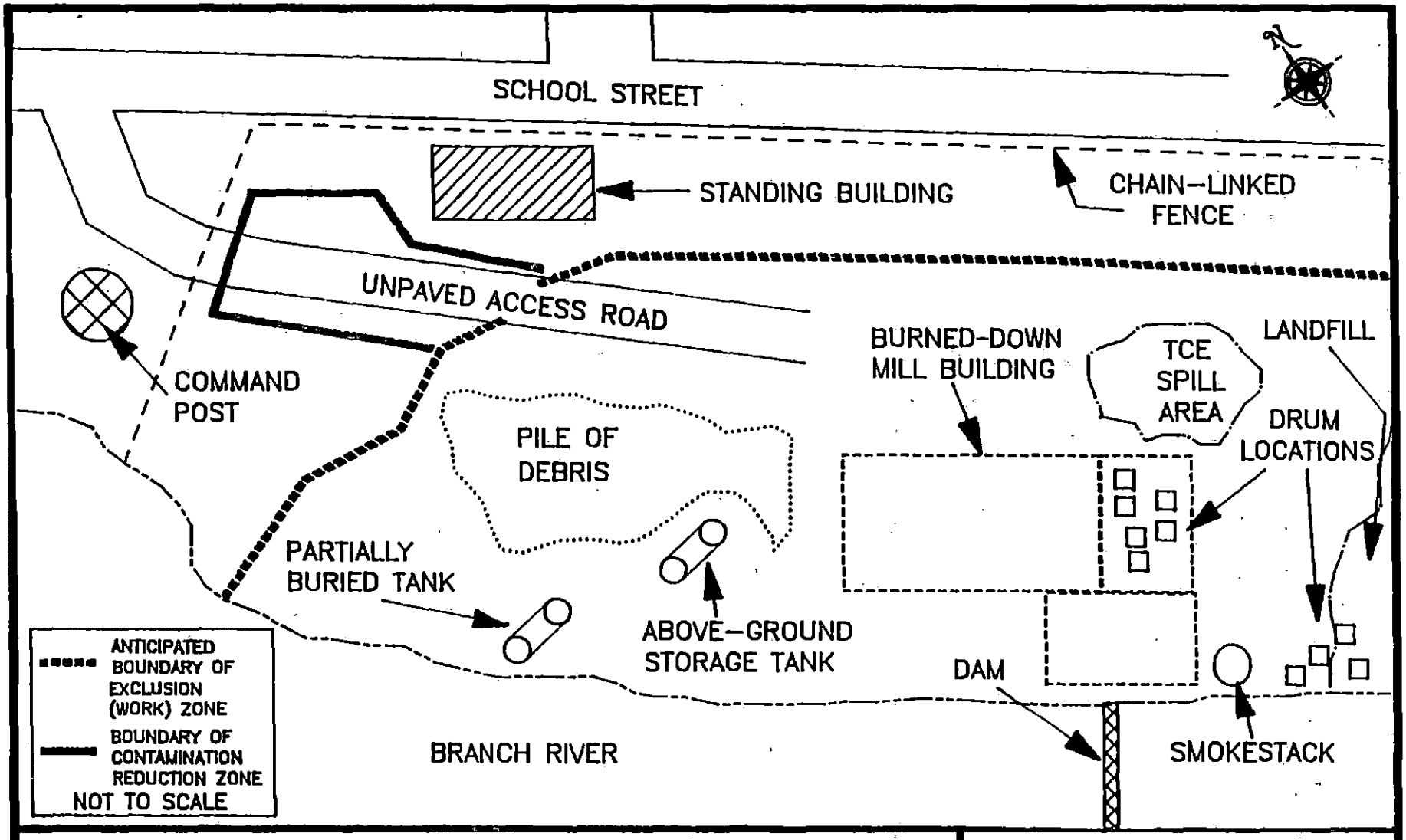


FIGURE 2

SITE DIAGRAM
STAMINA MILLS SITE
NORTH SMITHFIELD, RHODE ISLAND

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN E. FAHLE	DATE 07/90	PCS # 2405
APPROVED QWV	DATE 07/90	TDD # 01900205

1003 hrs: TAT members Fahle, Smart and Saccoccio exited the hot zone and proceeded to the decontamination zone.

1005 hrs: TAT members Fahle, Smart and Saccoccio doffed level B PPE and prepared chain of custody records for the samples.

1205 hrs: TAT members Fahle, Smart and Saccoccio departed from the Stamina Mills Site for the TAT office in Burlington, MA.

1430 hrs: TAT members Fahle, Smart and Saccoccio arrived at the TAT office, unloaded equipment and prepared samples for shipment to Analab in New Jersey.

APPENDIX A

TAT HOURS AND PROJECT TOTALS

DATE	NAME	HOURS	RATE	RATE x HOURS	HOTEL	PER DIEM	MISCELLANEOUS	MOT. ALLOW.	PERSONAL DAILY TOTAL	DAILY PROJECT TOTAL
5/14	M. BOICH	4	26.15	26.15				1.86	48.64	
5/14	M POIRIER	0.5	26.15	13.00					24.32	
										72.96
5/15	M BOICH	4	26.15	104.60					194.56	
5/15	M POIRIER	0.5	26.15	13.00					24.32	
5/15	P. VERNON	1.5	30.77	46.15					85.84	
										304.72
5/16	M BOICH	4	26.15	104.60					194.56	
5/16	P. SMART	2.5	19.68	49.05					91.23	
5/16	E. SPENCER	1	15.38	15.38					28.60	
5/16	P. VERNON	0.5	30.77	15.39					28.62	
										343.01
5/17	M. BOICH	2.5	26.15	65.38					121.60	
5/17	E. FAHLE	1	19.68	19.68					36.49	
5/17	T. SACCOCCIO	4.5	19.68	88.29					164.22	

DATE	NAME	HOURS	RATE	RATE x HOURS	HOTEL	PER DIEM	MISCELLANEOUS	MOTIVALIER	PERSONAL DAILY TOTAL	DAILY PROJECT TOTAL
5/17	P. SMART	5	19.62	98.10				1.86	182.47	
5/17	P. VERRATTI	1	30.77	30.77					57.23	
										562.01
5/18	M BOICH	5.5	26.15	143.83					267.58	
5/18	E. FAHLE	8.5	19.62	166.77					310.17	
5/18	T. SACCOCCIO	11.5	19.62	225.63					419.67	
5/18	P. SMART	10	19.62	196.20					364.93	
										1,362.31
5/21	M. BOICH	0.5	26.15	13.08					24.32	
										24.32
5/22	M. BOICH	1	26.15	26.15					48.64	
										48.64
5/25	P. SMART	1	19.62	19.62					36.49	
										36.49

DATE	NAME	HOURS	RATE	RATE x HOURS	HOTEL	PER DIEM	MISCELLANEOUS	MULTIPLIER	PERSONAL DAILY TOTAL	DAILY PROJECT TOTAL
6/1	M BOICH	0.5	26.15	13.08				1.86	24.32	
										24.32
6/5	M. BOICH	0.5	26.15	13.08					24.32	
										24.32
6/7	M. BOICH	2.0	26.15	52.30					97.28	
										97.28
6/14	M BOICH	0.5	2615	13.08					24.32	
										24.32
6/25	P. SMARS	2	19.62	39.24					72.99	
										72.99
6/26	M. BOICH	1	26.15	26.15					48.64	
6/26	R TOUTELLOT	1	15.38	15.38					28.61	
										77.25
6/27	M BOICH	1.5	26.15	39.23					72.96	
6/27	M. LOMBARDI	1	26.15	26.15					48.64	

DATE	NAME	HOURS	RATE	RATE x HOURS	HOTEL	PER DIEM	MISCELLANEOUS	MOTOR/LIER	PERSONAL DAILY TOTAL	DAILY PROJECT TOTAL
								1.86		121.60
6/28	M. BOICH	3.5	26.15	91.53					170.24	
6/28	M. LOMBARDI	1.5	26.15	39.23					72.96	
6/28	D. PASQUANTONIO	I	19.62	19.62					36.49	
6/28	R. TOURTELLOT	I	15.38	15.38					28.61	
										308.30
6/29	M. BOICH	1	26.15	26.15					48.64	
6/29	R. TOURTELLOT	0.5	15.38	7.69					14.30	
										62.94
7/2	M. BOICH	2	26.15	52.30					97.28	
7/2	M. McDUFFIE	1	30.77	30.77					57.23	
										154.51
7/3	M. BOICH	1.5	26.15	39.23					72.96	
										72.96

DATE	NAME	HOURS	RATE	RATE x HOURS	HOTEL	PER DIEM	MISCELLANEOUS	MOTOR/FUEL	DAILY TOTAL	PROJECT TOTAL
7/5	M. MCDUFFEE	3	30.77	30.77				1.86	57.23	
										57.23
7/6	M. BOICH	2	26.15	52.30					97.23	
										97.23
7/10	M. BOICH	1.5	26.15	39.23					72.96	
7/10	E. EAKLE	8	19.62	156.96					291.95	
										364.91
7/11	M. BOICH	2	26.15	52.30					97.23	
7/11	E. EAKLE	9.5	19.62	186.35					350.33	
7/11	J. KILPATRICK	6.5	19.62	127.53					237.21	
										684.77
7/12	M. BOICH	0.5	26.16	13.08					24.32	
7/12	E. EAKLE	8	19.62	156.96					291.95	
										316.27

APPENDIX B

HEALTH AND SAFETY PLAN

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

U.S. EPA CONTACT: Rich Haworth
Date of Inspection: 3/18/90 Time: 0900 TDD No. 01-9005-1413
Original Safety Plan: Yes ✓ No ___ PCS No. 2546
Admendment/Modification No. ___

SITE SAFETY COORDINATOR: Paul Smart, TATM

Site Name: Stamina Mills

Site Address: Street No. Main St.
City North Smithfield
County Providence
State Rhode Island Zip Code 02877

Site Contact: N/A Phone N/A

Directions to Site: (Attach Map) I 90 W to I 495 S to Rt 16 W. Follow to Rt 146 S to Slatersville-Foresdale exit. Turn onto Main St. Follow to site.

SITE HISTORY: NPL Site: Underground tanks found by remedial contractors during test pit operations. A previously sampled above-ground storage tank will be sampled as requested by Rich Haworth, US EPA. Acids detected as a result of previous sampling.

INCIDENT DESCRIPTION

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

PERSONNEL PHYSICAL SAFETY HAZARDS:

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

CHEMICAL CONTAMINANTS OF CONCERN

CONTAMINANT	TLV PEL	IDLH	PHYSICAL CHARACTERISTICS	ROUTE OF EXPOSURE	SYMPTOMS OF ACUTE EXPOSURE	FIRST AID	INSTRUMENTS TO DETECT
Acids	—	—	Corrossive	Contact Inh.	Burns	Flush Imm. w/ Water	Possibly Drager

Description of Decontamination To Be Used: Dry Decon. Wash equipment with soap and water if necessary. Emergency eye wash if necessary.

SPECIFY PPE TYPE

TASK TO BE PERFORMED	ANTIC. LEVEL OF PROTECT.	COVERALL	GLOVE IN/OUT.	AIR PURIF. RESPIRATOR CART/CANN
Sampling tank	B	Saran	surg/Neoprene/nitrile	SCBA

Anticipated Monitoring

Radiation Meter [ ] CGI [X] HNU [X] 11.7 eV Probe OVA [ ]

Detector Tube [ ] _____ Other _____

EMERGENCY PHONE NUMBERS:	LOCATION	PHONE	NOTIFIED
FIRE	N. Smithfield	401-762-1414	N
POLICE	N. Smithfield	401-762-1212	N
AMBULANCE	Woonsocket	401-769-4141	N
HOSPITAL	Landmark Med. CTR. Woonsocket	401-767-3811	N

CHEMICAL TRAUMA CAPABILITY? Yes

DIRECTIONS TO HOSPITAL: (ATTACH MAP) RTE. VERIFIED BY____ DATE 1/31/90

Turn right onto School St → Next intersection, right onto Rt. 146A (8 mi) take left onto Rock Ave (1.5 mi) Take Right onto Hamlet. Take left onto Cumberland St (0.25 mi) Take Right onto Cass. Ave.

ADDITIONAL EMERGENCY PHONE CONTACTS:

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

Prepared by: _____ Date: 5/16/90

Pre-Response Approval by: _____ Date: 5/16/90

TDD# 01-9005-13 PCS# 8546

OBSERVED CONDITIONS/ACTIVITIES

Describe Initial Conditions (Source/Type/Quantity): TAT personnel arrived at site to find locked gate with access path around gate. Weather: clear 13°C. Site sampling area inactive. Sampled tank appeared rusty and approximately 2/3 full. Material ~~on~~ PBS inside tank (above ground) appeared brownish with 1" layer of ash-like material over.

DOCUMENTATION PERFORMED BY: Paul B Smith

Type: Photo ✓ Log Book ✓ Recorder _____ Video _____

PHYSICAL DESCRIPTION

Size of Site: 1-2 acres Topography Terrain: hilly, wooded Weather Clear, 13°C

Distance to Nearest: Residence 200 ft 0 miles School .5 mile Hospital 4.3 miles

Public Building N/A Other factory 100 ft

Evacuation: Yes ___ No X Number ___ By Whom _____

Nearest Waterway: Borders Site Distance: Immediate

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

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

Was Entry Made by TAT: YES ✓ NO ___

TASK CONDUCTED: Describe Specific PPE Used and Why

Level B Protection: Air monitoring and sampling by TATM. Saranex, latex boots, nitrile gloves, surgicals, SCBA.

AIR MONITOR[illegible]OG

OVA Calibration ~~OK~~ PS N/A
HNU Calibration OK
OGI Calibration OK

Background O_2 21%
Organics 1 unit
Radiation 0-.01 mr

(ATTACH CALIBRATION DATA TO LOG)

OGI 0% LEL

S I T E N A M E

STATION/ LOCATION	DATE	TIME	NAME OF AIR MONITOR	TYPE OF EQUIPMENT (HNU(PROBE/SPAN), OGI, OVA, RAD MIR	READING	SUMMARY/COMMENTS
Perimeter/walkthrough	5/18/90	0940	Paul Smart	HNU	1 unit	Background
Near tank	"	"	"	"	"	"
Perimeter/walkthrough	"	"	E. Fohle	Radmeter	0 - .01 mr	"
Near tank	"	"	"	"	"	"
Perimeter/walkthrough	"	"	"	CGI/O_2 meter	0% LEL 21% O_2	"
Near tank	"	"	"	"	"	

SAMPLING: CONDUCTED? YES X NO

If Yes, Describe Sampling Method Two 32 ounce glass jars and 3 40 ml VOA vials were filled using a dedicated metal and dedicated plastic scoop/vias, respectively. Contaminated sampling materials were taken to New England Regional Laboratory for disposal.

Has Lab Been Notified of Potential Hazard Level? Yes X No___ NA___

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

I have read and understand this safety plan.

NAME (PRINTED)	SIGNATURE	AFFILIATION	DATE
Paul B Smart	Paul B Smart	Weston/TAT	5/18/90
ERIC FAHZE	Eric Fahze	Weston/TAT	5/18/90
John Kallfelz	John Kallfelz	Weston/TAT	5/18/90
Thomas Saccoccio	Thomas Saccoccio	Weston/TAT	5/18/90

Final Submission of Plan by Paul B Smart Date 6/25/90

*Neoprene Gloves should have been used.

Post Response Approval [signature] Date 6/19/90

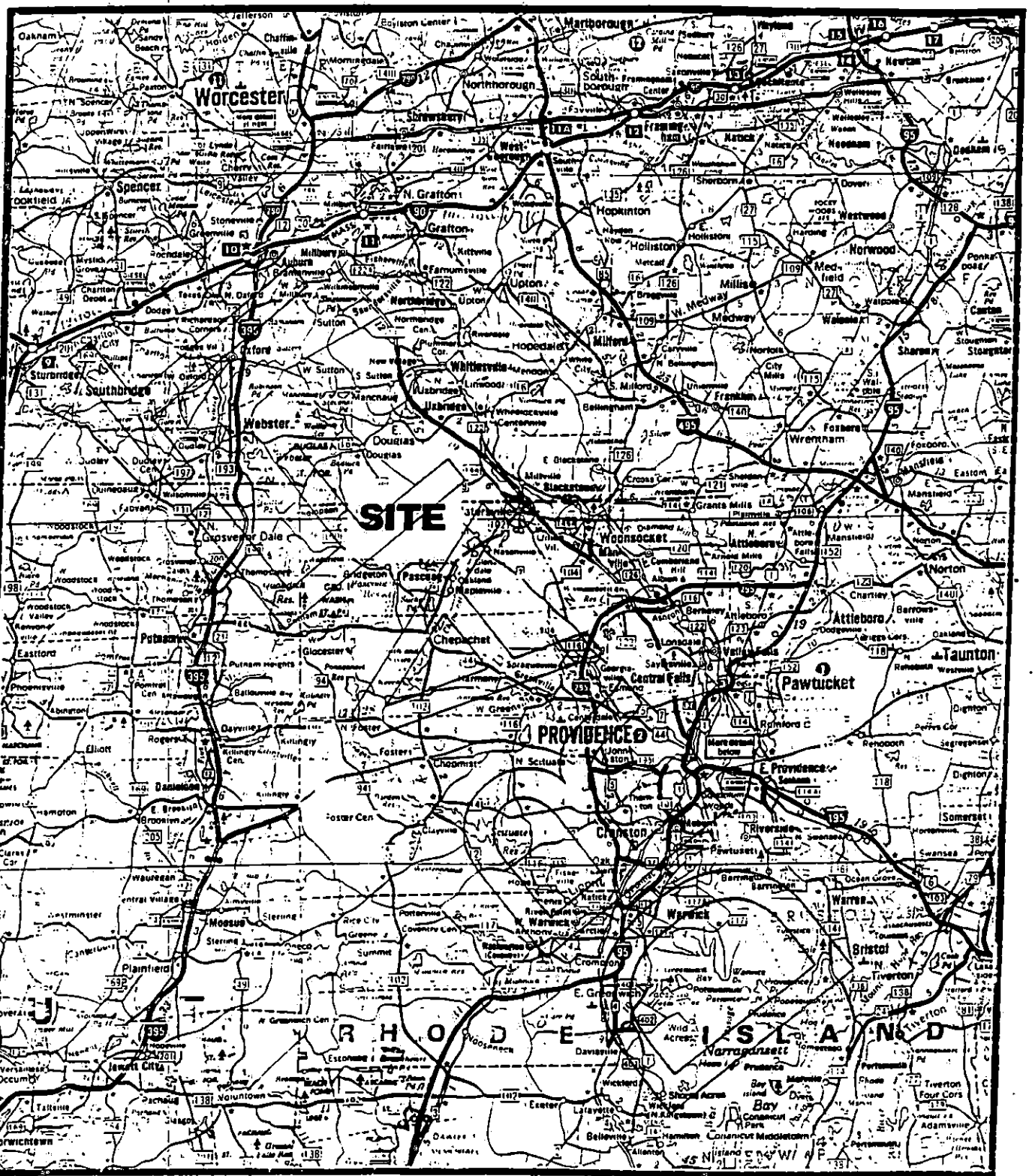
Copy to ZPMO Date

SPER HSO Reviewed by: Date:

Followup Required: Yes No

Followup Performed: Date: With:

Comments:

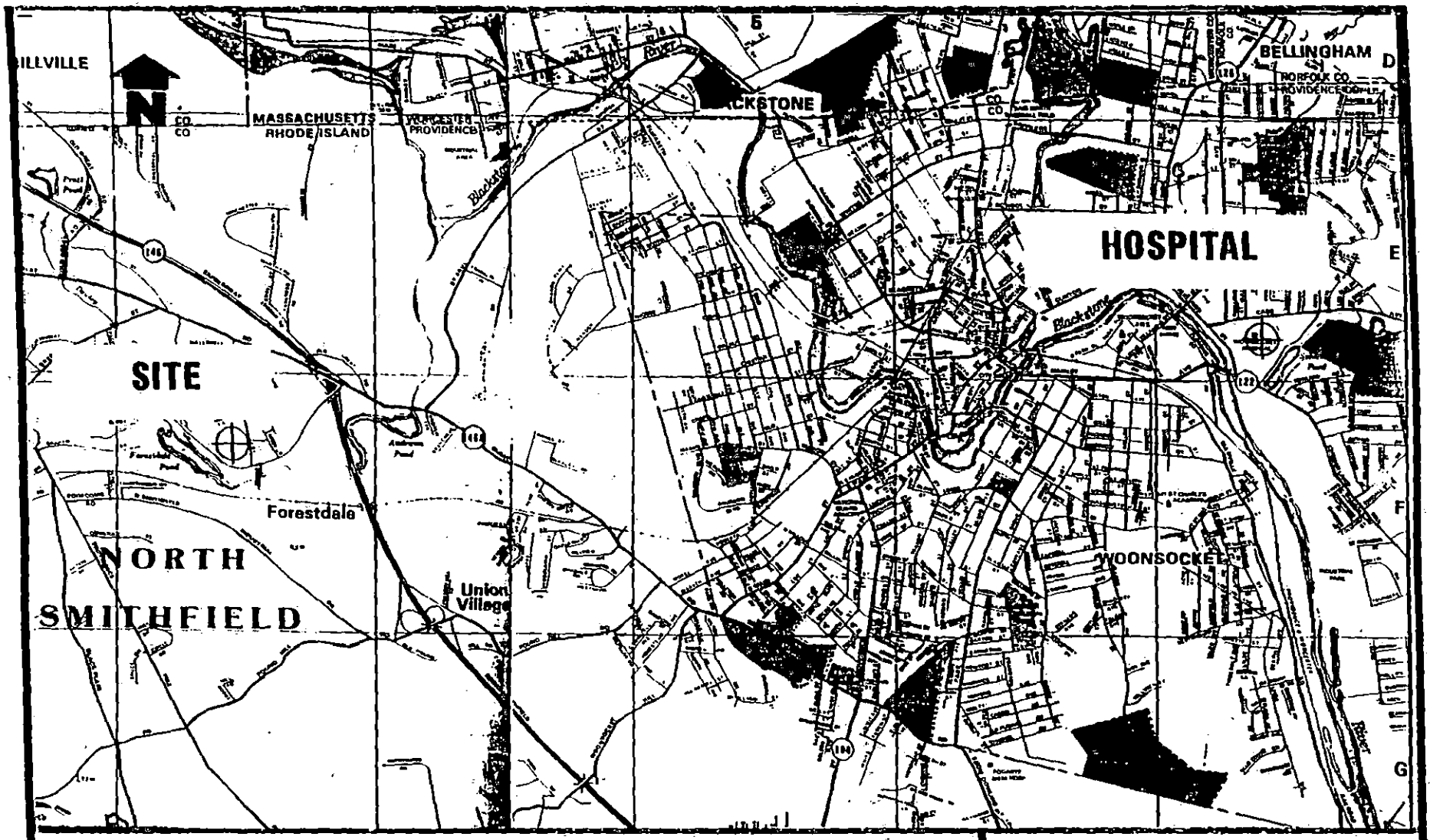


Directions to Stamina Mills Site
North Smithfield, Rhode Island

190W – 1495S – Rt. 16W – Rt. 146S
Follow to Slatersville–Forestdale exit
Turn onto Main St., follow to site
approximately 1/2 mile on left.

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN	DATE	PCS #
Kirkpatrick	10/89	2325
APPROVED	DATE	TOD #
MJM	10/89	01-8910-05



HOSPITAL LOCATION MAP

STAMINA MILLS SAMPLING

NORTH SMITHFIELD, RHODE ISLAND

FEBRUARY 1, 1990

WESTON

MANAGERS DESIGNERS/CONSULTANTS

DRAWN MJS	DATE 2/90	PCS # 2395
APPROVED	DATE 2/90	TDD # 01900125

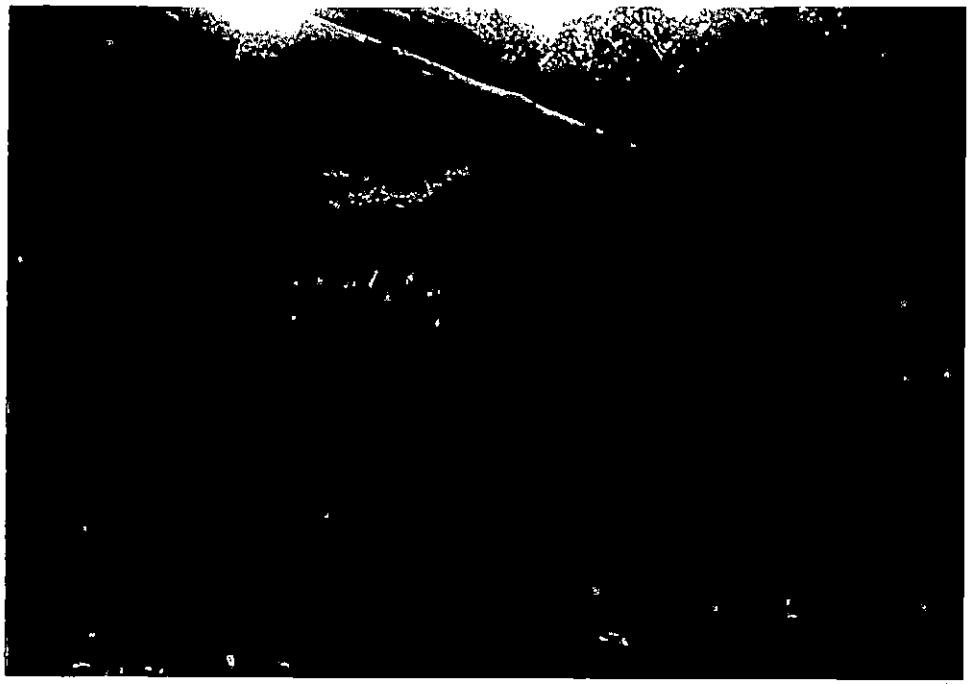
APPENDIX C

PHOTOGRAPHIC DOCUMENTATION LOG

SCENE: STRESSED VEGETATION ADJACENT TO ABOVE-GROUND TANK.
SITE NAME: STAMINA MILLS SITE LOCATION: NORTH SMITHFIELD, RI
FRAME NUMBER: 1 DATE: 05/18/90 TIME: 1000 SKY CONDITION: CLOUDY
PHOTO BY: ERIC FAHLE WITNESSES: T. SACCOCCIO ,P. SMART
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: 35MM FILM ROLL: 6300

SCENE: ENTRANCE VIEW OF ABOVE-GROUND TANK.
SITE NAME: STAMINA MILLS SITE LOCATION: NORTH SMITHFIELD, RI
FRAME NUMBER: 4 DATE: 05/18/90 TIME: 1001 SKY CONDITION: CLOUDY
PHOTO BY: ERIC FAHLE WITNESSES: T. SACCOCCIO ,P. SMART
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: 35MM FILM ROLL: 6300

PHOTOGRAPHY LOG SHEET



SCENE: SIDE VIEW OF ABOVE-GROUND TANK.
SITE NAME: STAMINA MILLS SITE LOCATION: NORTH SMITHFIELD, RI
FRAME NUMBER: 5 DATE: 05/18/90 TIME: 1001 SKY CONDITION: CLOUDY
PHOTO BY: ERIC FAHLE WITNESSES: T. SACCOCCIO ,P. SMART
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: 35MM FILM ROLL: 6300

NEGATIVES

SCENE: **********NEGATIVES**********
SITE NAME: STAMINA MILLS SITE LOCATION: NORTH SMITHFIELD, RI
FRAME NUMBER: 0 DATE: 05/18/90 TIME: SKY CONDITION: CLOUDY
PHOTO BY: ERIC FAHLE WITNESSES: T. SACCOCCIO ,P. SMART
CAMERA: OLYMPUS SETTING: AUTOMATIC FILM TYPE: 35MM FILM ROLL: 6300

APPENDIX D

SITE SAMPLING QA/QC PLAN

STAMINA MILLS SITE
SITE SAMPLING QA/QC PLAN
NORTH SMITHFIELD, RHODE ISLAND

Prepared For:

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

CONTRACT NO. 68-01-7367

TAT-01-N-00612

TDD NO. 01-9005-13

Prepared By:

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

July 1990

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

1.0 Background

The Stamina Mills Site is located in the town of North Smithfield, Rhode Island on the property of a former mill which burned down in 1977. The fire, which destroyed the mill and a previous spill at the mill resulted in the release of approximately 900 gallons of trichloroethylene (TCE) from the facility. In addition, from 1969 to 1974 approximately 20,000 gallons of still bottoms derived from the mill's solvent recovery system were landfilled at the site. These events led to wells in the area being contaminated with TCE at concentrations above the Safe Drinking Water Act Maximum Contaminant Levels (MCLs). The site was placed on the National Priorities List (NPL) in December 1982. A removal action, which extended the municipal water supply to the affected area, was initiated by the U.S. Environmental Protection Agency (EPA) Oil and Hazardous Materials Section (now the Emergency Planning and Response Branch (EPRB)) in November 1984.

During subsequent EPA remedial investigations in 1988, two abandoned, deteriorated and potentially leaking underground storage tanks were located. The tanks were found to contain hazardous substances such as toluene, ethylbenezene, and xylene. Due to the threat of these tanks introducing additional contaminants to the groundwater and surface water of the area, a second removal action was undertaken by the EPA EPRB in August 1988. This action resulted in the excavation and disposal of the two tanks and their contents.

In July 1989, as the remedial investigation continued, a 2,500-gallon aboveground storage tank marked "Acid Tank" was observed to have corroded holes on two sides. A solid/liquid mixture of unknown composition was observed inside the tank. The EPA remedial personnel requested assistance from the EPA EPRB. The tank contents were sampled by Roy F. Weston Technical Assistance Team (TAT) personnel at the request of EPA in 1990. The contents of the tank had a pH between 0 and 1. The tank was subsequently sampled in February 1990 and analyzed for volatile organic compounds (VOCs), metals, semi-volatile organic compounds (SVOCs), and flash point. No VOCs or SVOCs were detected in the samples, and the sample material did not flash at 60°C during flash point analysis. Results from X-Ray Fluorescence (XRF) metals screening indicated thatno metals were detected in the samples above natural soil background levels. In addition to the aboveground storage tank, drums of unknown contents and a partially buried storage tank were observed on the site by TAT personnel.

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 deemed 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:

MSA Combustible Gas/Indicator/Oxygen Alarm Model 260
HNU Photoionization Detector

The QA level for the samples analyzed at the laboratory will be QA2.
See Section 6.0 for details.

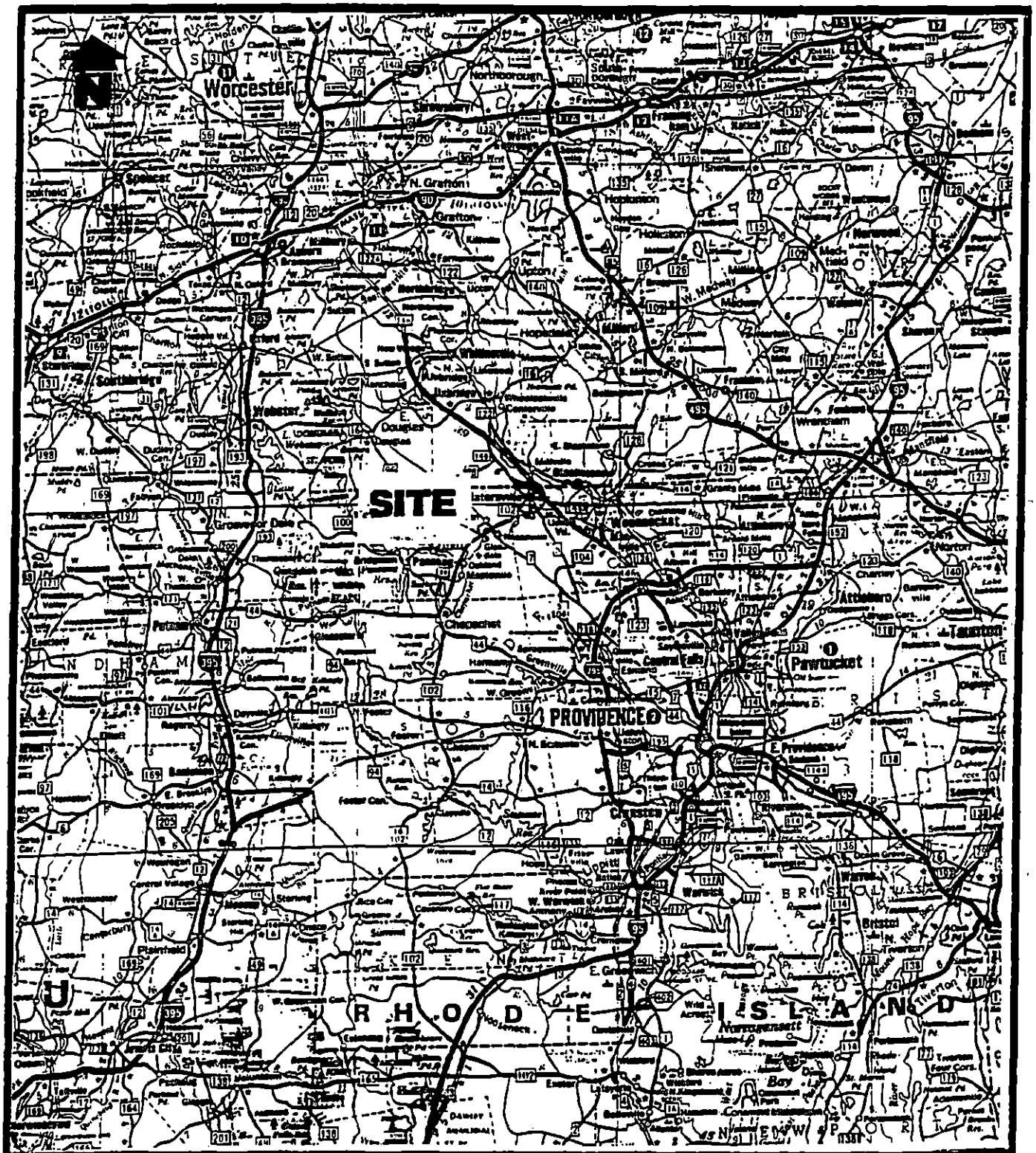


FIGURE 1

SITE LOCATION MAP
STAMINA MILLS SITE
NORTH SMITHFIELD, RHODE ISLAND

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN E. FAHLE	DATE 07/90	PCS # 2405
APPROVED QWV	DATE 07/90	TDD # 01900205

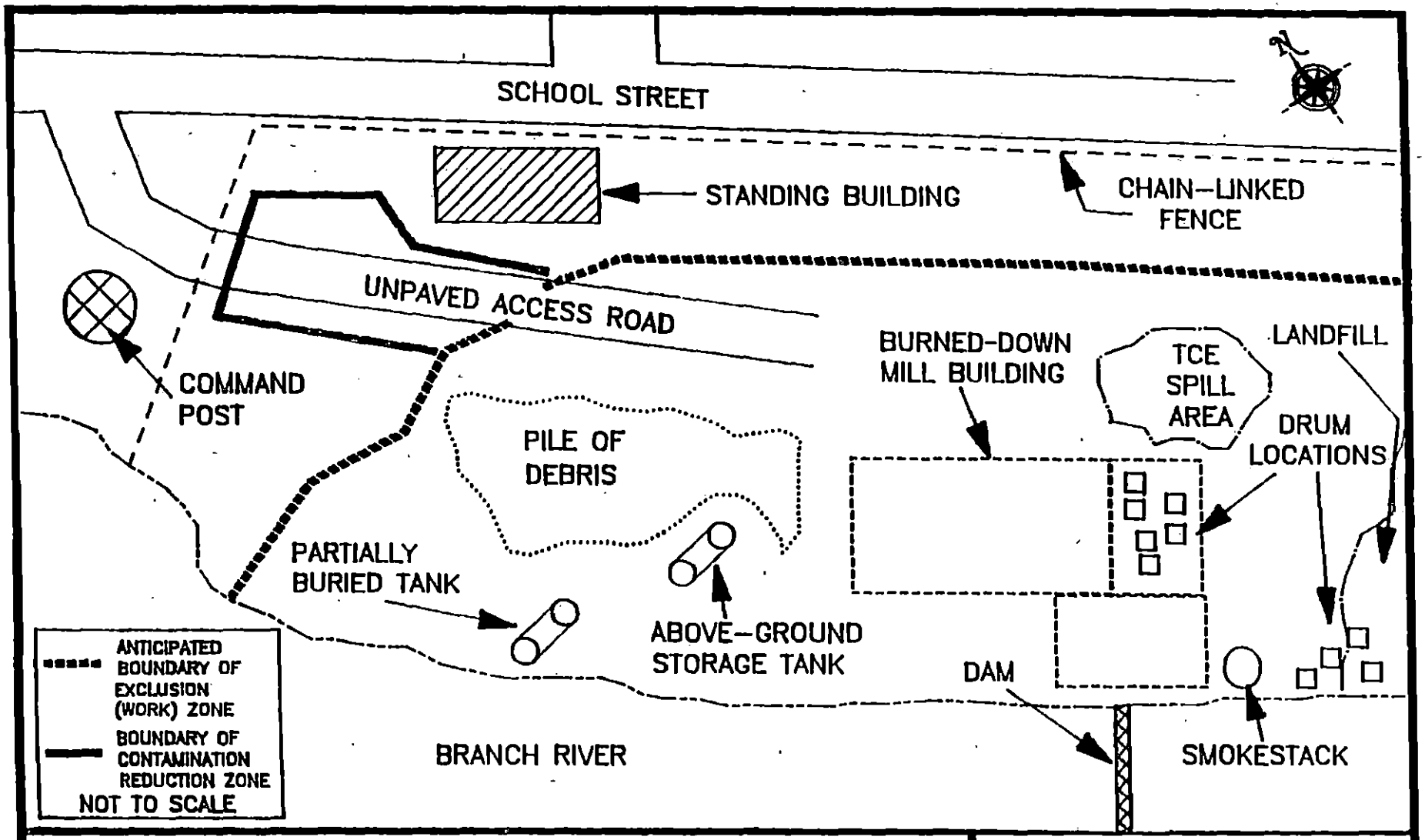


FIGURE 2

SITE DIAGRAM
STAMINA MILLS SITE
NORTH SMITHFIELD, RHODE ISLAND

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN E. FAHLE	DATE 07/90	PCS # 2405
APPROVED QWV	DATE 07/90	TDD # 01900205

4.0 Approach and Sampling Methodologies

The sampling survey will be conducted on or about May 18, 1990. Samples will be collected for, but not limited to, analyses for a combination incineration/landfill disposal determination.

Each media will be screened in the field prior to sample collection, if practical, to determine the location and quantity of samples. 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 according to U.S. EPA protocol. Samples will be disposed of by the laboratory performing the analyses. All contaminated sampling materials will be disposed of by the U.S. EPA NERL.

One composite sample will be collected from the material in the aboveground "acid tank". The sample will be collected using a scoopula. The scoopula will be decontaminated using a soap and water wash and a water rinse.

5.0 Project Organization & Responsibilities

U.S. EPA Emergency Planning and Response Branch:

Rich Haworth	On-scene Coordinator

Roy F. Weston Technical Assistance Team Members:

Eric Fahle	Air Monitoring
Paul Smart	Sampler
Thomas Saccoccio	Air Monitoring

6.0 Quality Assurance Requirements

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

The analyses of samples at the laboratory will employ the following QA level 2 requirements; sample documentation; chain of custody; sample holding times; method blanks, rinsate blanks and trip blanks; definitive identification: confirm the identification of analyses via a second GC column or mass spectra (for organic only); definitive quantitation: determine precision, accuracy, and confidence limits by analyzing one pair of matrix spike duplicates of the samples verified.

7.0 Deliverables

A chronological 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.

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

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.

TABLE 1

SAMPLING SUMMARY, ANALYTICAL METHODS, AND QA/QC SAMPLES

MATRIX	#SAMPLES	ANALYTICAL PARAMETER	VOLUME	CONTAINER	PRESERVATIVE	METHOD	TRIP BLANKS
Soil	0-10	Selected Parameters are shown on attached sheets entitled: "Landfill/Incineration Combined Disposal Analysis For a Solid".	40 ml	VOA vial	ice	Selected Methods are shown on attached sheets entitled: "Landfill/ Combined Disposal For a Solid".	Three 40 ml's

LANDFILL/INCINERATION COMBINED DISPOSAL ANALYSIS FOR A SOLID

___ PHYSICAL TESTS:

Color - Wht___ Blk___ Brn___ Ylw___ Grn___ Blu___ Prp___ Red___ Org___ Clr___ Gry___
Odor

Phasing - Single___ Mult?#___ Phases 1(top)___, 2___, 3___ (S, SL, L)

% Vol 1(top)___, 2___, 3___

Free Liquids, Paint Filter Test - SW846, 9095 ___% by volume, ___pass ___fail

Density (Bulk) - D1298 ASTM ___g/cc

Solids: % Solids - Std Method 209F ___% by Wt

Total - EPA 160.3 ___mg/kg

___ CHARACTERISTICS TESTS:

Reactivity

		LOD
Reactive Cyanide - SW846, 7.3.3.2	___mg/kg	10
Reactive Sulfide - SW846, 7.3.4.2	___mg/kg	10

Corrosivity

pH Test - SW846, 9045	___pH units	N/A

Ignitability

Flash Point - SW846, 1020 - ___<23°C ___24-37°C ___38-59°C ___60-93°C ___>93°C

___ TCLP TOXICITY TESTS: (51 CFR 114, Section 261.24)

___ Metals

		LOD*
Arsenic	___mg/L	0.5
Barium	___mg/L	0.5
Cadmium	___mg/L	0.5
Chromium	___mg/L	0.5
Copper	___mg/L	0.5
Lead	___mg/L	0.5
Mercury	___mg/L	0.05
Selenium	___mg/L	0.5
Silver	___mg/L	0.5
Zinc	___mg/L	0.5

___ Pesticides: RCRA Pesticides by GC ___mg/L 0.01/0.1

___ Herbicides: RCRA Herbicides by GC ___mg/L 0.1

___ COMPOSITIONAL TESTS:

___ Conventionals

Total Cyanide - SW846, 9010	___mg/kg	1.0
Total Phenols - SW846, 9065	___mg/kg	1.0
Ash Content - D482 ASTM	___%	0.1
BTU Content - D240 ASTM	___BTU/lb	200
Total Halogens Content, as Cl - SW846, 9020	___%	0.1
Total Sulfur Content - EPA 375.4	___%	0.1
Oxidizer Test - No Specified Method	___	+/-
Peroxide Test - No Specified Method	___mg/kg	50

LANDFILL/INCINERATION COMBINED DISPOSAL ANALYSIS FOR A SOLID (CONT'D)

____ COMPOSITIONAL TESTS: (Continued)

___ 20 Metals (Total) - SW846, 7000 (AA) or 6010 (ICAP)

Antimony	___mg/kg	2.0
Arsenic	___mg/kg	5.0
Barium	___mg/kg	1.0
Beryllium	___mg/kg	1.0
Cadmium	___mg/kg	1.0
Chromium, Total	___mg/kg	1.0
Copper	___mg/kg	1.0
Iron	___mg/kg	1.0
Lead	___mg/kg	2.0
Manganese	___mg/kg	1.0
Mercury	___mg/kg	0.2
Molybdenum	___mg/kg	5.0
Nickel	___mg/kg	1.0
Potassium	___mg/kg	10.0
Selenium	___mg/kg	1.0
Silver	___mg/kg	1.0
Sodium	___mg/kg	10.0
Thallium	___mg/kg	5.0
Vanadium	___mg/kg	5.0
Zinc	___mg/kg	1.0

___ Organics

Volatile Organics - SW846, 8240	mg/kg	10/50
Semivolatile Organics - SW846, 8270	mg/kg	10/50
Pesticides - SW846, 8080	mg/kg	0.1/0.5
PCB - SW846, 8080	mg/kg	0.5
Herbicides - SW846, 8080	mg/kg	0.1

___ Landban TCLP Tests: (51 CFR 114, Section 261.24)

Landban Volatiles by GC/MS	mg/L	As listed in
Landban Semivolatiles by GC/MS	mg/L	40CFR Part 268
Landban Alcohols by GC	mg/L	
Landban Pyridine by GC	mg/L	

APPENDIX E

CHAIN OF CUSTODY RECORD

HOR TAL TEC JAG.../

Office of Enforcement

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

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME	NO. OF CONTAINERS
	TDD# 01-9005-12 PCS# 0546	

SAMPLERS: (Signature)
PAUL GMARS-POS

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	40 ml VOA (Combined Landfill/Incinerator Disposal)	32 oz (1 Liter) glass (Combined Landfill/Incinerator Disposal)					REMARKS
000001	5/18/90	1000		✓	TANK	5	3	2					NONE Sample # 62794

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	See Attached for list of parameters Analab, Inc., 205 Campus Plaza E., Raritan Ctr., Edison, NJ 08837

Distribution: Original Accompanies Shipment; Copy to Coordinator Fie...

APPENDIX F

ANALYTICAL RESULTS

LANDFILL/INCINERATION COMBINED DISPOSAL ANALYSIS FOR A SOLID

__ PHYSICAL TESTS:

Color - Wht__ Blk__ Brn X Ylw__ Grn X Blu__ Prp__ Red__ Org__ Clr__ Gry__
Odor

Phasing - Single__ Mult?# 2 Phases 1(top)__, 2__, 3 X (S, SL, L)

% Vol 1(top)__, 2 2%, 3 98% (top layer was aqueous)

Free Liquids, Paint Filter Test - SW846, 9095 __% by volume, __pass __fail

Density (Bulk) - D1298 ASTM __g/cc

Solids: % Solids - Std Method 209F __% by Wt

Total - EPA 160.3 __mg/kg

__ CHARACTERISTICS TESTS:

Reactivity

Reactive Cyanide - SW846, 7.3.3.2	4.7 mg/kg
Reactive Sulfide - SW846, 7.3.4.2	16.7 mg/kg

Corrosivity

pH Test - SW846, 9045	2.25 pH units

Ignitability

Flash Point - SW846, 1020 - __<23°C __24-37°C __38-59°C __60-93°C __>93°C (not ignitable)

X TCLP TOXICITY TESTS: (51 CFR 114, Section 261.24)

X Metals

Arsenic	0.154 mg/L
Barium	<1.0 mg/L
Cadmium	<0.025 mg/L
Chromium	0.390 mg/L
Copper	0.33 mg/L
Lead	<0.250 mg/L
Mercury	<0.0005 mg/L
Selenium	<0.01 mg/L
Silver	0.054 mg/L
Zinc	0.362 mg/L

X Pesticides: RCRA Pesticides by GC Not Detected __mg/L

X Herbicides: RCRA Herbicides by GC Not Detected __mg/L

X COMPOSITIONAL TESTS:

X Conventionals

Total Cyanide - SW846, 9010	6.26 mg/kl
Total Phenols - SW846, 9065	2.7 mg/kl
Ash Content - D482 ASTM	1.11% mg/kg
BTU Content - D240 ASTM	<50 BTU/lb
Total Halogens Content, as Cl - SW846, 9020	38.5 mg/kg
Total Sulfur Content - EPA 375.4	32208 mg/kg
Oxidizer Test - No Specified Method	positive +
Peroxide Test - No Specified Method	+

LANDFILL/INCINERATION COMBINED DISPOSAL ANALYSIS FOR A SOLID (CONT'D)

X COMPOSITIONAL TESTS: (Continued)

X 20 Metals (Total) - SW846, 7000 (AA) or 6010 (ICAP)

Antimony	1.86 mg/kg
Arsenic	10.8 mg/kg
Barium	<100 mg/kg
Beryllium	<0.1 mg/kg
Cadmium	<2.50 mg/kg
Chromium, Total	26.8 mg/kg
Copper	117 mg/kg
Iron	194,250 mg/kg
Lead	<250 mg/kg
Manganese	97.7 mg/kg
Mercury	<0.25 mg/kg
Molybdenum	<100 mg/kg
Nickel	51.5 mg/kg
Potassium	<100 mg/kg
Selenium	<1.0 mg/kg
Silver	<5.00 mg/kg
Sodium	14.1 mg/kg
Thallium	<1.0 mg/kg
Vanadium	<5.0 mg/kg
Zinc	620 mg/kg

X Organics

Volatile Organics - SW846, 8240		Not Detected
Semivolatile Organics - SW846, 8270	3.12	Di-N-Butyl Phthalate
Pesticides - SW846, 8080		Not Detected
PCB - SW846, 8080		Not Detected
Herbicides - SW846, 8080		Not Detected

X Landban TCLP Tests: (55 Federal Register N798, March 29, 1990)

	Landban Volatiles by GC/MS	Not Detected	As listed in
	Landban Semivolatiles by GC/MS	Not Detected	40 CFR Part 268
*	Landban Alcohols by GC	Not Analyzed	
**	Landban Pyridine by GC	Not Detected	

* Was delected from the list, as per Federal Register, March 29, 1990

** Was included in th semi-volatile compounds

Note: All units reported in ppb in the analytical data package were converted to ppm.
Only those organic and landban TCLP compounds which were detected in the analyses have been reported in this summary.