



SDMS DocID 556480

COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
CENTRAL REGIONAL OFFICE

WILLIAM F. WELD  
Governor

ARGEO PAUL CELLUCCI  
Lt. Governor

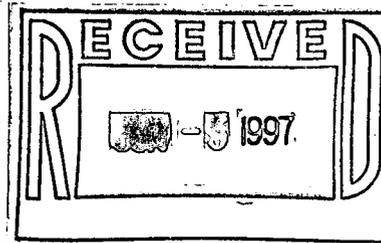
Superfund Records Center  
SITE: Covitch Property  
BREAK: 1.18  
OTHER: 556480

TRUDY COXE  
Secretary

DAVID B. STRUHS  
Commissioner

TRANSMITTAL:

TO: Mike Jennings  
Roy F. Weston, Inc.  
217 Middlesex Turnpike  
Burlington, MA 01803



INCLUDES:

Cover pages of Covitch and Arcade Phase I reports

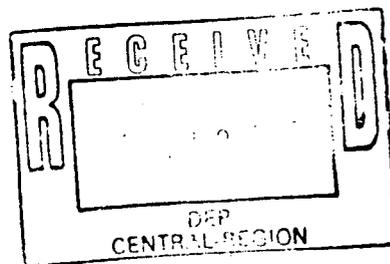
Laboratory reports from 1996 sample analyses at Covitch Property

Table of 1996-1997 Laboratory Results of sampling on the Arcade Property

If you have any questions contact me at (508) 792-7653 Ext. 3841.

Very truly yours,

Greg Root  
Environmental Analyst  
Waste Site Cleanup



**PHASE I INITIAL SITE  
INVESTIGATION REPORT**

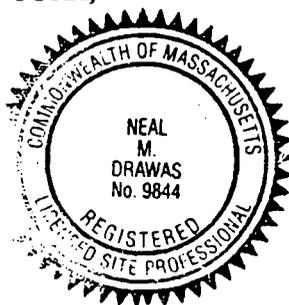
**ATF DAVIDSON  
1 MAIN STREET  
WHITINSVILLE, MASSACHUSETTS**

**RTN 2-0111**

**MARCH 1997**

**PREPARED BY**

**NEAL M. DRAWAS, LSP  
KROLL ASSOCIATES, INC.  
900 THIRD AVENUE  
NEW YORK, NEW YORK 10022**



**ANALYTICAL RESULTS**

ATF - Davidson Property  
1 Main Street, Northbridge, MA

10/17/96 + 1/17/97(\*)

Well ID	PCE	TCE	1,2-DCE	VCL	Acetone	Barium
M-1	--	--	--	--	--	--
M-2	ND	3.8	2.6	ND	103.	--
M-3	--	--	--	--	--	--
M-4	--	--	--	--	--	4.63
M-5	93.3	31.4	28.2	<u>17.8</u>	ND	--
M-6	ND	ND	ND	ND	ND	--
M-7(*)	ND	5.1	82.6	<u>62.5</u>	ND	1.05
M-8	52.9	9.8	7.9	ND	ND	--
M-9	ND	ND	ND	ND	ND	--
M-10(*)	ND	ND	ND	ND	ND	--
M-11(*)	ND	ND	ND	ND	ND	--
						<u>Other</u>
<u>Geoprobe (*)</u>	ND	ND	ND	ND	ND	7. (a)
SB-1	ND	ND	ND	ND	ND	ND
GP-1	ND	ND	ND	ND	ND	ND
SB-2	ND	ND	ND	ND	290.	8. (a)
GP-2	ND	ND	ND	ND	ND	ND
SB-3	ND	ND	ND	ND	ND	ND
GP-3	ND	ND	ND	ND	ND	ND
SB-4	ND	ND	ND	ND	ND	ND
GP-4	ND	ND	ND	ND	ND	ND
SB-5	ND	ND	ND	ND	200.	22. (a)
GP-5	ND	ND	ND	ND	ND	ND
SB-6	ND	ND	ND	25.	ND	ND
GP-6	ND	ND	50.	<u>74.</u>	ND	7. (b)
SB-7	ND	ND	ND	ND	ND	ND
GP-7	ND	ND	ND	ND	ND	ND

Notes:

Barium values given in mg/L (ppm).  
 All other values given in ug/L (ppb).  
 Underlined values exceed MCP Method 1 GW-2/3 limits.  
 ND = Below Quantitation Limit.  
 -- = Not Sampled.  
 SB- = Soil boring  
 GP- = Groundwater  
 Other: a = Methylene chloride (compound also detected in blank)  
 b = 1,2,3-Trichlorobenzene

**PHASE I REPORT  
THE SHOP (COVITCH PROPERTY)  
WHITINSVILLE, MASSACHUSETTS  
MADEP No. 2-0112**

*Prepared for*

White Consolidated Industries, Inc.  
11770 Berea Road  
Cleveland, Ohio 44111

*Prepared by*

CEH - JACQUES WHITFORD  
New Hampshire, Vermont, New Jersey, Maine

March, 1997

**APPENDIX H**  
**LABORATORY ANALYTICAL REPORTS**  
**(DECEMBER 1996)**



eastern analytical

### CHAIN OF CUSTODY FORM

Eastern Analytical  
25 Chenell Dr.  
Concord, NH 03301

Phone: 800 287-0525  
Fax: (603) 228-4591

Name: Jack McKenna

Project ID: ATF/D Shop  
(Exactly as you wish to appear on report)

Company: CEH

Address: Portsmouth, N.H.

Results needed by (enter preferred date): \_\_\_\_\_  
(Guaranteed rapid turnaround must have pre-approval)

Phone: 431-4899

Fax: \_\_\_\_\_

#### TEST PARAMETERS

Drinking Water Y N (Circle One)

Sample ID's (As will appear on report)	No of Cont.	Sampling Date/Time	Matrix	PCB	VPH	EPH	PAH 8270	PPM	Other Parameters/Notes
TRANS - 3	1	12/29/96/0940	Soil	X					
TRANS - 110	1	1030	"	X					
TRANS - 217-221	1	1045	"	X					
AST	3	0950	"		X	X			methanol ... vials (cliff set up)
Ash - 1	2	1115	"				X	X	
Ash - 2	2	1130	"				X	X	

Sampled by: David Gerschuler

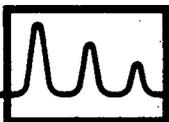
Additional Notes

i.e. Billing info if different, PO#, Quote# etc.

Relinquished by: David Gerschuler Date: 12/29/96 Time: 1400 Received by: [Signature]

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received by: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received by: \_\_\_\_\_



Jack McKenna  
Caswell, Eichler & Hill, Inc.  
27 Congress St., P.O. Box 4696  
Portsmouth, N.H. 03802-4696

FEB 10 1997

Subject: Laboratory Report

Eastern Analytical, Inc. ID: 7728 CEHNNH  
Client Identification: ATF / D Shop  
Date Received: 01/15/97  
Sample Quantity/Type: 1 soil

Dear Mr. McKenna:

Enclosed please find the laboratory report for the above identified project. All analyses were subjected to rigorous quality control measures to assure data accuracy.

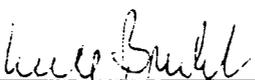
The following standard abbreviations and conventions apply throughout all Eastern Analytical, Inc. reports:

- < = "less than" followed by the detection limit
- TNR = Testing Not Requested
- ND = None Detected, no established detection limit
- BRL = Below Reporting Limits

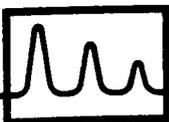
If you have any questions regarding the results contained within, please feel free to directly contact me, the department supervisor, or the analytical chemist who performed the testing in question. Unless otherwise requested, we will dispose of the sample(s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

  
\_\_\_\_\_  
Will Brunkhorst, President

2/8/97  
Date



# LABORATORY REPORT

Eastern Analytical, Inc. ID#: 7728 CEHNNH

Client: Caswell, Eichler & Hill, Inc.

Client Designation: ATF / D Shop

Sample ID: Ash-2  
Matrix: soil  
Date Rec'd: 01/15/97  
Units (unless noted): mg/kg

Date of  
Analysis Analyst Method

### Total Metals

Chromium 1,000  
Hexavalent Chromium < 0.1

01/22/97 RTW 6010  
01/31/97 JG 7196

Approved by: Tim Wilson, Inorganic Supervisor



Eastern Analytical

CHAIN OF 1128

7007

Eastern Analytical  
25 Chenell Dr.  
Concord, NH 03301

Phone: 800 287-0525  
Fax: (603) 228-4591

Name: Sue McNamee

Project ID: AU/D Shop  
(Exactly as you wish to appear on report)

Company: CEI

Results needed by (enter preferred date): \_\_\_\_\_  
(Guaranteed rapid turnaround must have pre-approval)

Address: 100 Smith St

Phone: 434 4579

Fax: \_\_\_\_\_

TEST PARAMETERS

Drinking Water Y N (Circle One)

Sample ID's (As will appear on report)	No of Cont.	Sampling Date/Time	Matrix	PCB	VPH	FPH	pH 3270	TPH	Other Parameters/Notes
11905 3	1	10/26/02	Sci /	X					
11905 110	1	1030	"	X					
11905 211 21	1	1041	"	X					
A51	3	0950	"		X	X			method results (check 507)
A51 1	2	1115	"				X	X	
A51 2	2	1130	"				X	X	

Sampled by: David Gerschuler

Relinquished by: David Gerschuler Date: 10/26/02 Time: 1400 Received by: [Signature]

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received by: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received by: \_\_\_\_\_

Received VIA: \_\_\_\_\_

Additional Notes i.e. Billing info if different, PO#, Quot# etc.



**eastern analytical**

*professional laboratory services*

Jack McKenna  
Caswell, Eichler & Hill, Inc.  
27 Congress St., P.O. Box 4696  
Portsmouth, N.H. 03802-4696

FEB 03 1997

Subject: Laboratory Report

Eastern Analytical, Inc. ID: 7727 CEHNNH  
Client Identification: ATF/D Shop  
Date Received: 01/15/97  
Sample Quantity/Type: 2 soil

Dear Mr. McKenna:

Enclosed please find the laboratory report for the above identified project. All analyses were subjected to rigorous quality control measures to assure data accuracy.

The following standard abbreviations and conventions apply throughout all Eastern Analytical, Inc. reports:

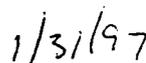
- < = "less than" followed by the detection limit
- TNR = Testing Not Requested
- ND = None Detected, no established detection limit
- BRL = Below Reporting Limits

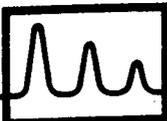
If you have any questions regarding the results contained within, please feel free to directly contact me, the department supervisor, or the analytical chemist who performed the testing in question. Unless otherwise requested, we will dispose of the sample(s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

  
\_\_\_\_\_  
Will Brunkhorst, President

  
\_\_\_\_\_  
Date



# LABORATORY REPORT

Eastern Analytical, Inc. ID#: 7597

Client: Caswell, Eichler & Hill, Inc.

Client Designation: ATF/D Shop

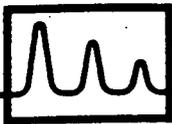
## Acid and Base/Neutral Extractable Compounds

Sample ID:	GP-2,Comp.	GP-4,Comp.	GP-6,Comp.	GP-8,Comp.
Matrix:	Soil	Soil	Soil	Soil
Date Received:	12/19/96	12/19/96	12/19/96	12/19/96
Units:	µg/Kg	µg/Kg	µg/Kg	µg/Kg
Date of Extraction:	12/23/96	12/23/96	12/23/96	12/23/96
Date of Analysis:	1/9/97	1/9/97	1/9/97	1/9/97
Analyst:	TDS	TDS	TDS	TDS
EPA Method:	8270	8270	8270	8270
Dilution Factor:	4	8	10	8

Benzyl alcohol	< 700	< 1,000	< 2,000	< 1,000
Nitrobenzene	< 700	< 1,000	< 2,000	< 1,000
Isophorone	< 700	< 1,000	< 2,000	< 1,000
2,4-Dinitrotoluene	< 700	< 1,000	< 2,000	< 1,000
2,6-Dinitrotoluene	< 700	< 1,000	< 2,000	< 1,000
Benzidine	< 1,000	< 3,000	< 3,000	< 3,000
3,3'-Dichlorobenzidine	< 700	< 1,000	< 2,000	< 1,000
Pyridine	< 700	< 1,000	< 2,000	< 1,000
Azobenzene	< 700	< 1,000	< 2,000	< 1,000
Dimethylphthalate	< 700	< 1,000	< 2,000	< 1,000
Diethylphthalate	< 700	< 1,000	< 2,000	< 1,000
Di-n-butylphthalate	< 700	< 1,000	< 2,000	< 1,000
Butylbenzylphthalate	< 700	< 1,000	< 2,000	< 1,000
bis(2-Ethylhexyl)phthalate	< 700	< 1,000	< 2,000	< 1,000
Di-n-octylphthalate	< 700	< 1,000	< 2,000	< 1,000
Naphthalene	< 700	< 1,000	2,000	< 1,000
2-Methylnaphthalene	< 700	2,000	4,000	2,000
Acenaphthylene	< 700	< 1,000	< 2,000	< 1,000
Acenaphthene	< 700	< 1,000	< 2,000	< 1,000
Dibenzofuran	< 700	< 1,000	< 2,000	< 1,000
Fluorene	< 700	< 1,000	< 2,000	< 1,000
Phenanthrene	< 700	< 1,000	< 2,000	< 1,000
Anthracene	< 700	< 1,000	< 2,000	< 1,000
Fluoranthene	< 700	< 1,000	< 2,000	< 1,000
Pyrene	< 700	< 1,000	< 2,000	< 1,000
Benzo[a]anthracene	< 700	< 1,000	< 2,000	< 1,000
Chrysene	< 700	< 1,000	< 2,000	< 1,000
Benzo[b]fluoranthene	< 700	< 1,000	< 2,000	< 1,000
Benzo[k]fluoranthene	< 700	< 1,000	< 2,000	< 1,000
Benzo[a]pyrene	< 700	< 1,000	< 2,000	< 1,000
Indeno[1,2,3-cd]pyrene	< 700	< 1,000	< 2,000	< 1,000
Dibenz[a,h]anthracene	< 700	< 1,000	< 2,000	< 1,000
Benzo[g,h,i]perylene	< 700	< 1,000	< 2,000	< 1,000

Dilution factor(s) required due to high levels of non-target compounds.

Approved By: Timothy D. Schaper, Organics Supervisor



# LABORATORY REPORT

Eastern Analytical, Inc. ID#: 7597

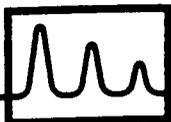
Client: Caswell, Eichler & Hill, Inc.

Client Designation: ATF/D Shop

## Acid and Base/Neutral Extractable Compounds

Sample ID:	GP-2,Comp.	GP-4,Comp.	GP-6,Comp.	GP-8,Comp.
Matrix:	Soil	Soil	Soil	Soil
Date Received:	12/19/96	12/19/96	12/19/96	12/19/96
Units:	µg/Kg	µg/Kg	µg/Kg	µg/Kg
Date of Extraction:	12/23/96	12/23/96	12/23/96	12/23/96
Date of Analysis:	1/9/97	1/9/97	1/9/97	1/9/97
Analyst:	TDS	TDS	TDS	TDS
EPA Method:	8270	8270	8270	8270
Dilution Factor:	4	8	10	8
Phenol	< 700	< 1,000	< 2,000	< 1,000
2-Chlorophenol	< 700	< 1,000	< 2,000	< 1,000
2,4-Dichlorophenol	< 700	< 1,000	< 2,000	< 1,000
2,4,5-Trichlorophenol	< 700	< 1,000	< 2,000	< 1,000
2,4,6-Trichlorophenol	< 700	< 1,000	< 2,000	< 1,000
Pentachlorophenol	< 7,000	< 10,000	< 20,000	< 10,000
2-Nitrophenol	< 700	< 1,000	< 2,000	< 1,000
4-Nitrophenol	< 7,000	< 10,000	< 20,000	< 10,000
2,4-Dinitrophenol	< 7,000	< 10,000	< 20,000	< 10,000
2-Methylphenol	< 700	< 1,000	< 2,000	< 1,000
4-Methylphenol	< 700	< 1,000	< 2,000	< 1,000
2,4-Dimethylphenol	< 700	< 1,000	< 2,000	< 1,000
4-Chloro-3-methylphenol	< 700	< 1,000	< 2,000	< 1,000
4,6-Dinitro-2-methylphenol	< 7,000	< 10,000	< 20,000	< 10,000
Benzoic Acid	< 7,000	< 10,000	< 20,000	< 10,000
N-Nitrosodimethylamine	< 700	< 1,000	< 2,000	< 1,000
n-Nitroso-di-n-propylamine	< 700	< 1,000	< 2,000	< 1,000
n-Nitrosodiphenylamine	< 700	< 1,000	< 2,000	< 1,000
bis(2-Chloroethyl)ether	< 700	< 1,000	< 2,000	< 1,000
bis(2-chloroisopropyl)ether	< 700	< 1,000	< 2,000	< 1,000
bis(2-Chloroethoxy)methane	< 700	< 1,000	< 2,000	< 1,000
1,3-Dichlorobenzene	< 700	< 1,000	< 2,000	< 1,000
1,4-Dichlorobenzene	< 700	< 1,000	< 2,000	< 1,000
1,2-Dichlorobenzene	< 700	< 1,000	< 2,000	< 1,000
1,2,4-Trichlorobenzene	< 700	< 1,000	< 2,000	< 1,000
2-Chloronaphthalene	< 700	< 1,000	< 2,000	< 1,000
4-Chlorophenyl-phenylether	< 700	< 1,000	< 2,000	< 1,000
4-Bromophenyl-phenylether	< 700	< 1,000	< 2,000	< 1,000
Hexachloroethane	< 700	< 1,000	< 2,000	< 1,000
Hexachlorobutadiene	< 700	< 1,000	< 2,000	< 1,000
Hexachlorocyclopentadiene	< 700	< 1,000	< 2,000	< 1,000
Hexachlorobenzene	< 700	< 1,000	< 2,000	< 1,000
4-Chloroaniline	< 700	< 1,000	< 2,000	< 1,000
2-Nitroaniline	< 700	< 1,000	< 2,000	< 1,000
3-Nitroaniline	< 700	< 1,000	< 2,000	< 1,000
4-Nitroaniline	< 700	< 1,000	< 2,000	< 1,000

Approved By: Timothy D. Schaper, Organics Supervisor



# LABORATORY REPORT

Eastern Analytical, Inc. ID#: 7597 CEHNNH

Client: Caswell, Eichler & Hill, Inc.

Client Designation: ATF/D Shop

Sample ID:	MC-15	OW-2	OW-3	RW-1	Date of	Analyst	Method
Matrix:	aqueous	aqueous	aqueous	aqueous	Analysis		
Date Rec'd:	12/19/96	12/19/96	12/19/96	12/19/96			
Units (unless noted):	mg/L	mg/L	mg/L	mg/L			
<b>Dissolved Metals</b>							
Antimony	< 0.05	< 0.05	< 0.05	< 0.05	12/23/96	RTW	200.7
Arsenic	< 0.01	< 0.01	< 0.01	< 0.01	12/23/96	RTW	200.7
Beryllium	< 0.005	< 0.005	< 0.005	< 0.005	12/23/96	RTW	200.7
Cadmium	< 0.001	< 0.001	< 0.001	< 0.001	12/23/96	RTW	200.7
Chromium	< 0.002	< 0.002	< 0.002	< 0.002	12/23/96	RTW	200.7
Copper	< 0.01	< 0.01	< 0.01	< 0.01	12/23/96	RTW	200.7
Lead	< 0.01	< 0.01	< 0.01	< 0.01	12/23/96	RTW	200.7
Mercury	< 0.0002	< 0.0002	< 0.0002	< 0.0002	01/02/97	JG	245.1
Nickel	< 0.01	< 0.01	< 0.01	< 0.01	12/23/96	RTW	200.7
Selenium	< 0.05	< 0.05	< 0.05	< 0.05	12/23/96	RTW	200.7
Silver	< 0.005	< 0.005	< 0.005	< 0.005	12/23/96	RTW	200.7
Thallium	< 0.1	< 0.1	< 0.1	< 0.1	12/23/96	RTW	200.7
Zinc	0.028	0.075	0.083	0.049	12/23/96	RTW	200.7

Approved by: Tim Wilson, Inorganic Supervisor



# LABORATORY REPORT

Eastern Analytical, Inc. ID#: 7597 CEHNNH

Client: Caswell, Eichler & Hill, Inc.

Client Designation: ATF/D Shop

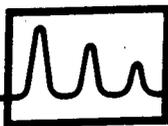
## Total Petroleum Hydrocarbons

Sample ID:	MC-14	OW-2	OW-3	RW-1
Matrix:	Aqueous	Aqueous	Aqueous	Aqueous
Date Received:	12/19/96	12/19/96	12/19/96	12/19/96
Units:	mg/L	mg/L	mg/L	mg/L
Date of Extraction:	12/23/96	12/23/96	12/23/96	12/23/96
Date of Analysis:	12/24/96	12/24/96	12/24/96	12/24/96
Analyst:	DJS	DJS	DJS	DJS
EPA Method:	8100(mod)	8100(mod)	8100(mod)	8100(mod)
Carbon Range:	C9-C40*	C9-C40*	C9-C40*	C9-C40*
Total Petroleum Hydrocarbons	< 0.5	< 0.5	< 0.5	1.1

Sample ID:	GP-2 Comp	GP-4 Comp	GP-6 Comp	GP-8 Comp
Matrix:	Soil	Soil	Soil	Soil
Date Received:	12/19/96	12/19/96	12/19/96	12/19/96
Units:	mg/kg	mg/kg	mg/kg	mg/kg
Date of Extraction:	12/23/96	12/23/96	12/23/96	12/23/96
Date of Analysis:	12/23/96	12/23/96	12/23/96	12/23/96
Analyst:	DJS	DJS	DJS	DJS
EPA Method:	8100(mod)	8100(mod)	8100(mod)	8100(mod)
Carbon Range:	C9-C40*	C9-C40*	C9-C40*	C9-C40*
Total Petroleum Hydrocarbons	3,500	5,800	13,000	1,900

\* Fuel (Diesel) and Lubricating Oil Range Organics.

Approved By: Timothy Schaper, Organics Supervisor



# LABORATORY REPORT

Eastern Analytical, Inc. ID#: 7597 CEHNNH

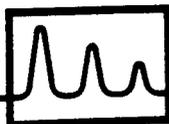
Client: Caswell, Eichler & Hill, Inc.

Client Designation: ATF/D Shop

## Volatile Organic Compounds

Sample ID:	OW-3			RW-1 GP-2,Comp		
	Aqueous	Aqueous	Soil	Aqueous	Aqueous	Soil
<b>Matrix:</b>	12/19/96	12/19/96	12/19/96	12/19/96	12/19/96	12/19/96
<b>Date Received:</b>	12/19/96	12/19/96	12/19/96	12/19/96	12/19/96	12/19/96
<b>Units:</b>	µg/L	µg/L	µg/kg	µg/L	µg/L	µg/kg
<b>Date of Analysis:</b>	12/30/96	12/30/96	12/31/96	12/30/96	12/30/96	12/31/96
<b>Analyst:</b>	JDS	JDS	JDS	JDS	JDS	JDS
<b>EPA Method:</b>	8260	8260	8260	8260	8260	8260
<b>Benzene</b>	< 1	< 1	< 10	<b>Ethylbenzene</b>	< 1	< 10
<b>Bromobenzene</b>	< 1	< 1	< 10	<b>Hexachlorobutadiene</b>	< 2	< 10
<b>Bromochloromethane</b>	< 2	< 2	< 10	<b>Isopropylbenzene</b>	< 1	< 10
<b>Bromodichloromethane</b>	< 2	< 2	< 10	<b>p-Isopropyltoluene</b>	< 1	< 10
<b>Bromoform</b>	< 2	< 2	< 10	<b>Methylene chloride</b>	< 2	20
<b>Bromomethane</b>	< 10	< 10	< 100	<b>Naphthalene</b>	< 1	< 10
<b>n-Butylbenzene</b>	< 1	< 1	< 10	<b>n-Propylbenzene</b>	< 1	< 10
<b>sec-Butylbenzene</b>	< 1	< 1	< 10	<b>Styrene</b>	< 1	< 10
<b>tert-Butylbenzene</b>	< 1	< 1	< 10	<b>1,1,1,2-Tetrachloroethane</b>	< 2	< 10
<b>Carbon tetrachloride</b>	< 2	< 2	< 10	<b>1,1,2,2-Tetrachloroethane</b>	< 2	< 10
<b>Chlorobenzene</b>	< 2	< 2	< 10	<b>Tetrachloroethene</b>	3	< 10
<b>Chloroethane</b>	< 10	< 10	< 100	<b>Toluene</b>	< 1	10
<b>Chloroform</b>	< 2	< 2	< 10	<b>1,2,3-Trichlorobenzene</b>	< 1	< 10
<b>Chloromethane</b>	< 10	< 10	< 100	<b>1,2,4-Trichlorobenzene</b>	< 1	< 10
<b>2-Chlorotoluene</b>	< 2	< 2	< 10	<b>1,1,1-Trichloroethane</b>	< 2	< 10
<b>4-Chlorotoluene</b>	< 2	< 2	< 10	<b>1,1,2-Trichloroethane</b>	< 2	< 10
<b>Dibromochloromethane</b>	< 2	< 2	< 10	<b>Trichloroethene</b>	< 2	< 10
<b>1,2-Dibromo-3-chloropropane</b>	< 2	< 2	< 10	<b>Trichlorofluoromethane</b>	< 10	< 100
<b>1,2-Dibromoethane</b>	< 2	< 2	< 10	<b>1,2,3-Trichloropropane</b>	< 2	< 10
<b>Dibromomethane</b>	< 2	< 2	< 10	<b>1,2,4-Trimethylbenzene</b>	< 1	< 10
<b>1,2-Dichlorobenzene</b>	< 1	< 1	< 10	<b>1,3,5-Trimethylbenzene</b>	< 1	< 10
<b>1,3-Dichlorobenzene</b>	< 1	< 1	< 10	<b>Vinyl chloride</b>	< 2	< 20
<b>1,4-Dichlorobenzene</b>	< 1	< 1	< 10	<b>o-Xylene</b>	< 1	< 10
<b>Dichlorodifluoromethane</b>	< 10	< 10	< 100	<b>m,p-Xylene</b>	< 1	< 10
<b>1,1-Dichloroethane</b>	< 2	< 2	< 10	<b>MTBE</b>	< 20	< 200
<b>1,2-Dichloroethane</b>	< 2	< 2	< 10	<b>Acetone</b>	< 50	< 500
<b>1,1-Dichloroethene</b>	< 1	< 1	< 10	<b>2-Butanone (MEK)</b>	< 10	< 100
<b>cis-1,2-Dichloroethene</b>	< 2	< 2	< 10	<b>4-Methyl-2-Pentanone (MIBK)</b>	< 10	< 100
<b>trans-1,2-Dichloroethene</b>	< 2	< 2	< 10	<b>2-Hexanone</b>	< 10	< 100
<b>1,2-Dichloropropane</b>	< 2	< 2	< 10			
<b>1,3-Dichloropropane</b>	< 2	< 2	< 10			
<b>2,2-Dichloropropane</b>	< 2	< 2	< 10			
<b>1,1-Dichloropropene</b>	< 2	< 2	< 10			
<b>cis-1,3-Dichloropropene</b>	< 2	< 2	< 10			
<b>trans-1,3-Dichloropropene</b>	< 2	< 2	< 10			

Approved By: Clifford Chase, Volatile Organics Supervisor



# LABORATORY REPORT

Eastern Analytical, Inc. ID#: 7597 CEHNNH

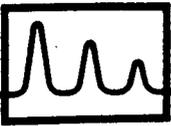
Client: Caswell, Eichler & Hill, Inc.

Client Designation: ATF/D Shop

## Volatile Organic Compounds

Sample ID:	MC-14	MC-15	OW-2		MC-14	MC-15	OW-2
Matrix:	Aqueous	Aqueous	Aqueous		Aqueous	Aqueous	Aqueous
Date Received:	12/19/96	12/19/96	12/19/96		12/19/96	12/19/96	12/19/96
Units:	µg/L	µg/L	µg/L		µg/L	µg/L	µg/L
Date of Analysis:	12/30/96	12/30/96	12/30/96		12/30/96	12/30/96	12/30/96
Analyst:	JDS	JDS	JDS		JDS	JDS	JDS
EPA Method:	8260	8260	8260		8260	8260	8260
Benzene	<1	<1	<1	Ethylbenzene	<1	<1	<1
Bromobenzene	<1	<1	<1	Hexachlorobutadiene	<2	<2	<2
Bromochloromethane	<2	<2	<2	Isopropylbenzene	<1	<1	<1
Bromodichloromethane	<2	<2	<2	p-Isopropyltoluene	<1	<1	<1
Bromoform	<2	<2	<2	Methylene chloride	<2	<2	<2
Bromomethane	<10	<10	<10	Naphthalene	<1	<1	<1
n-Butylbenzene	<1	<1	<1	n-Propylbenzene	<1	<1	<1
sec-Butylbenzene	<1	<1	<1	Styrene	<1	<1	<1
tert-Butylbenzene	<1	<1	<1	1,1,1,2-Tetrachloroethane	<2	<2	<2
Carbon tetrachloride	<2	<2	<2	1,1,2,2-Tetrachloroethane	<2	<2	<2
Chlorobenzene	<2	<2	<2	Tetrachloroethene	<2	<2	<2
Chloroethane	<10	<10	<10	Toluene	<1	<1	<1
Chloroform	<2	<2	<2	1,2,3-Trichlorobenzene	<1	<1	<1
Chloromethane	<10	<10	<10	1,2,4-Trichlorobenzene	<1	<1	<1
2-Chlorotoluene	<2	<2	<2	1,1,1-Trichloroethane	<2	<2	<2
4-Chlorotoluene	<2	<2	<2	1,1,2-Trichloroethane	<2	<2	<2
Dibromochloromethane	<2	<2	<2	Trichloroethene	<2	<2	<2
1,2-Dibromo-3-chloropropane	<2	<2	<2	Trichlorofluoromethane	<10	<10	<10
1,2-Dibromoethane	<2	<2	<2	1,2,3-Trichloropropane	<2	<2	<2
Dibromomethane	<2	<2	<2	1,2,4-Trimethylbenzene	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	1,3,5-Trimethylbenzene	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	Vinyl chloride	<2	<2	<2
1,4-Dichlorobenzene	<1	<1	<1	o-Xylene	<1	<1	<1
Dichlorodifluoromethane	<10	<10	<10	m,p-Xylene	<1	<1	<1
1,1-Dichloroethane	<2	<2	<2	MTBE	<20	<20	<20
1,2-Dichloroethane	<2	<2	<2	Acetone	<50	<50	<50
1,1-Dichloroethene	<1	<1	<1	2-Butanone (MEK)	<10	<10	<10
cis-1,2-Dichloroethene	<2	<2	<2	4-Methyl-2-Pentanone (MIBK)	<10	<10	<10
trans-1,2-Dichloroethene	<2	<2	<2	2-Hexanone	<10	<10	<10
1,2-Dichloropropane	<2	<2	<2				
1,3-Dichloropropane	<2	<2	<2				
2,2-Dichloropropane	<2	<2	<2				
1,1-Dichloropropene	<2	<2	<2				
cis-1,3-Dichloropropene	<2	<2	<2				
trans-1,3-Dichloropropene	<2	<2	<2				

Approved By: Clifford Chase, Volatile Organics Supervisor



# LABORATORY REPORT

Eastern Analytical, Inc. ID#: 7597

Client: Caswell, Eichler & Hill, Inc.

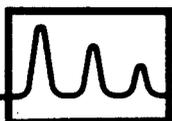
Client Designation: ATF/D Shop

## Acid and Base/Neutral Extractable Compounds

Sample ID:	OW-2	OW-3	RW-1	MC-14	MC-15
Matrix:	Aqueous	Aqueous	Aqueous	Aqueous	Aqueous
Date Received:	12/19/96	12/19/96	12/19/96	12/19/96	12/19/96
Units:	µg/L	µg/L	µg/L	µg/L	µg/L
Date of Extraction:	12/23/96	12/23/96	12/23/96	12/23/96	12/23/96
Date of Analysis:	1/8/97	1/8/97	1/9/97	1/9/97	1/9/97
Analyst:	TDS	TDS	TDS	TDS	TDS
EPA Method:	8270	8270	8270	8270	8270

Phenol	< 10	< 10	< 10	< 10	< 10
2-Chlorophenol	< 10	< 10	< 10	< 10	< 10
2,4-Dichlorophenol	< 10	< 10	< 10	< 10	< 10
2,4,5-Trichlorophenol	< 10	< 10	< 10	< 10	< 10
2,4,6-Trichlorophenol	< 10	< 10	< 10	< 10	< 10
Pentachlorophenol	< 100	< 100	< 100	< 100	< 100
2-Nitrophenol	< 10	< 10	< 10	< 10	< 10
4-Nitrophenol	< 100	< 100	< 100	< 100	< 100
2,4-Dinitrophenol	< 100	< 100	< 100	< 100	< 100
2-Methylphenol	< 10	< 10	< 10	< 10	< 10
4-Methylphenol	< 10	< 10	< 10	< 10	< 10
2,4-Dimethylphenol	< 10	< 10	< 10	< 10	< 10
4-Chloro-3-methylphenol	< 10	< 10	< 10	< 10	< 10
4,6-Dinitro-2-methylphenol	< 100	< 100	< 100	< 100	< 100
Benzoic Acid	< 100	< 100	< 100	< 100	< 100
N-Nitrosodimethylamine	< 10	< 10	< 10	< 10	< 10
n-Nitroso-di-n-propylamine	< 10	< 10	< 10	< 10	< 10
n-Nitrosodiphenylamine	< 10	< 10	< 10	< 10	< 10
bis(2-Chloroethyl)ether	< 10	< 10	< 10	< 10	< 10
bis(2-chloroisopropyl)ether	< 10	< 10	< 10	< 10	< 10
bis(2-Chloroethoxy)methane	< 10	< 10	< 10	< 10	< 10
1,3-Dichlorobenzene	< 10	< 10	< 10	< 10	< 10
1,4-Dichlorobenzene	< 10	< 10	< 10	< 10	< 10
1,2-Dichlorobenzene	< 10	< 10	< 10	< 10	< 10
1,2,4-Trichlorobenzene	< 10	< 10	< 10	< 10	< 10
2-Chloronaphthalene	< 10	< 10	< 10	< 10	< 10
4-Chlorophenyl-phenylether	< 10	< 10	< 10	< 10	< 10
4-Bromophenyl-phenylether	< 10	< 10	< 10	< 10	< 10
Hexachloroethane	< 10	< 10	< 10	< 10	< 10
Hexachlorobutadiene	< 10	< 10	< 10	< 10	< 10
Hexachlorocyclopentadiene	< 10	< 10	< 10	< 10	< 10
Hexachlorobenzene	< 10	< 10	< 10	< 10	< 10
4-Chloroaniline	< 10	< 10	< 10	< 10	< 10
2-Nitroaniline	< 10	< 10	< 10	< 10	< 10
3-Nitroaniline	< 10	< 10	< 10	< 10	< 10
4-Nitroaniline	< 10	< 10	< 10	< 10	< 10

Approved By: Timothy D. Schaper, Organics Supervisor



# LABORATORY REPORT

Eastern Analytical, Inc. ID#: 7597

Client: Caswell, Eichler & Hill, Inc.

Client Designation: ATF/D Shop

## Acid and Base/Neutral Extractable Compounds

Sample ID:	OW-2	OW-3	RW-1	MC-14	MC-15
Matrix:	Aqueous	Aqueous	Aqueous	Aqueous	Aqueous
Date Received:	12/19/96	12/19/96	12/19/96	12/19/96	12/19/96
Units:	µg/L	µg/L	µg/L	µg/L	µg/L
Date of Extraction:	12/23/96	12/23/96	12/23/96	12/23/96	12/23/96
Date of Analysis:	1/8/97	1/8/97	1/9/97	1/9/97	1/9/97
Analyst:	TDS	TDS	TDS	TDS	TDS
EPA Method:	8270	8270	8270	8270	8270

Benzyl alcohol	< 10	< 10	< 10	< 10	< 10
Nitrobenzene	< 10	< 10	< 10	< 10	< 10
Isophorone	< 10	< 10	< 10	< 10	< 10
2,4-Dinitrotoluene	< 10	< 10	< 10	< 10	< 10
2,6-Dinitrotoluene	< 10	< 10	< 10	< 10	< 10
Benzidine	< 20	< 20	< 20	< 20	< 20
3,3'-Dichlorobenzidine	< 10	< 10	< 10	< 10	< 10
Pyridine	< 10	< 10	< 10	< 10	< 10
Azobenzene	< 10	< 10	< 10	< 10	< 10
Dimethylphthalate	< 10	< 10	< 10	< 10	< 10
Diethylphthalate	< 10	< 10	< 10	< 10	< 10
Di-n-butylphthalate	< 10	< 10	< 10	< 10	< 10
Butylbenzylphthalate	< 10	< 10	< 10	< 10	< 10
bis(2-Ethylhexyl)phthalate	< 10	< 10	< 10	< 10	< 10
Di-n-octylphthalate	< 10	< 10	< 10	< 10	< 10
Naphthalene	< 10	< 10	< 10	< 10	< 10
2-Methylnaphthalene	< 10	< 10	< 10	< 10	< 10
Acenaphthylene	< 10	< 10	< 10	< 10	< 10
Acenaphthene	< 10	< 10	< 10	< 10	< 10
Dibenzofuran	< 10	< 10	< 10	< 10	< 10
Fluorene	< 10	< 10	< 10	< 10	< 10
Phenanthrene	< 10	< 10	< 10	< 10	< 10
Anthracene	< 10	< 10	< 10	< 10	< 10
Fluoranthene	< 10	< 10	< 10	< 10	< 10
Pyrene	< 10	< 10	< 10	< 10	< 10
Benzo[a]anthracene	< 10	< 10	< 10	< 10	< 10
Chrysene	< 10	< 10	< 10	< 10	< 10
Benzo[b]fluoranthene	< 10	< 10	< 10	< 10	< 10
Benzo[k]fluoranthene	< 10	< 10	< 10	< 10	< 10
Benzo[a]pyrene	< 10	< 10	< 10	< 10	< 10
Indeno[1,2,3-cd]pyrene	< 10	< 10	< 10	< 10	< 10
Dibenz[a,h]anthracene	< 10	< 10	< 10	< 10	< 10
Benzo[g,h,i]perylene	< 10	< 10	< 10	< 10	< 10

Approved By: Timothy D. Schaper, Organics Supervisor



Jack McKenna  
Caswell, Eichler & Hill, Inc.  
27 Congress St., P.O. Box 4696  
Portsmouth, N.H. 03802-4696

Subject: Laboratory Report

Eastern Analytical, Inc. ID: 7601 CEHNNH  
Client Identification: ATF / D Shop  
Date Received: 12/20/96  
Sample Quantity/Type: 6 soil

Dear Mr. McKenna:

Enclosed please find the laboratory report for the above identified project. All analyses were subjected to rigorous quality control measures to assure data accuracy.

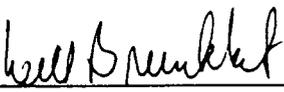
The following standard abbreviations and conventions apply throughout all Eastern Analytical, Inc. reports:

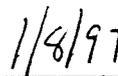
- < = "less than" followed by the detection limit
- TNR = Testing Not Requested
- ND = None Detected, no established detection limit
- BRL = Below Reporting Limits

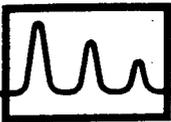
If you have any questions regarding the results contained within, please feel free to directly contact me, the department supervisor, or the analytical chemist who performed the testing in question. Unless otherwise requested, we will dispose of the sample(s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

  
\_\_\_\_\_  
Will Brunkhorst, President

  
\_\_\_\_\_  
Date



# LABORATORY REPORT

Eastern Analytical, Inc. ID#: 7601

Client: Caswell, Eichler & Hill, Inc.

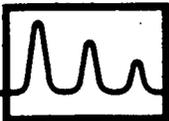
Client Designation: ATF / D Shop

## Polynuclear Aromatic Hydrocarbons

Sample ID:	Ash-1	Ash-2
Matrix:	Soil	Soil
Date Received:	12/20/96	12/20/96
Units:	µg/Kg	µg/Kg
Date of Extraction:	12/23/96	12/23/96
Date of Analysis:	12/31/96	12/31/96
Analyst:	TDS	TDS
EPA Method:	8270	8270
Dilution Factor:	1	11
Naphthalene	< 200	< 2,000
2-Methylnaphthalene	< 200	< 2,000
Acenaphthylene	< 200	< 2,000
Acenaphthene	< 200	< 2,000
Fluorene	< 200	< 2,000
Phenanthrene	< 200	< 2,000
Anthracene	< 200	< 2,000
Fluoranthene	< 200	< 2,000
Pyrene	< 200	< 2,000
Benzo[a]anthracene	< 200	< 2,000
Chrysene	< 200	< 2,000
Benzo[b]fluoranthene	< 200	< 2,000
Benzo[k]fluoranthene	< 200	< 2,000
Benzo[a]pyrene	< 200	< 2,000
Indeno[1,2,3-cd]pyrene	< 200	< 2,000
Dibenz[a,h]anthracene	< 200	< 2,000
Benzo[g,h,i]perylene	< 200	< 2,000

Dilution factor(s) required due to high levels of non-target compounds

Approved By: Timothy D. Schaper, Organics Supervisor



# LABORATORY REPORT

Eastern Analytical, Inc. ID#: 7601 CEHNNH

Client: Caswell, Eichler & Hill, Inc.

Client Designation: ATF / D Shop

Sample ID:	Ash-1	Ash-2				
Matrix:	soil	soil	Date of	Analysis	Analyst	Method
Date Rec'd:	12/20/96	12/20/96				
Units (unless noted):	mg/kg	mg/kg				
<b>Total Metals</b>						
Antimony	< 2	< 2	01/02/97	RTW		6010
Arsenic	3	< 2	01/02/97	RTW		6010
Beryllium	1.0	0.6	01/02/97	RTW		6010
Cadmium	0.6	0.7	01/02/97	RTW		6010
Chromium	8.3	1,000	01/02/97	RTW		6010
Copper	28	120	01/02/97	RTW		6010
Lead	8	88	01/02/97	RTW		6010
Mercury	0.2	< 0.2	01/02/97	JG		7471
Nickel	63	48	01/02/97	RTW		6010
Selenium	< 2	< 2	01/02/97	RTW		6010
Silver	< 0.2	< 0.2	01/02/97	RTW		6010
Thallium	< 4	< 4	01/02/97	RTW		6010
Zinc	74	88	01/02/97	RTW		6010

Approved by: Tim Wilson, Inorganic Supervisor



# LABORATORY REPORT

Eastern Analytical, Inc. ID#: 7601 CEHNH

Client: Caswell, Eichler & Hill, Inc.

Client Designation: AFT / D Shop

## Polychlorinated Biphenyls

Sample ID:	Trans-3	Trans-110	Trans-217-221
Matrix:	Soil	Soil	Soil
Date Received:	12/20/96	12/20/96	12/20/96
Units:	µg/kg	µg/kg	µg/kg
Date of Extraction:	12/20/96	12/20/96	12/20/96
Date of Analysis:	12/24/96	12/31/96	12/26/96
Analyst:	TDS	TDS	TDS
EPA Method:	8080	8080	8080
Dilution Factor:	1	1000	5*
PCB-1016	< 100	< 100000	< 500
PCB-1221	< 100	< 100000	< 500
PCB-1232	< 100	< 100000	< 500
PCB-1242	< 100	< 100000	< 500
PCB-1248	< 100	< 100000	< 500
PCB-1254	< 100	< 100000	< 500
PCB-1260	< 100	400,000	< 500

\* Dilution factor necessary due to high non-target compounds

Approved By: Timothy Schaper, Organics Supervisor



# LABORATORY REPORT

Eastern Analytical, Inc. ID#: 7727 CEHNNH

Client: Caswell, Eichler & Hill, Inc.

Client Designation: ATF/D Shop

Sample ID:	GP-4, Comp.	GP-6, Comp.			
Matrix:	soil	soil			
Date Rec'd:	01/15/97	01/15/97			
Units (unless noted):	mg/kg	mg/kg	Date of Analysis	Analyst	Method
<b>Total Metals</b>					
Arsenic	5	6	01/22/96	RTW	6010
Barium	47	43	01/22/96	RTW	6010
Cadmium	1.0	0.92	01/22/96	RTW	6010
Chromium	14	10	01/22/96	RTW	6010
Lead	60	54	01/22/96	RTW	6010
Mercury	< 0.2	< 0.2	01/29/96	JG	7471
Selenium	< 2	< 2	01/22/96	RTW	6010
Silver	< 0.2	< 0.2	01/22/96	RTW	6010

Approved by: Tim Wilson, Inorganic Supervisor



# LABORATORY REPORT

Eastern Analytical, Inc. ID#: 7597 CEHNNH

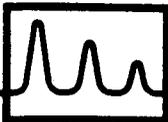
Client: Caswell, Eichler & Hill, Inc.

Client Designation: ATF/D Shop

## Volatile Organic Compounds

Sample ID:	GP-4,Comp	GP-6,Comp	GP-8,Comp		GP-4,Comp	GP-6,Comp	GP-8,Comp
Matrix:	Soil	Soil	Soil		Soil	Soil	Soil
Date Received:	12/19/96	12/19/96	12/19/96		12/19/96	12/19/96	12/19/96
Units:	µg/kg	µg/kg	µg/kg		µg/kg	µg/kg	µg/kg
Date of Analysis:	12/31/96	12/31/96	12/31/96		12/31/96	12/31/96	12/31/96
Analyst:	JDS	JDS	JDS		JDS	JDS	JDS
EPA Method:	8260	8260	8260		8260	8260	8260
Benzene	< 10	< 10	< 10	Ethylbenzene	< 10	< 10	< 10
Bromobenzene	< 10	< 10	< 10	Hexachlorobutadiene	< 10	< 10	< 10
Bromochloromethane	< 10	< 10	< 10	Isopropylbenzene	< 10	< 10	< 10
Bromodichloromethane	< 10	< 10	< 10	p-Isopropyltoluene	< 10	40	< 10
Bromoform	< 10	< 10	< 10	Methylene chloride	30	10	20
Bromomethane	< 100	< 100	< 100	Naphthalene	< 10	70	< 10
n-Butylbenzene	< 10	< 10	< 10	n-Propylbenzene	< 10	< 10	< 10
sec-Butylbenzene	< 10	20	< 10	Styrene	< 10	< 10	< 10
tert-Butylbenzene	< 10	< 10	< 10	1,1,1,2-Tetrachloroethane	< 10	< 10	< 10
Carbon tetrachloride	< 10	< 10	< 10	1,1,2,2-Tetrachloroethane	< 10	< 10	< 10
Chlorobenzene	< 10	< 10	< 10	Tetrachloroethene	< 10	< 10	< 10
Chloroethane	< 100	< 100	< 100	Toluene	< 10	< 10	210
Chloroform	< 10	< 10	< 10	1,2,3-Trichlorobenzene	< 10	< 10	< 10
Chloromethane	< 100	< 100	< 100	1,2,4-Trichlorobenzene	< 10	< 10	< 10
2-Chlorotoluene	< 10	< 10	< 10	1,1,1-Trichloroethane	< 10	< 10	< 10
4-Chlorotoluene	< 10	< 10	< 10	1,1,2-Trichloroethane	< 10	< 10	< 10
Dibromochloromethane	< 10	< 10	< 10	Trichloroethene	20	< 10	10
1,2-Dibromo-3-chloropropane	< 10	< 10	< 10	Trichlorofluoromethane	< 100	< 100	< 100
1,2-Dibromoethane	< 10	< 10	< 10	1,2,3-Trichloropropane	< 10	< 10	< 10
Dibromomethane	< 10	< 10	< 10	1,2,4-Trimethylbenzene	< 10	300	< 10
1,2-Dichlorobenzene	< 10	< 10	< 10	1,3,5-Trimethylbenzene	< 10	190	< 10
1,3-Dichlorobenzene	< 10	< 10	< 10	Vinyl chloride	20	< 20	< 20
1,4-Dichlorobenzene	< 10	< 10	< 10	o-Xylene	< 10	20	< 10
Dichlorodifluoromethane	< 100	< 100	< 100	m,p-Xylene	< 10	10	< 10
1,1-Dichloroethane	10	150	< 10	MTBE	< 200	< 200	< 200
1,2-Dichloroethane	< 10	< 10	< 10	Acetone	< 500	< 500	< 500
1,1-Dichloroethene	< 10	< 10	< 10	2-Butanone (MEK)	< 100	< 100	< 100
cis-1,2-Dichloroethene	100	20	< 10	4-Methyl-2-Pentanone (MIBK)	< 100	< 100	< 100
trans-1,2-Dichloroethene	30	< 10	< 10	2-Hexanone	< 100	< 100	< 100
1,2-Dichloropropane	< 10	< 10	< 10				
1,3-Dichloropropane	< 10	< 10	< 10				
2,2-Dichloropropane	< 10	< 10	< 10				
1,1-Dichloropropene	< 10	< 10	< 10				
cis-1,3-Dichloropropene	< 10	< 10	< 10				
trans-1,3-Dichloropropene	< 10	< 10	< 10				

Approved By: Clifford Chase, Volatile Organics Supervisor



# LABORATORY REPORT

Eastern Analytical, Inc. ID#: 7601 CEHNNH

Client: Caswell, Eichler & Hill, Inc.

Client Designation: ATF/D Shop

## Volatile Organic Compounds

Sample ID: AST  
Matrix: Aqueous  
Date Received: 12/20/96  
Units: µg/L  
Date of Analysis: 12/30/96  
Analyst: TML  
Method: MA VPH

### Targeted VPH Analytes

Methyl-t-butylether (MTBE)	< 1000
Benzene	< 50
Toluene	< 50
Ethylbenzene	< 50
Total Xylenes	< 50
naphthalene	< 50

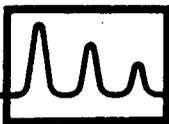
### VPH Results

C5-C8 Aliphatics **	< 1000
C9-C12 Aliphatics	< 1000
C9-C10 Aromatics	< 1000

### Toxicity Equivalent Concentration

	Multiplier	
C5-C8 Aliphatics **	0.5	< 500
C9-C12 Aliphatics	0.05	< 50
C9-C10 Aromatics	1.0	< 1000

Approved By: Clifford Chase, Volatile Organics Supervisor



# LABORATORY REPORT

Eastern Analytical, Inc. ID#: 7601

Client: Caswell, Eichler & Hill, Inc.

Client Designation: ATF / D Shop

## Extractable Petroleum Hydrocarbons

Sample ID: AST  
Matrix: Soil  
Date Received: 12/20/96  
Units: mg/Kg  
Date of Extraction: 12/23/96  
Date of Analysis: 12/31/96  
Analyst: TDS  
EPA Method: EPH\*

C9-C18 Aliphatics 20  
C19-C36 Aliphatics 40  
C10-C22 Aromatics 14

### Toxicity Equivalent Concentration

Equivalent Concentration	Multiplier	
C9-C18 Aliphatics	0.05	1.0
C19-C36 Aliphatics	0.005	0.2
C10-C22 Aromatics	1	11.5

EPH (Total) 12.7

### Target PAH Analytes

Date of Analysis: 12/31/96  
Analyst: TDS

Naphthalene < 0.2  
2-Methylnaphthalene < 0.2  
Acenaphthylene < 0.2  
Acenaphthene < 0.2  
Fluorene < 0.2  
Phenanthrene 0.4  
Anthracene < 0.2

Fluoranthene 0.6  
Pyrene 0.6  
Benzo[a]anthracene 0.2  
Chrysene 0.3  
Benzo[b]fluoranthene 0.2  
Benzo[k]fluoranthene < 0.2

Benzo[a]pyrene 0.2  
Indeno[1,2,3-cd]pyrene < 0.2  
Dibenz[a,h]anthracene < 0.2  
Benzo[g,h,i]perylene < 0.2

Target PAH Analytes Total 2.5

(\* Denotes MADEP Draft Method.

Approved By: Timothy D. Schaper, Organics Supervisor



eastern analytical

CHAIN OF CUSTODY FORM

Eastern Analytical  
25 Chenell Dr.  
Concord, NH 03301  
Phone: 800 287-0525  
Fax: (603) 228-4591

Name: Jack McKenna

Project ID: ATF/D Shop  
(Exactly as you wish to appear on report)

Company: CEH

Address: partsmobile, LLC

Results needed by (enter preferred date): \_\_\_\_\_  
(Guaranteed rapid turnaround must have pre-approval)

Phone: 431-4899

Fax: \_\_\_\_\_

TEST PARAMETERS

Drinking Water Y N (Circle One)

Sample ID's (As will appear on report)	No of Cont.	Sampling Date/Time	Matrix	VOC'S 8260	TPH 8100	APW'S	PPH metals	Other Parameters/Notes
OW-2	5	12/18/1200	water	X	X	X	X	
OW-3	5	12/18/1240		X	X	X	X	
RW-1	45	1/1330		X	X	X	X	
MC-14	84	1400		X	X	X		
MC-15	84	1430	✓	X		X	X	

Sampled by: David Schneider

Relinquished by: David Schneider Date: 12/14/96 Time: 0930 Received by: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date: 12/19/96 Time: 3:27 Received by: WJW

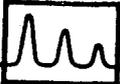
Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received by: \_\_\_\_\_

Additional Notes i.e. Billing info if different, PO#, Quote# etc.

1. All metal samples were field filtered.

TPH level I per Craig Gendron 12/20/96  
ESB

1012



eastern analytical

7597

### CHAIN OF CUSTODY FORM

Eastern Analytical  
 25 Chenell Dr.  
 Concord, NH 03301  
 Phone: 800 287-0525  
 Fax: (603) 228-4591

Name: Jack McKenna  
 Company: CEH  
 Address: Portsmouth, N.H.  
 Phone: 431-4899  
 Fax: \_\_\_\_\_

Project ID: ATF/D shop  
 (Exactly as you wish to appear on report)

Results needed by (enter preferred date): \_\_\_\_\_  
 (Guaranteed rapid turnaround must have pre-approval)

#### TEST PARAMETERS

Drinking Water Y N (Circle One)

Sample ID's s will appear on report)	No of Cont.	Sampling Date/Time	Matrix	VOC'S 8260	ABV'S	TPH 8100	Other Parameters/Notes
<u>P-4, composite</u>	<u>3</u>	<u>12/17/1530</u>	<u>soil</u>	<u>X</u>	<u>X</u>	<u>X</u>	
<u>P-2, composite</u>	<u>3</u>	<u>1/1540</u>	<u> </u>	<u>X</u>	<u>X</u>	<u>X</u>	
<u>P-6, composite</u>	<u>3</u>	<u>1/1545</u>	<u> </u>	<u>X</u>	<u>X</u>	<u>X</u>	
<u>P-8, composite</u>	<u>3</u>	<u>1/1550</u>	<u> </u>	<u>X</u>	<u>X</u>	<u>X</u>	

Sampled by: David Gerschunter

Acquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received by: \_\_\_\_\_  
David Gerschunter 12/19/96 09:30 \_\_\_\_\_

Acquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received by: \_\_\_\_\_  
12/15/96 12:21 [Signature]

Acquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received by: \_\_\_\_\_

Additional Notes i.e. Billing info if different, PO#, Quote# etc.

1. May add PCB analysis, please hold some sample if possible, will call when I know.

2. All samples were composited in the field.

TPH Level I per Craig Gendron 12/20/96  
 2 of 2  
 ESB

Received VIA:

4/23/97

Mike,

Here is the updated site information you requested. Let me know if you find an omission or need more data.

Sincerely,

Greg Root

508-792-7653

x 3841



**TIER CLASSIFICATION, TIER II EXTENSION &  
TIER II TRANSFER TRANSMITTAL FORM**

Pursuant to 310 CMR 40.0510 and 40.0560 (Subpart E)

Release Tracking Number

2 - 0000111

**A. DISPOSAL SITE LOCATION:**

Disposal Site Name: ATF Davidson  
Street: 355 Main Street Location Aid: opposite Arcade Pond  
City/Town: Northbridge ZIP Code: 01588  
Related Release Tracking Numbers That This Submittal Will Address: \_\_\_\_\_

**B. THIS FORM IS BEING USED TO:** (check all that apply)

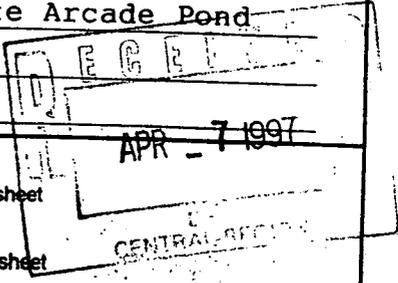
- Submit a new or revised Tier Classification Submittal for a Tier I Site, including a Numerical Ranking Scoresheet (complete Sections A, B, C, I, J, K and L).
- Submit a new or revised Tier Classification Submittal for a Tier II Site, including a Numerical Ranking Scoresheet (complete Sections A, B, C, F, G, I, J, K and L).
- Submit a Notice that an additional Release Tracking Number(s) is (are) being linked to this Tier Classified Site and rescoring is not required at this time (complete Sections A, B, J, K and L). If this submittal is for a Tier I Site, you must also submit a Minor Permit Modification Transmittal Form (BWSC-109).

List Additional Release Tracking Number(s): \_\_\_\_\_

- Submit a Phase I Completion Statement supporting a Tier Classification Submittal (complete Sections A, B, I, J, K and L).
- Submit a Tier II Extension Submittal for Response Actions at a Tier II Site (complete Sections A, B, D, F, G, I, J, K and L).
- Submit a Tier II Extension Submittal for Response Actions taken after expiration of a Waiver, pursuant to 310 CMR 40.0630(4) (complete Sections A, B, D, F, J, K and L, and also complete Sections G and I or Section H).\*
- Submit a Tier II Transfer Submittal for a change in person(s) undertaking Response Actions at a Tier II Site (complete Sections A, B, E, F, G, I, J, K, L, M, N and O).
- Submit a Tier II Transfer Submittal for a change in person(s) undertaking Response Actions at a Waiver Site, pursuant to 310 CMR 40.0630(6) (complete Sections A, B, E, F, J, K, L, M, N and O, and also complete Sections G and I or Section H).\*

You must attach all supporting documentation required for each use of form indicated, including copies of any Legal Notices and Notices to Public Officials required by 310 CMR 40.1400.

\*NOTE: The Waiver expires on the effective date of this submittal and all further Response Actions must be taken as a Tier II Site.



**C. TIER CLASSIFICATION SUBMITTAL:**

Numerical Ranking Score for Disposal Site: (from Numerical Ranking Scoresheet) 216  
Proposed Tier Classification of Disposal Site: (check one)  Tier IA  Tier IB  Tier IC  Tier II

Check which, if any, of the Tier I inclusionary criteria are met by the Disposal Site, pursuant to 310 CMR 40.0520:

- Groundwater is located within an Interim Wellhead Protection Area or a Zone II, and there is evidence of groundwater contamination by an Oil or Hazardous Material at the time of Tier Classification at concentrations equal to or exceeding the applicable RCGW-1 Reportable Concentration set forth in 310 CMR 40.0360.
- An Imminent Hazard is present at the time of Tier Classification.
- Check here if this Tier Classification revises a previous submittal for this Disposal Site. You must include a revised Numerical Ranking Scoresheet with this submittal. If a Tier I Permit has been issued, you may also need to submit a Major Permit Modification Application (BWSC-10).

If incorporating additional Release(s) into the Disposal Site, list Release Tracking Number(s): \_\_\_\_\_

**D. TIER II EXTENSION SUBMITTAL REQUIREMENTS:**

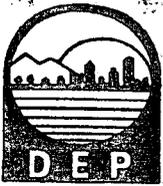
State the expiration date of the Tier II Classification or Waiver for the Disposal Site, whichever is applicable: \_\_\_\_\_

Attach a statement summarizing why a Permanent or Temporary Solution has not been achieved at the Disposal Site. A Tier II Extension is effective for a period of one year beyond the current expiration date of the Tier II Classification or Waiver.

**E. TIER II TRANSFER SUBMITTAL REQUIREMENTS:**

State the proposed effective date of the change in person(s) undertaking Response Actions at the Disposal Site: \_\_\_\_\_

Attach a statement summarizing the reasons for the proposed change in person(s) undertaking the Response Actions. All Response Actions must be completed by the deadline applicable to the person who first filed either a Tier Classification Submittal for the Disposal Site or received a Waiver of Approvals.



**TIER CLASSIFICATION, TIER II EXTENSION &  
TIER II TRANSFER TRANSMITTAL FORM**  
Pursuant to 310 CMR 40.0510 and 40.0560 (Subpart E)

Release Tracking Number

2 - 0000111

**F. DISPOSAL SITE COMPLIANCE HISTORY SUMMARY:**

- > If providing either a Tier Classification Submittal for a Tier II Site or a Tier II Extension Submittal for a Waiver Site, the person named in Section J must provide a Compliance History.
- > If providing a Tier II Extension Submittal for a Tier II Site, the person named in Section J must update their Compliance History since the effective date of the Tier II Classification.
- > If providing a Tier II Transfer Submittal for a Tier II or Waiver Site, the person named in Section M must provide a Compliance History.

Compliance History for (provide only one name per History): former ATF Davidson

Check here if there has been no change to the Compliance History of the person named above (Extension Submittal for a Tier II Site ONLY)

List all permits or licenses that have been issued by the Department that are relevant to this Disposal Site: None

PROGRAM	PERMIT NUMBER	PERMIT CATEGORY	FACILITY ID
Air Quality			
Hazardous Waste (M.G.L. c. 21C)			
Solid Waste			
Industrial Wastewater Management			
Water Supply			
Water Pollution Control/Surface Water			
Water Pollution Control/Groundwater			
Water Pollution Control/Sewer Connection			
Wetland & Waterways			

List all other Federal, state or local permits, licenses, certifications, registrations, variances, or approvals that are relevant to this Disposal Site:

ISSUING AUTHORITY OR PROGRAM, OR DOCUMENTATION TYPE	IDENTIFICATION NUMBER	DATE ISSUED

If needed, attach to this Transmittal Form a statement further describing the Compliance History of this Disposal Site. This statement must describe the compliance history of the person named above with the following:

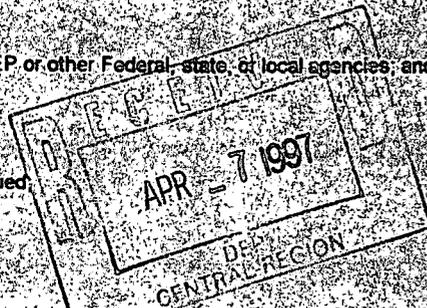
- DEP regulations; and
- other laws for the protection of health, safety, public welfare and the environment administered or enforced by any other government agency

Such a statement should identify information such as:

- actions relevant to the Disposal Site taken by the Department to enforce its requirements including, but not limited to, a Notice of Noncompliance (NON), Notice of Intent to Assess Civil Administrative Penalty (PAN), Notice of Intent to Take Response Action (NORA), and an administrative enforcement order;
- administrative consent orders;
- judicial consent judgements;
- similar administrative actions taken by other Federal, state or local agencies;
- civil or criminal actions relevant to the Disposal Site brought on behalf of the DEP or other Federal, state, or local agencies; and
- any additional relevant information.

For each action identified, provide the following information:

- name of the issuing authority, type of action, identification number and date issued;
- description of noncompliance cited;
- current status of the matter; and
- final disposition, if any.





TIER CLASSIFICATION, TIER II EXTENSION &  
TIER II TRANSFER TRANSMITTAL FORM

Pursuant to 310 CMR 40.0510 and 40.0560 (Subpart E)

Release Tracking Number

2 - 0000111

G. CERTIFICATION OF ABILITY AND WILLINGNESS:

- > If providing either a Tier II Classification Submittal or a Tier II Extension Submittal, the person who signs this certification MUST be the person named in Section J, or that person's agent.
- > If providing a Tier II Transfer Submittal, the person who signs this certification MUST be the person named in Section M, or that person's agent.

I attest under the pains and penalties of perjury that (i) I/the person(s) or entity(ies) on whose behalf this submittal is made has/have personally examined and am/ls familiar with the requirements of M.G.L. c. 21E and 310 CMR 40.0000; (ii) based upon my inquiry of the/those Licensed Site Professional(s) employed or engaged to render Professional Services for the disposal site which is the subject of this Transmittal Form and of the person(s) or entity(ies) on whose behalf this submittal is made, and my/that person's(s) or entity's(ies) understanding as to the estimated costs of necessary response actions, that/those person(s) or entity(ies) has/have the technical, financial and legal ability to proceed with response actions for such site in accordance with M.G.L. c. 21E, 310 CMR 40.0000 and other applicable requirements; and (iii) that I am fully authorized to make this attestation on behalf of the person(s) or entity(ies) legally responsible for this submittal. I/the person(s) or entity(ies) on whose behalf this submittal is made is aware of the requirements in 310 CMR 40.0172 for notifying the Department in the event that I/the person(s) or entity(ies) on whose behalf this submittal is made learn(s) that it/they is/are unable to proceed with the necessary response actions.

By: [Signature] Title: Property Mgr.  
(signature)  
For: Arcade Realty Trust Date: 4-4-97  
(print name of person or entity recorded in Section J or M, as appropriate)

APR - 7 1997  
DEP  
CENTRAL REGION

If you are submitting either a Tier II Extension Submittal for a Waiver Site or a Tier II Transfer Submittal for a Waiver Site, you may choose to sign the alternative Ability and Willingness Certification found in Section H in place of providing the certification in Section G and the LSP Opinion in Section I.

H. ALTERNATIVE CERTIFICATION OF ABILITY AND WILLINGNESS:

- > If providing a Tier II Extension Submittal for a Waiver Site, the person who signs this certification MUST be the person named in Section J, or that person's agent
- > If providing a Tier II Transfer Submittal for a Waiver Site, the person who signs this certification MUST be the person named in Section M, or that person's agent.

I attest under the pains and penalties of perjury that (i) I/the person(s) or entity(ies) on whose behalf this submittal is made has/have personally examined and am/ls familiar with the requirements of M.G.L. c. 21E and 310 CMR 40.0000; (ii) based upon my inquiry of the Consultant-of-Record for the disposal site which is the subject of this Transmittal Form and of the person(s) or entity(ies) on whose behalf this submittal is made, and my/that person's(s) or entity's(ies) understanding as to the estimated costs of necessary response actions, that/those person(s) or entity(ies) has/have the technical, financial and legal ability to proceed with response actions for such site in accordance with M.G.L. c. 21E, 310 CMR 40.0000 and other applicable requirements; and (iii) that I am fully authorized to make this attestation on behalf of the person(s) or entity(ies) legally responsible for this submittal. I/the person(s) or entity(ies) on whose behalf this submittal is made is aware of the requirements in 310 CMR 40.0172 for notifying the Department in the event that I/the person(s) or entity(ies) on whose behalf this submittal is made learn(s) that it/they is/are unable to proceed with the necessary response actions.

By: \_\_\_\_\_ Title: \_\_\_\_\_  
(signature)  
For: \_\_\_\_\_ Date: \_\_\_\_\_  
(print name of person or entity recorded in Section J or M, as appropriate)

I. LSP OPINION:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and (iii) the provisions of 309 CMR 4.03(5), to the best of my knowledge, information and belief.

- > If Section B of this form indicates that a Tier I or Tier II Classification Submittal which relies upon a previously submitted Phase I Completion Statement is being submitted, this Tier Classification Submittal has been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000.
- > If Section B of this form indicates that a Phase I Completion Statement or a Tier I or Tier II Classification Submittal which does not rely upon a previously submitted Phase I Completion Statement is being submitted, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal.

SECTION I IS CONTINUED ON THE NEXT PAGE



**TIER CLASSIFICATION, TIER II EXTENSION &  
TIER II TRANSFER TRANSMITTAL FORM**

Pursuant to 310 CMR 40.0510 and 40.0560 (Subpart E)

Release Tracking Number

2 - 0000111

**I. LSP OPINION: (continued)**

> if Section B of this form indicates that a Tier II Extension Submittal or a Tier II Transfer Submittal is being submitted, the response action(s) that is (are) the subject of this submittal (i) is (are) being implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal.

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order, permit, and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable order, permit, and/or approval(s).

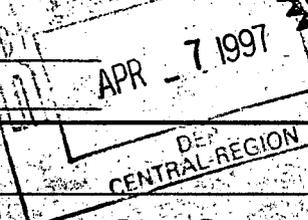
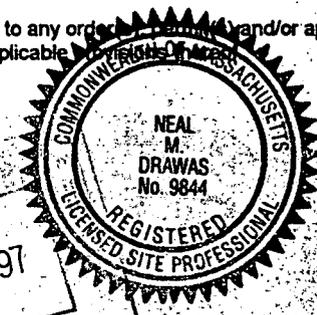
LSP Name: Neal M. Drawas LSP #: 9844 Stamp:

Telephone: 508-443-1833 Ext: \_\_\_\_\_

FAX: (optional) 508-443-1929

Signature: *Neal M. Drawas*

Date: April 4, 1997



**J. PERSON MAKING SUBMITTAL:**

Name of Organization: Arcade Realty Trust

Name of Contact: Leonard Jolles Title: Property Mgr.

Street: 1 Main Street

City/Town: Whitinsville (Northbridge) State: MA ZIP Code: 01588

Telephone: 508-234-6301 Ext: \_\_\_\_\_ FAX: (optional) \_\_\_\_\_

**K. RELATIONSHIP TO DISPOSAL SITE OF PERSON MAKING SUBMITTAL: (check one)**

RP or PRP Specify:  Owner  Operator  Generator  Transporter Other RP or PRP \_\_\_\_\_

Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

Any Other Person Making Submittal Specify Relationship: \_\_\_\_\_

**L. CERTIFICATION OF PERSON MAKING SUBMITTAL:**

I, Leonard Jolles attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

By: *Leonard Jolles* Title: Property Mgr.

(signature) \_\_\_\_\_

For: Arcade Realty Trust Date: 4-4-97

(print name of person or entity recorded in Section J)

Enter address of the person providing certification(s), including Ability and Willingness Certification where applicable, if different from address recorded in Section J:

Street: same

City/Town: \_\_\_\_\_ State: \_\_\_\_\_ ZIP Code: \_\_\_\_\_

Telephone: \_\_\_\_\_ Ext: \_\_\_\_\_ FAX: (optional) \_\_\_\_\_

**YOU MUST COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE, AND YOU MAY INCUR ADDITIONAL COMPLIANCE FEES.**

MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION

Bureau of Waste Site Cleanup

APR 7 1997

NUMERICAL RANKING SYSTEM SCORESHEET  
(310 CMR 40.1511)

CLASSIFICATION SUBMITTAL	
Initial Submittal	Re-Classification
<input type="checkbox"/>	<input checked="" type="checkbox"/>

DISPOSAL SITE SCORE					
II	III	IV	V	VI	TOTAL
<u>20</u>	<u>91</u>	<u>40</u>	<u>65</u>	<u>0</u>	<u>216</u>

Disposal Site Tier Classification	I			<b>II</b>
Permit Category (Tier I Only)	A	B	C	

I. DISPOSAL SITE INFORMATION

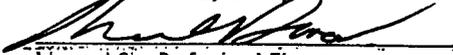
DEP Release Tracking Number(s)	2-0000111
DEP Disposal Site Number(s)	2-0111

UTM Coordinates	N: 4,665,418
	E: 278,463

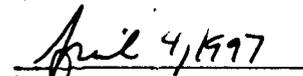
Disposal Site Name	ATF Davidson		
Disposal Site Address	355 Main Street		
	City: Northbridge	Zip: 01588	

Is the Disposal Site classified Tier I because it is located within the boundaries of a Zone II or Interim Wellhead Protection Area and groundwater concentrations equal or exceed RCGW-1 at the time of Tier Classification pursuant to 310 CMR 40.0520(2)(a).?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/> see Section VI
Is the Disposal Site classified Tier I because an Imminent Hazard is present at the time of Tier Classification pursuant to 310 CMR 40.0520(2)(a)2.?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

I attest under the pains and penalties of perjury that I have personally completed this Numerical Ranking System Scoresheet, and have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this submittal, and in my professional opinion and judgment based upon: (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and (iii) the provisions of 309 CMR 4.03(5), to the best of my knowledge, information and belief, this Scoresheet was developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000. I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

  
 Licensed Site Professional Signature  
 Neal M. Drawas  
 LSP Name (Printed)  
 Arcade Realty Trust

9844  
 LSP Registration Number  
 Kroll Env. Enter., Inc.  
 Company Name

  
 Date  
 508-443-1833  
 Telephone Number

Responsible Party, Potentially Responsible Party, or Other Person who will provide certification in accordance with 310 CMR 40.0000.

40.1511 (Continued)

II. EXPOSURE PATHWAYS

II. EXPOSURE PATHWAYS				
Score according to 40.1512 - Exposure Pathway Designation Criteria				
MEDIA	DESIGNATION			
	NONE or NOT APPLICABLE	EVIDENCE OF CONTAMINATION	POTENTIAL EXPOSURE PATHWAY	LIKELY OR CONFIRMED EXPOSURE PATHWAY
A. SOIL (Includes Sediment)	0	15	100	150
B. GROUNDWATER	0	20	100	150
C. SURFACE WATER (Includes Wetlands)	0	20	100	150
D. AIR	0	15	100	200

Note: Score only the highest value for each media, i.e., score None or Not Applicable or Evidence of Contamination or Potential Exposure Pathway or Likely or Confirmed Exposure Pathway.

II. (A - D) Summary Rationale for Section II A - D Values and Phase I Report References	
Groundwater is designated as "Evidence of Contamination" based on the presence of Vinyl Chloride in two monitoring wells and one Geoprobe location at concentrations exceeding the RC. (Phase I Report, Section V, Table 5.1).	
Soil is designated as "None" based on maximum OHM concentrations being less than applicable RCs. Surface water and air are designated as "None" because the OHM compound has not been identified in, and is not anticipated to be identified in, these media.	

II.E. OHM SOURCES			
Number of OHM Sources	1	2	≥ 3
	0	25	50

SECTION II SCORE (A. + B. + C. + D. + E.)					
A.	B.	C.	D.	E.	TOTAL: (15 - 700)
0	20	0	0	0	20

Check here if Section VI has been used to amend the score for this Section of the NRS.	<input type="checkbox"/>
--	--------------------------

40.1511 (Continued)

III. DISPOSAL SITE CHARACTERISTICS

<b>III.A. OHM TOXICITY SCORE</b> <i>Highest OHM Toxicity Score</i> <i>From Table III.A. or Worksheet III.A.1. on Following Pages.</i>	
OHM Scored: <u>Barium</u> Concentration and Media: <u>4,630 ug/l in Groundwater</u>	Toxicity Score (1 - 80) <u>25</u>

<b>III.B. MULTIPLE OHMs</b>		
More Than One OHM With an OHM Toxicity Score of $\geq 30$	No <input checked="" type="radio"/> 0	Yes 30

<b>III.C. OHM MOBILITY and PERSISTENCE</b> <i>Score according to 40.1514 - OHM Mobility and Persistence</i>	
OHM Scored: <u>cis 1,2-DCE</u>	Score (0 - 50) <u>50</u>

<b>III.D. DISPOSAL SITE HYDROGEOLOGY</b> <i>Score according to 40.1515 - Soil Permeability</i>			
DEPTH TO GROUNDWATER (in feet)	SOIL PERMEABILITY		
	Low	Medium	High
> 25	2	4	8
10.1 - 25	4	8	12
5.1 - 10	8	12	16
0 - 5	12	<input checked="" type="radio"/> 16	20

<b>SECTION III SCORE (A + B + C + D)</b>				
A. <u>25</u>	B. <u>0</u>	C. <u>50</u>	D. <u>16</u>	TOTAL: (3 - 180) <u>91</u>

Check here if Section VI has been used to amend the score for this Section of the NRS.	<input type="checkbox"/>
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310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

40.1511 (Continued)

Use Worksheet III.A.1. to determine the OHM Toxicity Score for OHM not listed in Table III.A.  
See 40.1513 for Human Health-Based Toxicity Values for each OHM.

Worksheet III.A.1 OHM TOXICITY SCORE							
HUMAN HEALTH-BASED TOXICITY VALUE	CONCENTRATION						
	Use µg/g for Soil and µg/l for Surface Water and Groundwater						
	≤ 99	100 - 999	1,000 - 9,999	10,000 - 100,000	> 100,000 NAPL < 0.5"	NAPL 0.5" - 12"	NAPL > 12"
< 5	1	10	20	30	40	50	60
5 - 19	5	15	25	35	45	55	65
20 - 29	10	20	30	40	50	60	70
30 - 39	15	25	35	45	55	65	75
40 - 50	20	30	40	50	60	70	80

III.A.1. OHM and Concentrations Used in Section III.A.1.				
OHM	Human Health-Based Toxicity Value	Concentration (Soil - µg/g)	Concentration (Water - µg/l)	OHM Toxicity Score
PCE	25		93.3	10
TCE	30		31.4	15
cis 1,2-DCE	18		82.6	5
VCL	38		74.	15
Acetone	8		103.	15
1,2,3-TCB	25 D		7.	10
Barium	8		4,630.	25

D = Default Value of 25 (40.1513(3))

40.1511 (Continued)

IV. HUMAN POPULATION AND LAND USES

IV.A. HUMAN POPULATION				
Residential Population Within 1/2 Mile	None 0	1 - 99 5	100 - 999 <b>10</b>	≥ 1,000 15
Institutions Within 500 feet	None <b>0</b>		One or More 10	
On-Site Workers	None 0	1 - 99 5	100 - 999 <b>10</b>	≥ 1,000 15

IV.B. AQUIFERS		
Sole Source Aquifer Name: _____	No <b>0</b>	Yes 25
Potentially Productive Aquifer	No <b>0</b>	Medium or High 15

IV.C. WATER USE					
Proximity of Disposal Site to Public Drinking Water Supply Source	Not Applicable (NA) see Section VI <b>0</b>			Zone A 20	Zone II, IWPA, or SW Intake ≤ 400' 50
Persons Served by Public Drinking Water Supply	NA 0	25 - 999 5	1,000 - 4,999 10	5,000 - 49,999 <b>20</b>	≥ 50,000 25
Private Water Supplies Within 500 Feet	None <b>0</b>		Commercial Industrial 10	Agriculture Residential (Not Ingested) 15	Drinking Food Processing 25
Alternative Public Water Supply Available (Viable Public Water Supply in Disposal Site Community and Public Water Connection ≤ 500 Feet from Site)	Yes <b>0</b>			No 25	

SECTION IV SCORE (A + B + C)			
A. <u>20</u>	B. <u>0</u>	C. <u>20</u>	TOTAL: (0 - 205) <u>40</u>

Check here if Section VI has been used to amend the score for this Section of the NRS.

40.1511 (Continued)

V. ECOLOGICAL POPULATION

V.A. ENVIRONMENTAL RESOURCE AREAS			
RESOURCE	LOCATION		
Area of Critical Environmental Concern	> 500' from Site 0	≤ 500' from Site 20	On-Site 30
Species of Special Concern. Threatened or Endangered Species Habitat	> 500' from Site 0	On-Site or ≤ 500' from Habitat 30	
Wetlands, Certified Vernal Pool, or Outstanding Resource Water	> 100' from Site 0	≤ 100' from Site 20	On-Site 30
Fish Habitat	> 500' from Site 0	≤ 500' from Site 20	On-Site 30
Protected Open Space (Local/State/Federal/Trustee)	> 500' from Site 0	≤ 500' from Site 20	On-Site 30

SCORE SECTION V.B. ONLY IF SECTION V.A. SCORE IS ≥ 30.

V.B. ENVIRONMENTAL TOXICITY SCORE	
<i>Highest Environmental Toxicity Score From Table V.B. or Worksheet V.B.I. on Following Pages.</i>	
OHM Scored: <u>Acetone</u> / <u>Barium</u>	Toxicity Score (1 - 35)
Concentration and Media: <u>103 ug/l in GW</u> / <u>4,630 ug/l in GW</u>	<u>15</u>

SECTION V. SCORE (A. + B.)		
A. <u>50</u>	B. <u>15</u>	TOTAL: (0 - 185) <u>65</u>

Check here if Section VI has been used to amend the score for this Section of the NRS.	<input type="checkbox"/>
--	--------------------------

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

40.1511 (Continued)

Use Worksheet V.B.1. to determine Environmental Toxicity Scores for OHM not listed in Table V.B.  
See 40.1516 for Environmental Toxicity Values for each OHM.

Worksheet V.B.1 ENVIRONMENTAL TOXICITY SCORE					
ENVIRONMENTAL TOXICITY VALUE	CONCENTRATION				
	Use µg/g for Soil and µg/l for Surface Water or Groundwater				
	< 1	1 - 99	100 - 999	1,000 - 9,900	≥ 10,000
10	0	1	5	10	15
20	1	5	10	15	20
30	5	10	15	20	25
40	10	15	20	25	30
50	15	20	25	30	35

V.B.1. OHM and Concentrations Used in Section V.B.1.				
OHM	Environmental Toxicity Value	Concentration (Soil - µg/g)	Concentration (Water - µg/l)	Environmental Toxicity Score
PCE	10		93.3	1
TCE	10		31.4	1
cis 1,2-DCE	10		82.6	1
VCL	--		74.	10
Acetone	30 D		103.	15
1,2,3-TCB	30 D		7.	10
Barium	20 D		4,630.	15

D = Default Value (40.1516(2))





LICENSED SITE PROFESSIONAL (LSP)  
EVALUATION OPINION TRANSMITTAL FORM 7 1997  
Pursuant to 310 CMR 40.0600 (Subpart F)

Release Tracking Number

2 - 0000111

APR - 7 1997

A. SITE OR LOCATION TO BE INVESTIGATED (LTBI) INFORMATION:

Provide the following information as it appears on the Transition List of Confirmed Disposal Sites and Locations To Be Investigated.

Site or LTBI Name: ATF Davidson  
Street: 355 Main Street Location Aid: opposite Arcade Pond

City/Town: Northbridge ZIP Code: 01588

Site Status: (check one)  Location To Be Investigated  Unclassified Disposal Site  Non-Priority Disposal Site without a Waiver

Date First Listed in Above Category: 10/15/87

Related Release Tracking Numbers that this LSP Evaluation Opinion Addresses:

B. LSP EVALUATION OF SITE OR LOCATION TO BE INVESTIGATED: (check one of the following)

- Check here if this location is NOT a Site where a Release of Oil(s) or Hazardous Material(s) occurred that is subject to the notification requirements of 310 CMR 40.0300, and no further response actions are required.
- Check here if a Release of Oil(s) and Hazardous Material(s) subject to the notification requirements of 310 CMR 40.0300 occurred or may have occurred at this location, but Response Actions completed prior to the date of this LSP Evaluation Opinion meet the requirements of a Class A or Class B Response Action Outcome.

If this LSP Evaluation Opinion is checked, you must meet all appropriate Response Action Outcome requirements described at 310 CMR 40.1000. You must include with this submittal documentation equivalent to a Response Action Outcome, including all supporting materials.

Indicate the class of the equivalent Response Action Outcome:

- Class A-1  Class A-2  Class A-3  Class B-1  Class B-2

You may choose to submit a completed Response Action Outcome Statement (BWSC-104) and supporting documentation in lieu of an LSP Evaluation Opinion, provided that you make the submittal prior to the LSP Evaluation Opinion deadline.

- Check here if a Release subject to the notification requirements of 310 CMR 40.0300 occurred or may have occurred at this location, and further Response Actions are necessary, pursuant to 310 CMR 40.0000.

If this option is checked you must make one of the following submittals by the applicable LSP Evaluation Opinion deadline: (i) provide a Tier Classification Submittal Transmittal Form (BWSC-107) and, if necessary, a Tier I Permit Application; (ii) provide a Response Action Outcome Statement (BWSC-104); (iii) or provide a Downgradient Property Status Submittal (BWSC-104).

- (Refer to BWSC-107A & BWSC-108 documents submitted for this Site) Check here if this location is a Site that is Adequately Regulated, pursuant to 310 CMR 40.0110. Specify which other regulatory authority applies:

- Response Actions at this Site, which are being conducted as a HSWA Corrective Action, are Adequately Regulated, pursuant to 310 CMR 40.0112.
- Response Actions at this Site, which is a 21C facility under the RCRA Authorized State Hazardous Waste Program, are Adequately Regulated under M.G.L. c. 21C and 310 CMR 30.000, pursuant to 310 CMR 40.0113.
- Response Actions at this Site, which is a Solid Waste Management facility, are Adequately Regulated under M.G.L. c. 21H, M.G.L. c. 111, § 150A and/or 310 CMR 19.000, pursuant to 310 CMR 40.0114.

You must attach all supporting documentation for the LSP Evaluation Opinion indicated, including copies of any Legal Notices and Notices to Public Officials required by 310 CMR 40.1400.

D. LSP OPINION:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and (iii) the provisions of 309 CMR 4.03(5), to the best of my knowledge, information and belief, this LSP Evaluation Opinion was developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and the response action(s) upon which this opinion is based, if any, were reasonable and appropriate to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000.

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

SECTION D IS CONTINUED ON THE NEXT PAGE.



STR 4/17/97

LICENSED SITE PROFESSIONAL (LSP)  
EVALUATION OPINION TRANSMITTAL FORM

Release Tracking Number

2 - 0000111

Pursuant to 310 CMR 40.0600 (Subpart F)

D. LSP OPINION: (continued)

Check here if the Response Action(s) on which this opinion is based, if any, is (are) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If this box is checked, you MUST attach a statement identifying the applicable provisions thereof.

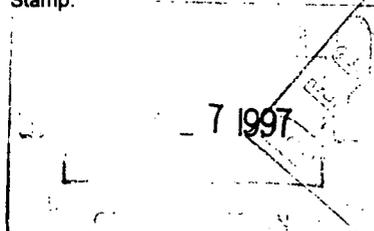
LSP Name: Neal M. Drawas LSP #: 9844 Stamp:

Telephone: 508-443-1833 Ext.: \_\_\_\_\_

FAX: (optional) 508-443-1929

Signature: *Neal M. Drawas*

Date: April 4, 1997



E. PERSON SUBMITTING LSP EVALUATION OPINION:

Name of Organization: Arcade Realty Trust

Name of Contact: Leonard Jolles Title: Property Mgr.

Street: 1 Main Street

City/Town: Whitinsville (Northbridge) State: MA ZIP Code: 01588

Telephone: 508-234-6301 Ext.: \_\_\_\_\_ FAX: (optional) \_\_\_\_\_

F. RELATIONSHIP TO SITE OR LOCATION TO BE INVESTIGATED OF PERSON SUBMITTING LSP EVALUATION OPINION: (check one)

RP or PRP Specify:  Owner  Operator  Generator  Transporter Other RP or PRP: \_\_\_\_\_

Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

Any Other Person Submitting LSP Evaluation Opinion Specify Relationship: \_\_\_\_\_

G. CERTIFICATION OF PERSON SUBMITTING LSP EVALUATION OPINION:

I, Leonard Jolles, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

By: *Leonard Jolles* Title: Property Mgr.  
(signature)

For: Arcade Realty Trust Date: 4-4-97  
(print name of person or entity recorded in Section E)

Enter address of the person providing certification, if different from address recorded in Section E:

Street: same

City/Town: \_\_\_\_\_ State: \_\_\_\_\_ ZIP Code: \_\_\_\_\_

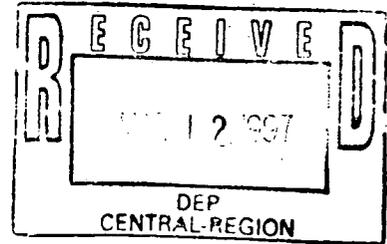
Telephone: \_\_\_\_\_ Ext.: \_\_\_\_\_ FAX: (optional) \_\_\_\_\_

YOU MUST COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE, AND YOU MAY INCUR ADDITIONAL COMPLIANCE FEES.

TABLE OF CONTENTS  
PHASE I REPORT

ATF DAVIDSON  
1 MAIN STREET  
WHITINSVILLE; MA

RTN 2-0111



- I. INTRODUCTION AND PURPOSE
- II. SITE DESCRIPTION
- III. SITE HISTORY
- IV. SITE HYDROGEOLOGY CHARACTERISTICS
- V. NATURE AND EXTENT OF CONTAMINATION
- VI. MIGRATION PATHWAYS AND EXPOSURE POTENTIAL
- VII. SUMMARY AND CONCLUSIONS

FIGURES

- Figure 1- Site Locus
- Figure 2- Monitoring Well Location Plan
- Figure 3- MADEP GIS Priority Resource Map
- Figure 4- Whitinsville Water Company- Zone II Delineation Maps

TABLES

- Table 5.1- Analytical Results (October 1996/January 1997)

APPENDICES

- Appendix 1 Caswell, Eichler & Hill, Inc., October 1985, "Monitoring Well Installation and Ground Water and River Bottom Sediment".
- Appendix 2 Caswell, Eichler & Hill, Inc., January 1986, "Additional Investigations- ATF/Davidson Arcade Facility, Covitch Properties, Mumford River".
- Appendix 3 Caswell, Eichler & Hill, Inc., October 1986, "ATF/Davidson Arcade Facility Sampling Report".
- Appendix 4 Caswell, Eichler & Hill, Inc., March 1987, "Additional M-8 Investigations ATF/Davidson Arcade Facility, Whitinsville, Massachusetts".
- Appendix 5 Kroll Associates, Inc., October 1996 and January 1997, "Groundwater Monitoring Data".

## I. INTRODUCTION AND PURPOSE

This Phase I Initial Site Investigation Report has been prepared by Kroll Associates, Inc. (Kroll) on behalf of Arcade Realty Trust, the Owner and Potentially Responsible Party (PRP) of the Site identified as ATF Davidson, 1 Main Street, Northbridge, MA (the "Site"), also known as the "Arcade". The Site has been further identified by the Release Tracking Number (RTN) 3-1431 which was assigned by the Massachusetts Department of Environmental Protection, Central Regional Office (MA DEP CERO).

The Massachusetts Contingency Plan (MCP) 310 CMR 40.0000 has established various action levels, time sensitive reporting formats and an attendant fee structure to ensure adequate compliance with the intent of the regulation. Specific to this site is the requirement that it be Tier Classified [310 CMR 40.0501] if additional remedial measures are required at the site. Additionally, the MCP mandates that a Phase I Initial Site Investigation Report accompany any Tier Submittal [310 CMR 40.0481(2)] and that the report follow a prescribed format [310 CMR 40.0483].

This Phase I Report is based on information collected from the following sources:

- Facility inspections and assessment activities in order to categorize present day conditions at the site;
- MA DEP GIS Priority Resources Map, with databases listed at Figure 3;
- Review of available historical information regarding site use and progressive development, including available historical site plans and environmental reports.
- Review of federal, state and local regulatory information regarding the subject property and adjacent sites.
- Review of Whitinsville Water Company files:
- Interviews of knowledgeable individuals regarding site and facility history, and facility work practices.
- An on-site environmental inspection of the subject property conducted on February 10, 1997, including building interiors and a visual survey of the adjacent and surrounding properties.
- Caswell, Eichler & Hill, Inc., October 1985, "Monitoring Well Installation and Ground Water and River Bottom Sediment".
- Caswell, Eichler & Hill, Inc., January 1986, "Additional Investigations-ATF/Davidson Arcade Facility, Covitch Properties, Mumford River".
- Caswell, Eichler & Hill, Inc., October 1986, "ATF/Davidson Arcade Facility Sampling Report".

- Caswell, Eichler & Hill, Inc., March 1987, "Additional M-8 Investigations ATF/Davidson Arcade Facility, Whitinsville, Massachusetts".
- Kroll Associates, Inc., October 1996 and January 1997, "Groundwater Monitoring Data".

The earlier site assessments conducted by Caswell, Eichler & Hill, on behalf of the previous Owners, are included in the Appendices and are incorporated by reference in this Phase I Report.

## 2. SITE DESCRIPTION

The legal description of the subject property and street address is as follows:

Address: 355 Main Street  
Northbridge (Whitinsville), Massachusetts

U.S. Geological Survey: Uxbridge Quadrangle  
42°06'41" North latitude  
71°40'46" West longitude

Universal Transverse  
Mercator (UTM) Coordinates: 4,665,418mN; 278,463mE

MADEP Site Reference: 2-0111

The subject property is in a commercial/industrial zone and is currently used as warehouse, distribution and light manufacturing facility with two (2) tenants. The area around the subject property is a mixture of commercial and residential properties along Main Street, and is primarily residential properties west and north of the site. The Site is bounded on the south by the Mumford River.

Approximately 97,000 square feet are leased to Auburn Merchandise Distributors, Inc. (AMD) who employs approximately 150 employees. AMD operates a warehousing/distribution center for cigarettes and food supplies. The second tenant is MHPG, Inc. (MHPG) who performs silk screening of clothing and operates a warehouse and distribution center. MHPG currently employs approximately 135 employees.

The building is concrete, brick and partial steel siding, and occupies approximately 194,000 square feet of the 27 acre parcel, paved parking areas occupy the northern and western sides of the building. The building is primarily a single story structure, with a partial second story which contains a small locker room and an electric utility room. A boiler room with two (2) gas fired boilers provides steam heat throughout the entire building.

Two (2) separate metal utility type buildings are located southeast of the main building. One structure (approximately 15' by 25') is used by AMD for the storage of warehouse conveyance machinery. The second building (approximately 10' by 10' feet) houses an external electric transformer within a concrete containment basin.

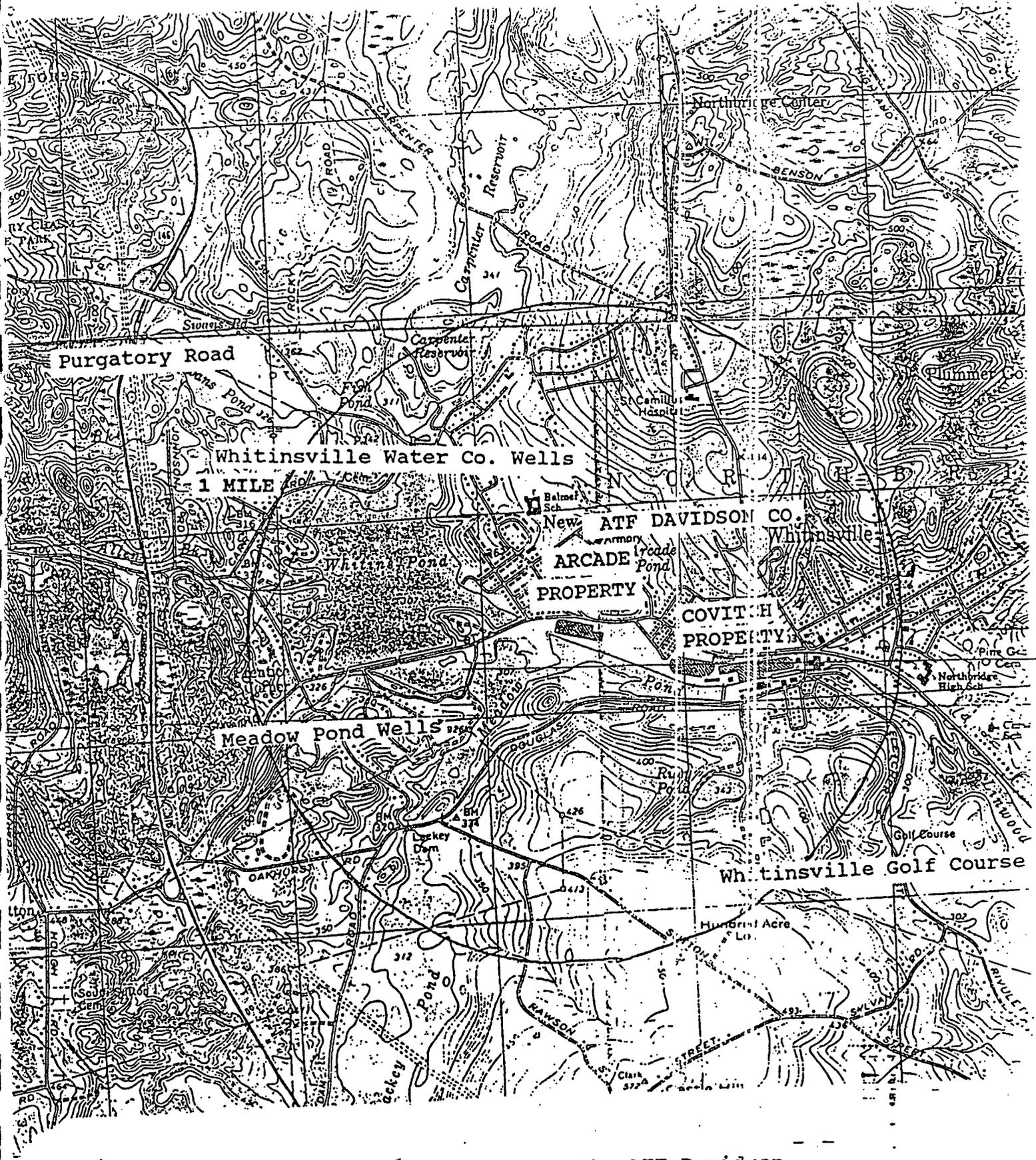
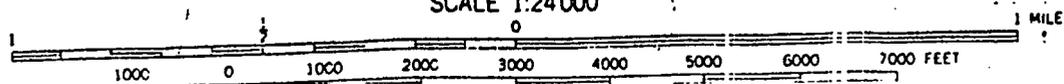


Figure 1. Locus Map of the ATF Davidson Co., Inc. Facility in Northbridge, MA.

SCALE 1:24000



### 3. SITE HISTORY

The ATF-Davidson property was a 73 acre facility directly west of the downtown portion of Whitinsville, a village within the Town of Northbridge (see Figure 1). The site is located in the 50-100 year flood plain. The Site was later sub-divided into the Covich property (46 acres) and the ATF-Davidson "Arcade" (27 acres) by ATF-Davidson and sold the east portion to Covich.

The entire property was originally owned by the Whitin Machine Works which produced textile machines at the Covich location from approximately 1837 to 1979. From 1941-1945, 85% of the facility was converted to war production. After the war, production of textile machines resumed. In 1966, the company converted to the production of graphic arts equipment. Whitin Machine, then part of ATF-Davidson, ceased operations in 1982.

Subsequent to the Whitin Machine Works, ATF-Davidson utilized the Arcade property to produce printing machines. Historic processes included turning, milling, grinding, metal treatment, assembly, painting and testing.

Foundry wastes from the foundry at Whitin Machine Works were mixed with spent foundry sand and were deposited, from roughly 1930 to 1979, adjacent to the present day Covich property in an unlined landfill called the "Arcade". The landfill area initially consisted of overburden of river sediments over bedrock extending approximately 3200 feet along the northern bank of the Mumford River. The Arcade facility was built upon a portion of the filled area. Total volume of the landfill was estimated at 40,000 cubic yard; total surface area is estimated at 730,000 square feet. Foundry sands range in size from fine to coarse with some pumice like material, foundry glass and ash.

Monitoring wells which were initially installed in 1985 detected groundwater within the "Arcade" site was found to be contaminated with volatile organic constituents (VOCs) and heavy metals. This resulted in the Arcade site being listed as a "Confirmed Non-Priority Site" by the MA DEP on October 15, 1987. Volatile organic constituents appear to be concentrated within one general area on the Arcade property suggesting that limited and random spillage may have occurred. Heavy metal constituents appeared to be located in two (2) discrete locations along the Site's southern boundary. Monitoring wells on the Covich Property have never indicated the presence of contaminants in groundwater at or near action levels.

The parcels which make up the subject site are currently owned by Arcade Realty Trust.

**THIS PHASE I REPORT SPECIFICALLY ADDRESSES ONLY THE ATF-DAVIDSON "ARCADE" PROPERTY.**

#### 4. SITE HYDROGEOLOGICAL CHARACTERISTICS

Based on the surface topography of the area and the proximity of the Mumford River south of the subject property, it appears that both surface and groundwater regional flow is to the south/southeast.

Surface water runoff is discharged to storm drains located on the property which discharge directly into the Mumford River. A survey of monitoring well elevations and gauging of monitoring wells on the subject property confirm local groundwater conditions. Environmental reports by Caswell, Eichler & Hill, Inc. (1985, 1986 and 1987) and Kroll (1996 and 1997) indicate the presence of fill to a depth of 7.0 to 14.5 feet below grade (fbg) and river bottom sediments extending an additional three feet to refusal. Groundwater fluctuates at depths between approximately 3 to 5.5 feet and generally flows south beneath the site and discharges into the Mumford River.

## 5. NATURE AND EXTENT OF CONTAMINATION

There have been a number of environmental studies and groundwater monitoring events of the subject site which are listed below.

Caswell, Eichler & Hill, Inc.	October 1985
Caswell, Eichler & Hill, Inc.	January 1986
Caswell, Eichler & Hill, Inc.	October 1986
Caswell, Eichler & Hill, Inc.	March 1987
Caswell, Eichler & Hill, Inc.	July 1987
Kroll Associates, Inc.	October 1996
Kroll Associates, Inc.	January 1997

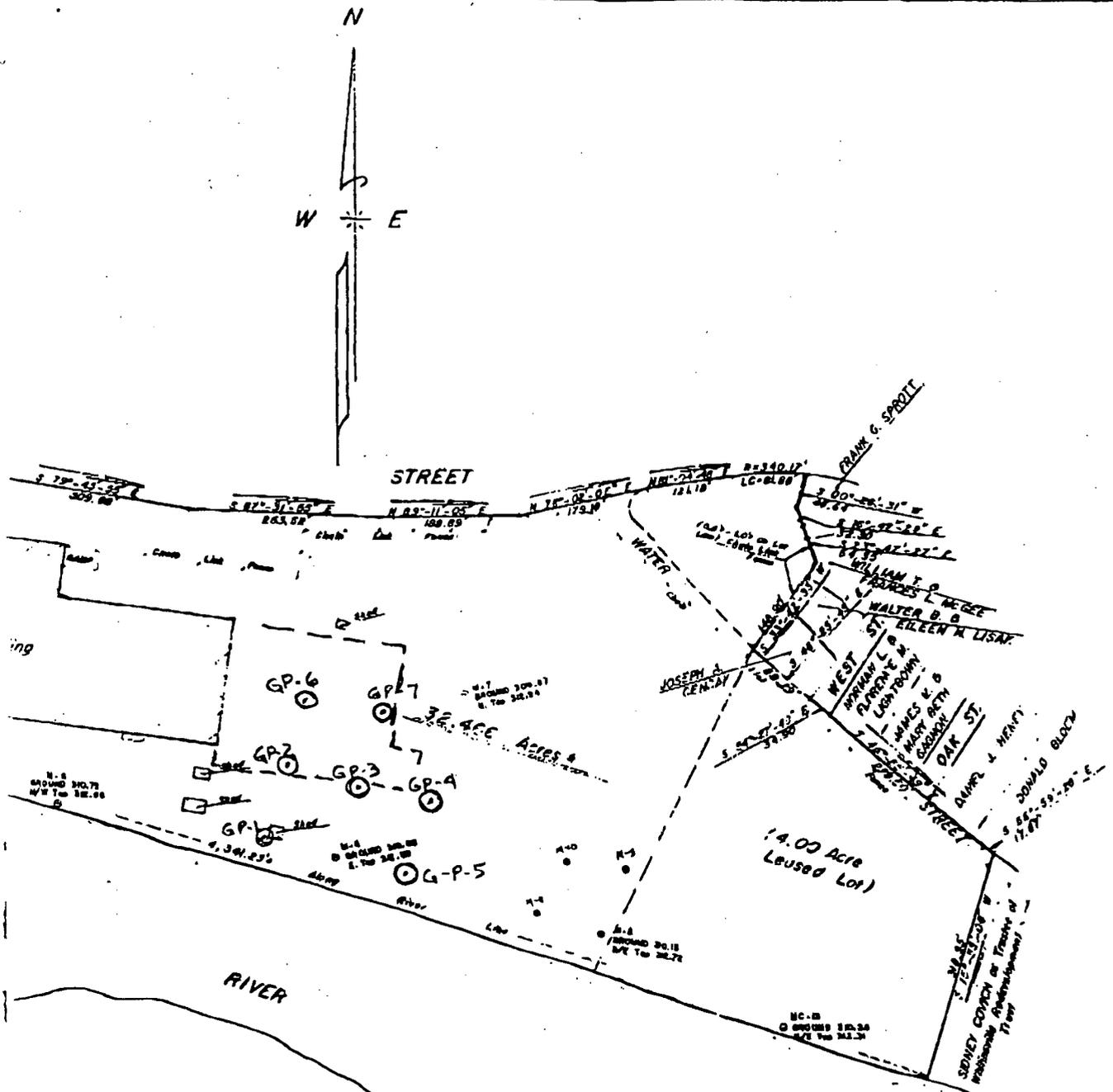
In 1985, eight shallow monitoring wells (M-1 through M-8) were installed by ATF-Davidson (see Figure 2). Groundwater samples were collected and analyzed for VOCs, metals and inorganics and cyanide. Groundwater samples from monitoring well M-3 (west of the building) were also analyzed for oil and grease. Soil samples were collected from each monitoring well from the surface and every 5 feet in depth.

Analysis of groundwater samples indicated that VOC contamination was present only in monitoring wells M-3, M-6 and M-8. Analysis of samples from the other wells did not reveal VOC constituents. Analysis of groundwater samples for priority pollutant metals, barium and cyanide revealed levels well below the Massachusetts Drinking Water Standards for all metals except barium. Barium was identified at concentrations near or slightly above that standard in monitoring wells M-4, M-5, M-6 and M-8. Oil and grease in monitoring well M-3 was less than 500 ppb.

Five benthic cores (B-1 through B-5) were taken from the littoral zone of the Mumford River bottom. The five benthic samples taken from the river bottom in 1985 were characterized as dark organic peat and muck. None of the 14 metals analyzed had levels above the maximum allowable concentrations of contaminants per the MCP Method 1 Standards. In addition, Caswell, Eichler and Hill conducted Extraction Toxicity testing on the sediments. Only chromium appeared to of significant concentration warranting further discussion by Caswell, Eichler and Hill. In this case, chromium was found up to 410 ug/g in the benthic samples and the level at which chromium is potentially EP Toxic in sediment samples is 100 ug/l. The upgradient to downgradient (in terms of river flow) concentrations of chromium in the benthic samples were as follows:

B-5	64 ug/g
B-1	410 ug/g
B-2	250 ug/g
B-3	400 ug/g
B-4	100 ug/g

As reported, the upgradient concentration is itself moderately high, although not potentially EP Toxic. Caswell, Eichler and Hill reported that the remaining four downgradient samples all, exceeded their criteria for delineating potential EP Toxicity but are less than the 1,000 ug/g Method

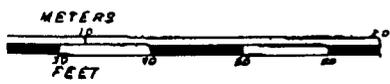


PLAN OF LAND  
FOR  
SOLIDATED INDUSTRIES, INC.  
AND/OR  
AVIDSON COMPANY, INC.

Arcade Property

NORTHBIDGE, MASS.  
DECEMBER, 1984

DOUGLAS ROAD



1 FOOT = 0.3048 METERS

ONE  
 SHEET  
 OF TOP 34.1

**B** BEAULT AND FLORENTZ **F**  
 ENGINEERING CO.

CIVIL ENGINEERS AND LAND SURVEYORS  
 99 MAIN STREET, WOONSOCKET, R.I.



1 Standard. These elevated chromium concentrations may have come from two potential sources, the ATF-Davidson site or some upgradient facility. ATF-Davidson and White Consolidated Inc. officials have stated that they have never used chromium at the Arcade facility, and chromium is not a constituent of concern based on on-site sampling and analysis. Therefore the reasonable conclusion is that the source of this constituents was an upgradient/upstream source.

Caswell, Eichler and Hill explained that the increase in concentrations between B-5 and the remaining samples pertains to changes in the morphology of the river from the Whitinsville Water Company parcel, past the Arcade facility to the dam on the Covich property. The dam creates a large head pond (Whitin Pond) that extends back up the river past the ATF-Davidson facility. As chromium laden organic material flowed past the channelized portion of the river opposite the Whitinsville Water Company, it remained in suspension due to adequate flow velocity. As this material entered the head pond, decreased flow velocity would tend to facilitate settling. As the organic matter degraded, the concentration of incorporated metals such as chromium increased in the sediments. Both textile and tannery facilities (which normally use chromium in their processes) were in operation further up-river, this settling and accretion theory seems to be the most plausible explanation for the levels of metal constituents noted the benthic samples, as chromium is not a constituent of concern for the Arcade site.

In December 1985, additional groundwater samples were obtained from monitoring wells M-1 through M-8. As with the July 1985 analyses, samples from monitoring wells M-1, 2, 4 and 5 did not reveal detectable levels of VOC constituents. Vinyl chloride and 1,2-dichloroethylene were detected in monitoring wells M-3, 6 and 8. Trichloroethylene and tetrachloroethylene were only detected in monitoring wells M-6; and 1,1-dichloroethylene was detected in monitoring well M-7. Levels of barium were near or above the Massachusetts Drinking Water Standard in monitoring wells M-4, 5, 6, and 8.

From February 1986 through August 1986, three additional rounds of analysis were performed on all wells. Groundwater samples analyzed from monitoring wells M-1, 2 and 5 did not contain VOC constituents. Elevated concentrations of 1,2-dichloroethylene and vinyl chloride were found in monitoring wells M-6 and 8. In January 1987, three additional monitoring wells (M-9, 10 and 11) were installed in a radial fashion in an area hydraulically upgradient from monitoring well M-8. Each well was approximately 100 feet from monitoring well M-8 and its adjacent counterpart. Analysis of samples indicated that the contaminants found in monitoring well M-8 were observed in low or non-detectable levels in monitoring wells M-9, 10 and 11 in groundwater samples. Soil boring samples were devoid of the same contaminants found in the groundwater samples, which suggests a limited and localized presence from a historical release. Caswell, Eichler and Hill concluded that groundwater and the contaminants were obviously flowing toward and being diluted by the Mumford River, thus no health or environmental hazard existed.

In 1987, Caswell, Eichler and Hill (CEH) prepared a Risk Assessment which focused on the contaminated area surrounding monitoring well M-8 at the subject property. The Risk Assessment was comprised of a Hazard Assessment, Exposure Assessment and a Risk Assessment. Investigation centered about the average levels of three VOCs that had been present in the groundwater samples from monitoring well M-8. CEH investigated possible routes of exposure from air and surface water. Potential receptors included local residents and employees of local businesses. CEH concluded that the concentrations of the contaminants as calculated were very low in both pathways and that the risks associated with exposure were calculated to be negligible. MADEP had reviewed the CEH Risk Assessment and concluded that although CEH used an average level of the three VOCs present in the groundwater instead of the highest levels, according to MADEP engineers they doubted whether using the highest concentrations would significantly change the results.

In October 1996 and January 1997 (see Table 5.1), Kroll Associates performed another sampling round of the Arcade monitoring wells and installed seven Geoprobe borings to collect soil and groundwater samples in the vicinity of new building construction. With exception of vinyl chloride in monitoring wells M-6 and M-8 and boring GP-6, all VOC constituent concentrations had notably reduced concentrations and were less than Massachusetts Contingency Plan action levels. The sole presence of vinyl chloride, the final daughter constituent associated with natural degradation, confirms CEH's Risk Assessment conclusions that historic releases of volatile organic materials were limited in magnitude and should naturally degrade over time without the need for additional treatment. Barium concentrations previously found in monitoring wells above MCP action levels, were now found at levels less than MCP standards.

## 6. MIGRATION PATHWAYS AND EXPOSURE POTENTIAL

As shown in Figure 3, the only environmentally sensitive receptor within 500 feet is the Mumford River bordering the site along the southern boundary. Within a 1/2 mile radius north and west of the Site is a portion of the Whitinsville Water Company well field and its surrounding productive aquifer. However, the groundwater flows in a south/southeasterly direction into the Mumford River downgradient of the Whitinsville Water Company well field. The MADEP GIS Priority Resource Map (see Figure 3) incorrectly identifies that the subject site lies within the Interim Protection Wellhead Zone of the Whitinsville Water Company Whitin Pond well field. Engineering documentation (see Figure 4) prepared by the water company's consultant (Whitman & Howard) specifies a Defined Zone II Protective area (see Figure 4) which is upgradient and off-site from the subject Site.

The only identified migration pathway for the vinyl chloride release at this Site appears to be through subsurface migration to the river. River sampling conducted by Caswell, Eichler and Hill did not detect vinyl chloride or other volatile organic constituents, indicating that any volatile organics reaching the river are rapidly attenuated through evaporation, dilution and degradation.

Other potential receptors include workers and visitors to the Site. Under current conditions, exposure to vapors or fugitive dust appears minimal due to the depth of the observed contamination (over 3 to 5 feet below grade). However, under future conditions construction or utility worker in excavated trenches within the area of groundwater contamination could be exposed, and proper precautions should be taken. Any future building construction should be designed to incorporate a vapor control barrier with passive subsurface ventilation to prevent vapors rising into the building(s).

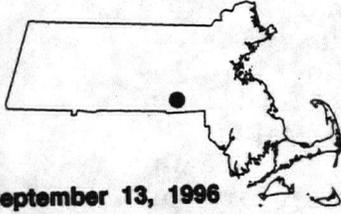
A number of other potential contaminants were identified in the earlier studies prepared by Caswell, Eichler and Hill (see Appendices). However, there is no evidence to indicate that there are any other constituents which exceed MCP Method 1 Cleanup Standards other than those previously discussed.

**SITE NAME:**

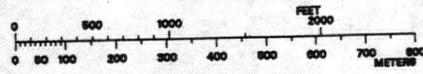
**ATF DAVIDSON PROPERTY**  
**1 MAIN STREET**  
**NORTHBRIDGE, MA**  
**4655418n 278463ew**

**MA DEP - Bureau of Waste Site Cleanup**

**Site Scoring Map: 500 feet & 0.5 Mile Radii**



September 13, 1996



**SCALE 1:15000**

The information shown on this map is the best available at the date of printing. Please refer to the data source descriptions document.

- Potentially Productive Medium Yield Aquifer
- Potentially Productive High Yield Aquifer
- NOT Potentially Productive Medium Yield Aquifer
- NOT Potentially Productive High Yield Aquifer
- EPA Designated Sole Source Aquifers
- DEP Approved Wellhead Protection Area - ZONE 2
- Interim Wellhead Protection Area
- Public Surface Water Supply
- Lakes, Ponds, Other Fresh Water Features
- Bays, Estuaries, Other Salt Water Features
- Fresh Water Non-Forested Wetlands
- Salt Water Wetlands
- State, Federal, Municipal, Nonprofit and Private Open Space and Recreational Facilities
- Areas of Critical Environmental Concern
- DEP Permitted Solid Waste Facilities
- NHESP Estimated Habitats of Rare Wetlands Wildlife 1995 - for use with Wetlands Protection Act ONLY

- State, U.S., Interstate Routemarkers
- Interstate Highway
- U.S. Highway
- State Highway
- Other Roads
- Municipal Boundary
- County Boundary
- Train
- Powerline
- Pipeline
- Aqueduct
- Major Drainage Basin
- Sub Drainage Basin
- Zone of Contribution
- Public Water Supply - Groundwater
- Public Water Supply - Surface Water
- Non Community Public Water Supply
- Certified Vernal Pools



**ANALYTICAL RESULTS**

**ATF - Davidson Property  
1 Main Street, Northbridge, MA**

**10/17/96 + 1/17/97(\*)**

<u>Well ID</u>	<u>PCE</u>	<u>TCE</u>	<u>1,2-DCE</u>	<u>VCL</u>	<u>Acetone</u>	<u>Barium</u>
M-1	--	--	--	--	--	--
M-2	--	--	--	--	--	--
M-3	ND	3.8	2.6	ND	103.	--
M-4	--	--	--	--	--	--
M-5	--	--	--	--	--	4.63
M-6	93.3	31.4	28.2	<u>17.8</u>	ND	--
M-7(*)	ND	ND	ND	ND	ND	--
M-8	ND	5.1	82.6	<u>62.5</u>	ND	1.05
M-9	52.9	9.8	7.9	ND	ND	--
M-10(*)	ND	ND	ND	ND	ND	--
M-11(*)	ND	ND	ND	ND	ND	--
<u>Geoprobe(*)</u>						<u>Other</u>
SB-1	ND	ND	ND	ND	ND	7. (a)
GP-1	ND	ND	ND	ND	ND	ND
SB-2	ND	ND	ND	ND	290.	8. (a)
GP-2	ND	ND	ND	ND	ND	ND
SB-3	ND	ND	ND	ND	ND	ND
GP-3	ND	ND	ND	ND	ND	ND
SB-4	ND	ND	ND	ND	ND	ND
GP-4	ND	ND	ND	ND	ND	ND
SB-5	ND	ND	ND	ND	200.	22. (a)
GP-5	ND	ND	ND	ND	ND	ND
SB-6	ND	ND	ND	25.	ND	ND
GP-6	ND	ND	50.	<u>74.</u>	ND	7. (b)
SB-7	ND	ND	ND	ND	ND	ND
GP-7	ND	ND	ND	ND	ND	ND

**Notes:**

- Barium values given in mg/L (ppm).
- All other values given in ug/L (ppb).
- Underlined values exceed MCP Method 1 GW-2/3 limits.
- ND = Below Quantitation Limit.
- = Not Sampled.
- SB- = Soil boring
- GP- = Groundwater
- Other: a = Methylene chloride (compound also detected in blank)
- b = 1,2,3-Trichlorobenzene



LICENSED SITE PROFESSIONAL (LSP)  
EVALUATION OPINION TRANSMITTAL FORM  
Pursuant to 310 CMR 40.0600 (Subpart F)

Release Tracking Number  
2 - 00112

A. SITE OR LOCATION TO BE INVESTIGATED (LTBI) INFORMATION:

Provide the following information as it appears on the Transition List of Confirmed Disposal Sites and Locations To Be Investigated.

Site or LTBI Name: The Shop (COVITCH PROPERTY)  
Street: ONE MAIN STREET Location Aid: 01588  
City/Town: WHITINSVILLE (NORTHBRIDGE) ZIP Code: \_\_\_\_\_  
Site Status: (check one)  Location To Be Investigated  Unclassified Disposal Site  Non-Priority Disposal Site without a Waiver  
Date First Listed in Above Category: OCTOBER 10, 1987  
Related Release Tracking Numbers that this LSP Evaluation Opinion Addresses: \_\_\_\_\_

B. LSP EVALUATION OF SITE OR LOCATION TO BE INVESTIGATED: (check one of the following)

- Check here if this location is NOT a Site where a Release of Oil(s) or Hazardous Material(s) occurred that is subject to the notification requirements of 310 CMR 40.0300, and no further response actions are required.
  - Check here if a Release of Oil(s) and Hazardous Material(s) subject to the notification requirements of 310 CMR 40.0300 occurred or may have occurred at this location, but Response Actions completed prior to the date of this LSP Evaluation Opinion meet the requirements of a Class A or Class B Response Action Outcome.
- If this LSP Evaluation Opinion is checked, you must meet all appropriate Response Action Outcome requirements described at 310 CMR 40.1000. You must include with this submittal documentation equivalent to a Response Action Outcome, including all supporting materials.

Indicate the class of the equivalent Response Action Outcome:

- Class A-1     Class A-2     Class A-3     Class B-1     Class B-2

You may choose to submit a completed Response Action Outcome Statement (BWSC-104) and supporting documentation in lieu of an LSP Evaluation Opinion, provided that you make the submittal prior to the LSP Evaluation Opinion deadline.

- Check here if a Release subject to the notification requirements of 310 CMR 40.0300 occurred or may have occurred at this location, and further Response Actions are necessary, pursuant to 310 CMR 40.0000.

If this option is checked you must make one of the following submittals by the applicable LSP Evaluation Opinion deadline: (i) provide a Tier Classification Submittal Transmittal Form (BWSC-107) and, if necessary, a Tier I Permit Application; (ii) provide a Response Action Outcome Statement (BWSC-104); (iii) or provide a Downgradient Property Status Submittal (BWSC-104).

- Check here if this location is a Site that is Adequately Regulated, pursuant to 310 CMR 40.0110. Specify which other regulatory authority applies:
  - Response Actions at this Site, which are being conducted as a HSWA Corrective Action, are Adequately Regulated, pursuant to 310 CMR 40.0112.
  - Response Actions at this Site, which is a 21C facility under the RCRA Authorized State Hazardous Waste Program, are Adequately Regulated under M.G.L. c. 21C and 310 CMR 30.000, pursuant to 310 CMR 40.0113.
  - Response Actions at this Site, which is a Solid Waste Management facility, are Adequately Regulated under M.G.L. c. 21H, M.G.L. c. 111, § 150A and/or 310 CMR 19.000, pursuant to 310 CMR 40.0114.

You must attach all supporting documentation for the LSP Evaluation Opinion indicated, including copies of any Legal Notices and Notices to Public Officials required by 310 CMR 40.1400.

D. LSP OPINION:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and (iii) the provisions of 309 CMR 4.03(5), to the best of my knowledge, information and belief, this LSP Evaluation Opinion was developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and the response action(s) upon which this opinion is based, if any, were reasonable and appropriate to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000.

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

SECTION D IS CONTINUED ON THE NEXT PAGE.



LICENSED SITE PROFESSIONAL (LSP) EVALUATION OPINION TRANSMITTAL FORM Pursuant to 310 CMR 40.0800 (Subpart F)

Release Tracking Number

2 - 00112

D. LSP OPINION: (continued)

Check here if the Response Action(s) on which this opinion is based, if any, is (are) subject to any order(s) or approval(s) issued by DEP or EPA. If this box is checked, you MUST attach a statement identifying the applicable page(s).

LSP Name: JACK MCKENNA LSP #: 4913 Telephone: 603-431-4899 Ed.: 12 Signature: [Signature] Date: 04/07/97



E. PERSON SUBMITTING LSP EVALUATION OPINION:

Name of Organization: THE SHOP AT WHITINSVILLE Name of Contact: LEONARD S. JOLLES Title: PROPERTY MANAGER Street: ONE MAIN STREET City/Town: WHITINSVILLE State: MA ZIP Code: 01588 Telephone: 508 234-6301 Ed.: FAX: (optional)

F. RELATIONSHIP TO SITE OR LOCATION TO BE INVESTIGATED OF PERSON SUBMITTING LSP EVALUATION OPINION: (check one)

- RP or PRP Specify: Owner Operator Generator Transporter Other RP or PRP:
Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)
Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 50)
Any Other Person Submitting LSP Evaluation Opinion Specify Relationship:

G. CERTIFICATION OF PERSON SUBMITTING LSP EVALUATION OPINION:

I, LEONARD S. JOLLES, attest under the pains and penalties of perjury (1) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (2) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (3) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. The person or entity on whose behalf this submittal is made attests aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

By: [Signature] Title: For: (print name of person or entity recorded in Section E) Date: 4/7/97

Enter address of the person providing certification, if different from address recorded in Section E: Street: City/Town: State: ZIP Code: Telephone: Ed.: FAX: (optional)

YOU MUST COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE, AND YOU MAY INCUR ADDITIONAL COMPLIANCE FEES.



JA 4/13/97

**TIER CLASSIFICATION, TIER II EXTENSION &  
TIER II TRANSFER TRANSMITTAL FORM**

Pursuant to 310 CMR 40.0510 and 40.0560 (Subpart E)

Release Tracking

2 - 100112

**A. DISPOSAL SITE LOCATION:**

Disposal Site The Shop (Covitch Property)

Street: 1 Main Street Location Aid: \_\_\_\_\_

City/Town: Whitinsville (Northbridge) ZIP 01588

Related Release Tracking Numbers That This Submittal Will \_\_\_\_\_

**B. THIS FORM IS BEING USED TO:** (check all that apply)

- Submit a new or revised Tier Classification Submittal for a Tier I Site, including a Numerical Ranking Scoresheet (complete Sections A, B, C, I, J, K and L).
- Submit a new or revised Tier Classification Submittal for a Tier II Site, including a Numerical Ranking Scoresheet (complete Sections A, B, C, F, G, I, J, K and L).
- Submit a Notice that an additional Release Tracking Number(s) is (are) being linked to this Tier Classified Site and rescoring is not required at this time (complete Sections A, B, J, K and L). If this submittal is for a Tier I Site, you must also submit a Minor Permit Modification Transmittal Form (BWSC-109).

List Additional Release Tracking \_\_\_\_\_

- Submit a Phase I Completion Statement supporting a Tier Classification Submittal (complete Sections A, B, I, J, K and L).
- Submit a Tier II Extension Submittal for Response Actions at a Tier II Site (complete Sections A, B, D, F, G, I, J, K and L).
- Submit a Tier II Extension Submittal for Response Actions taken after expiration of a Waiver, pursuant to 310 CMR 40.0630(4) (complete Sections A, B, D, F, J, K and L, and also complete Sections G and I or Section H).\*
- Submit a Tier II Transfer Submittal for a change in person(s) undertaking Response Actions at a Tier II Site (complete Sections A, B, E, F, G, I, J, K, L, M, N and O).
- Submit a Tier II Transfer Submittal for a change in person(s) undertaking Response Actions at a Waiver Site, pursuant to 310 CMR 40.0630(6) (complete Sections A, B, E, F, J, K, L, M, N and O, and also complete Sections G and I or Section H).\*

You must attach all supporting documentation required for each use of form indicated, including copies of any Legal Notices and Notices to Public Officials required by 310 CMR 40.1400.

\*NOTE: The Waiver expires on the effective date of this submittal and all further Response Actions must be taken as a Tier II Site.

**C. TIER CLASSIFICATION SUBMITTAL:**

Numerical Ranking Score for Disposal Site: (from Numerical Ranking 197)

Proposed Tier Classification of Disposal Site: (check one)  Tier IA  Tier IB  Tier IC  Tier II

Check which, if any, of the Tier I inclusionary criteria are met by the Disposal Site, pursuant to 310 CMR 40.0520:

- Groundwater is located within an Interim Wellhead Protection Area or a Zone II, and there is evidence of groundwater contamination by an Oil or Hazardous Material at the time of Tier Classification at concentrations equal to or exceeding the applicable RCGW-1 Reportable Concentration set forth in 310 CMR 40.0360.
- An Imminent Hazard is present at the time of Tier Classification.
- Check here if this Tier Classification revises a previous submittal for this Disposal Site. You must include a revised Numerical Ranking Scoresheet with this submittal. If a Tier I Permit has been issued, you may also need to submit a Major Permit Modification Application (BWSC 10).

If incorporating additional Release(s) into the Disposal Site, list Release Tracking \_\_\_\_\_

**D. TIER II EXTENSION SUBMITTAL REQUIREMENTS:**

State the expiration date of the Tier II Classification or Waiver for the Disposal Site, whichever is \_\_\_\_\_

Attach a statement summarizing why a Permanent or Temporary Solution has not been achieved at the Disposal Site. A Tier II Extension is effective for a period of one year beyond the current expiration date of the Tier II Classification or Waiver.

**E. TIER II TRANSFER SUBMITTAL REQUIREMENTS:**

State the proposed effective date of the change in person(s) undertaking Response Actions at the Disposal \_\_\_\_\_

Attach a statement summarizing the reasons for the proposed change in person(s) undertaking the Response Actions. All Response Actions must be completed by the deadline applicable to the person who first filed either a Tier Classification Submittal for the Disposal Site or received a Waiver of Approvals.



**TIER CLASSIFICATION, TIER II EXTENSION &  
TIER II TRANSFER TRANSMITTAL FORM**  
Pursuant to 310 CMR 40.0510 and 40.0560 (Subpart E)

Release Tracking

2 - 00112

**F. DISPOSAL SITE COMPLIANCE HISTORY SUMMARY:**

- > If providing either a Tier Classification Submittal for a Tier II Site or a Tier II Extension Submittal for a Waiver Site, the person named in Section J must provide a Compliance History.
- > If providing a Tier II Extension Submittal for a Tier II Site, the person named in Section J must update their Compliance History since the effective date of the Tier II Classification.
- > If providing a Tier II Transfer Submittal for a Tier II or Waiver Site, the person named in Section M must provide a Compliance History.

Compliance History for (provide only one name per See Phase I Report)

Check here if there has been no change to the Compliance History of the person named above (Extension Submittal for a Tier II Site ONLY).

List all permits or licenses that have been issued by the Department that are relevant to this Disposal Site:

PROGRAM:	PERMIT NUMBER:	PERMIT CATEGORY:	FACILITY ID:
Air Quality	_____	_____	_____
Hazardous Waste (M.G.L. c. 21C)	_____	_____	_____
Solid Waste	_____	_____	_____
Industrial Wastewater Management	_____	_____	_____
Water Supply	_____	_____	_____
Water Pollution Control/Surface Water	_____	_____	_____
Water Pollution Control/Groundwater	_____	_____	_____
Water Pollution Control/Sewer Connection	_____	_____	_____
Wetland & Waterways	_____	_____	_____

List all other Federal, state or local permits, licenses, certifications, registrations, variances, or approvals that are relevant to this Disposal Site:

ISSUING AUTHORITY OR PROGRAM, OR DOCUMENTATION TYPE:	IDENTIFICATION NUMBER:	DATE ISSUED:
_____	_____	_____
_____	_____	_____
_____	_____	_____

If needed, attach to this Transmittal Form a statement further describing the Compliance History of this Disposal Site. This statement must describe the compliance history of the person named above with the following:

- (1) DEP regulations; and
- (2) other laws for the protection of health, safety, public welfare and the environment administered or enforced by any other government agency.

Such a statement should identify information such as:

- (1) actions relevant to the Disposal Site taken by the Department to enforce its requirements including, but not limited to, a Notice of Noncompliance (NON), Notice of Intent to Assess Civil Administrative Penalty (PAN), Notice of Intent to Take Response Action (NORA), and
- an administrative enforcement order;
- (2) administrative consent orders;
- (3) judicial consent judgements;
- (4) similar administrative actions taken by other Federal, state or local agencies;
- (5) civil or criminal actions relevant to the Disposal Site brought on behalf of the DEP or other Federal, state, or local agencies; and
- (6) any additional relevant information.

- (1) name of the issuing authority, type of action, identification number and date issued;
- (2) description of noncompliance cited;
- (3) current status of the matter; and
- (4) final disposition, if any.



**TIER CLASSIFICATION, TIER II EXTENSION &  
TIER II TRANSFER TRANSMITTAL FORM**

Pursuant to 310 CMR 40.0510 and 40.0560 (Subpart E)

Release Tracking

2 - 00112

**G. CERTIFICATION OF ABILITY AND WILLINGNESS:**

- > If providing either a Tier II Classification Submittal or a Tier II Extension Submittal, the person who signs this certification **MUST** be the person named in Section J, or that person's agent.
- > If providing a Tier II Transfer Submittal, the person who signs this certification **MUST** be the person named in Section M, or that person's agent.

I attest under the pains and penalties of perjury that (i) I/the person(s) or entity(ies) on whose behalf this submittal is made has/have personally examined and am/is familiar with the requirements of M.G.L. c. 21E and 310 CMR 40.0000; (ii) based upon my inquiry of the/those Licensed Site Professional(s) employed or engaged to render Professional Services for the disposal site which is the subject of this Transmittal Form and of the person(s) or entity(ies) on whose behalf this submittal is made, and my/that person's(s') or entity's(ies') understanding as to the estimated costs of necessary response actions, that/those person(s) or entity(ies) has/have the technical, financial and legal ability to proceed with response actions for such site in accordance with M.G.L. c. 21E, 310 CMR 40.0000 and other applicable requirements; and (iii) that I am fully authorized to make this attestation on behalf of the person(s) or entity(ies) legally responsible for this submittal. I/the person(s) or entity(ies) on whose behalf this submittal is made is aware of the requirements in 310 CMR 40.0172 for notifying the Department in the event that I/the person(s) or entity(ies) on whose behalf this submittal is made learn(s) that it/they is/are unable to proceed with the necessary response actions.

By: [Signature] Title: Property Manager  
(signature)  
For: The State of Massachusetts Date: 3/12/97  
(print name of person or entity recorded in Section J or M, as appropriate)

If you are submitting either a Tier II Extension Submittal for a Waiver Site or a Tier II Transfer Submittal for a Waiver Site, you may choose to sign the alternative Ability and Willingness Certification found in Section H in place of providing the certification in Section G and the LSP Opinion in Section I.

**H. ALTERNATIVE CERTIFICATION OF ABILITY AND WILLINGNESS:**

- > If providing a Tier II Extension Submittal for a Waiver Site, the person who signs this certification **MUST** be the person named in Section J, or that person's agent
- > If providing a Tier II Transfer Submittal for a Waiver Site, the person who signs this certification **MUST** be the person named in Section M, or that person's agent.

I attest under the pains and penalties of perjury that (i) I/the person(s) or entity(ies) on whose behalf this submittal is made has/have personally examined and am/is familiar with the requirements of M.G.L. c. 21E and 310 CMR 40.0000; (ii) based upon my inquiry of the Consultant-of-Record for the disposal site which is the subject of this Transmittal Form and of the person(s) or entity(ies) on whose behalf this submittal is made, and my/that person's(s') or entity's(ies') understanding as to the estimated costs of necessary response actions, that/those person(s) or entity(ies) has/have the technical, financial and legal ability to proceed with response actions for such site in accordance with M.G.L. c. 21E, 310 CMR 40.0000 and other applicable requirements; and (iii) that I am fully authorized to make this attestation on behalf of the person(s) or entity(ies) legally responsible for this submittal. I/the person(s) or entity(ies) on whose behalf this submittal is made is aware of the requirements in 310 CMR 40.0172 for notifying the Department in the event that I/the person(s) or entity(ies) on whose behalf this submittal is made learn(s) that it/they is/are unable to proceed with the necessary response actions.

By: \_\_\_\_\_ Title: \_\_\_\_\_  
(signature)  
For: \_\_\_\_\_ Date: \_\_\_\_\_  
(print name of person or entity recorded in Section J or M, as appropriate)

**I. LSP OPINION:**

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and (iii) the provisions of 309 CMR 4.03(5), to the best of my knowledge, information

- > if Section B of this form indicates that a Tier I or Tier II Classification Submittal which relies upon a previously submitted Phase I Completion Statement is being submitted, this Tier Classification Submittal has been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000;
- > if Section B of this form indicates that a Phase I Completion Statement or a Tier I or Tier II Classification Submittal which does not rely upon a previously submitted Phase I Completion Statement is being submitted, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal;

SECTION I IS CONTINUED ON THE NEXT PAGE



**TIER CLASSIFICATION, TIER II EXTENSION &  
TIER II TRANSFER TRANSMITTAL FORM**

Pursuant to 310 CMR 40.0510 and 40.0560 (Subpart E)

Release Tracking

2 - 00112

**I. LSP OPINION: (continued)**

> if Section B of this form indicates that a Tier II Extension Submittal or a Tier II Transfer Submittal is being submitted, the response action(s) that is (are) the subject of this submittal (i) is (are) being implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) complies(y) with the identified provisions of all orders, permits, and approvals identified in this

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.

LSP Name: Jack McKenna LSP #: 4913 Stamp:

Telephone: (603) 431-4899 Ext.: \_\_\_\_\_

FAX: \_\_\_\_\_

Signature: [Handwritten Signature]

Date: 03/03/97



**J. PERSON MAKING SUBMITTAL: (For Transfer Submittals describe person currently undertaking response actions, not transferee)**

Name of The Shop at Whitinsville

Name of Leonard S. Jolles Title: Property Manager

Street: One Main Street

City/Town: Whitinsville State: MA ZIP Code: 01588

Telephone: (508) 234-6301 Ext.: \_\_\_\_\_ FAX: \_\_\_\_\_

**K. RELATIONSHIP TO DISPOSAL SITE OF PERSON MAKING SUBMITTAL: (check one)**

RP or PRP Specify  Owner  Operator  Generator  Transporter Other RP or PRP: \_\_\_\_\_

Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

Any Other Person Making Submittal Specify \_\_\_\_\_

**L. CERTIFICATION OF PERSON MAKING SUBMITTAL:**

I, Leonard S. Jolles, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

By: [Handwritten Signature] Title: Property Manager

For: The Shop at Whitinsville Date: 3/2/97  
(print name of person or entity recorded in Section J)

Enter address of the person providing certification(s), including Ability and Willingness Certification where applicable, if different from address recorded in Section J:

Street: \_\_\_\_\_

City/Town: \_\_\_\_\_ State: \_\_\_\_\_ ZIP Code: \_\_\_\_\_

Telephone: \_\_\_\_\_ Ext.: \_\_\_\_\_ FAX: \_\_\_\_\_

**YOU MUST COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE, AND YOU MAY INCUR ADDITIONAL COMPLIANCE FEES.**

AT 4/3/97

MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
Bureau of Waste Site Cleanup

NUMERICAL RANKING SYSTEM SCORESHEET  
(310 CMR 40.1511)

CLASSIFICATION SUBMITTAL	
Initial Submittal <input checked="" type="checkbox"/>	Re-Classification <input type="checkbox"/>

DISPOSAL SITE SCORE					
II <u>60</u>	III <u>77</u>	IV <u>25</u>	V <u>35</u>	VI <u>N/A</u>	TOTAL <u>197</u>

Disposal Site Tier Classification	I			II
Permit Category (Tier I Only)	A	B	C	

I. DISPOSAL SITE INFORMATION

DEP Release Tracking Number(s)	2-00112
DEP Disposal Site Number(s)	

LAT/Long UTM Coordinates	N: 42° 06' 35"
	E: 71° 40' 19"

Disposal Site Name	ATF/Covitch		
Disposal Site Address	One Main Street		
	City: Whitinsville (Northbridge)	Zip: 01588	

Is the Disposal Site classified Tier I because it is located within the boundaries of a Zone II or Interim Wellhead Protection Area and groundwater concentrations equal or exceed RCGW-1 at the time of Tier Classification pursuant to 310 CMR 40.0520(2)(a)1.?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the Disposal Site classified Tier I because an Imminent Hazard is present at the time of Tier Classification pursuant to 310 CMR 40.0520(2)(a)2.?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

I attest under the pains and penalties of perjury that I have personally completed this Numerical Ranking System Scoresheet, and have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this submittal, and in my professional opinion and judgment based upon: (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and (iii) the provisions of 309 CMR 4.03(5), to the best of my knowledge, information and belief, this Scoresheet was developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000. I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

<u>Jack McKenna</u> Licensed Site Professional Signature	<u>4913</u> LSP Registration Number	<u>3/03/97</u> Date
<u>Jack McKenna</u> LSP Name (Printed)	<u>CEH-Jacques Whitford.</u> Company Name	<u>(603) 431-4899</u> Telephone Number

The Shop at Whitinsville

Responsible Party, Potentially Responsible Party, or Other Person who will provide certification in accordance with 310 CMR 40.0009.

**II. EXPOSURE PATHWAYS**

<b>II. EXPOSURE PATHWAYS</b>				
<i>Score according to 40.1512 - Exposure Pathway Designation Criteria</i>				
<i>MEDIA</i>	<i>DESIGNATION</i>			
	NONE or NOT APPLICABLE	EVIDENCE OF CONTAMINATION	POTENTIAL EXPOSURE PATHWAY	LIKELY OR CONFIRMED EXPOSURE PATHWAY
A. SOIL (Includes Sediment)	0	15	100	150
B. GROUNDWATER	0	20	100	150
C. SURFACE WATER (Includes Wetlands)	0	20	100	150
D. AIR	0	15	100	200

*Note: Score only the highest value for each media, i.e., score None or Not Applicable or Evidence of Contamination or Potential Exposure Pathway or Likely or Confirmed Exposure Pathway.*

<i>II. (A - D) Summary Rationale for Section II A - D Values and Phase I Report References</i>	
A & B: Refer to the Phase I Report. Release of oil from appears to be limited in extent	
C: The Phase I did not sample surface water but groundwater near the river was below GW-3 standards	
D: The Phase I did not investigate contamination to air. No likely pathway to air or surface water was identified in assessment activities.	

<b>II.E. OHM SOURCES</b>			
Number of OHM Sources	1	2	≥ 3
	0	25	50

<b>SECTION II SCORE (A. + B. + C. + D. + E.)</b>					
A.	B.	C.	D.	E.	TOTAL: (15 - 700)
15	20	0	0	25	60

Check here if Section VI has been used to amend the score for this Section of the NRS.	<input type="checkbox"/>
--	--------------------------

**III. DISPOSAL SITE CHARACTERISTICS**

<b>III.A. OHM TOXICITY SCORE</b>	
<i>Highest OHM Toxicity Score From Table III.A. or Worksheet III.A.1. on Following Pages.</i>	
OHM Scored: <u>Vinyl Chloride and Naphthalene</u>	Toxicity Score (1 - 80)
Concentration and Media: <u>0.02 µg/g of Vinyl Chloride and 2.0 0 ug/g Naphthalene in soil</u>	<u>15</u>

<b>III.B. MULTIPLE OHMs</b>		
More Than One OHM With an OHM Toxicity Score of ≥ 30	No	Yes
	<u>0</u>	30

<b>III.C. OHM MOBILITY and PERSISTENCE</b>	
<i>Score according to 40.1514 - OHM Mobility and Persistence</i>	
OHM Scored: <u>50</u>	Score (0 - 50)
<u>Cis 1,2-Dichloroethene</u>	<u>25</u>

<b>III.D. DISPOSAL SITE HYDROGEOLOGY</b>			
<i>Score according to 40.1515 - Soil Permeability</i>			
DEPTH TO GROUNDWATER (in feet)	SOIL PERMEABILITY		
	Low	Medium	High
> 25	2	4	8
10.1 - 25	4	8	12
5.1 - 10	8	<u>12</u>	16
0 - 5	12	16	20

<b>SECTION III SCORE (A + B + C + D)</b>				
A.	B.	C.	D.	TOTAL: (3 - 180)
<u>15</u>	<u>0</u>	<u>50</u>	<u>12</u>	<u>77</u>

Check here if Section VI has been used to amend the score for this Section of the NRS.	<input type="checkbox"/>
--	--------------------------

**IV. HUMAN POPULATION AND LAND USES**

SECTION 1

SECTION 2

IV.A. HUMAN POPULATION				
Residential Population Within 1/2 Mile	None 0	1 - 99 5	100 - 999 10	≥ 1,000 15
Institutions Within 500 feet	None 0		One or More 10	
On-Site Workers	None 0	1 - 99 5	100 - 999 10	≥ 1,000 15

IV.B. AQUIFERS		
Sole Source Aquifer	No 0	Yes 25
Potentially Productive Aquifer	No 0	Medium or High 15

IV.C. WATER USE						
Proximity of Disposal Site to Public Drinking Water Supply Source	Not Applicable (NA) 0			Zone A 20	Zone II, IWPA, or SW Intake ≤ 400' 50	
Persons Served by Public Drinking Water Supply	NA 0	25 - 999 5	1,000 - 4,999 10	5,000 - 49,999 20	≥ 50,000 25	
Private Water Supplies Within 500 Feet	None 0		Commercial Industrial 10	Agriculture Residential (Not Ingested) 15	Drinking Food Processing 25	
Alternative Public Water Supply Available (Viable Public Water Supply in Disposal Site Community and Public Water Connection ≤ 500 Feet from Site)	Yes 0			No 25		

SECTION IV SCORE (A + B + C)			
A. 25	B. 0	C. 0	TOTAL: (0 - 205) 25

Check here if Section VI has been used to amend the score for this Section of the NRS.

V. ECOLOGICAL POPULATION

V.A. ENVIRONMENTAL RESOURCE AREAS			
RESOURCE	LOCATION		
Area of Critical Environmental Concern	> 500' from Site 0	≤ 500' from Site 20	On-Site 30
Species of Special Concern, Threatened or Endangered Species Habitat	> 500' from Site 0	On-Site or ≤ 500' from Habitat 30	
Wetlands, Certified Vernal Pool, or Outstanding Resource Water	> 100' from Site 0	≤ 100' from Site 20	On-Site 30
Fish Habitat	> 500' from Site 0	≤ 500' from Site 20	On-Site 30
Protected Open Space (Local/State/Federal/Trustee)	> 500' from Site 0	≤ 500' from Site 20	On-Site 30

SCORE SECTION V.B. ONLY IF SECTION V.A. SCORE IS ≥ 30.

V.B. ENVIRONMENTAL TOXICITY SCORE	
<i>Highest Environmental Toxicity Score From Table V.B. or Worksheet V.B.1. on Following Pages.</i>	
OHM Scored: <u>Naphthalene and Vinyl Chloride</u> Concentration and Media: <u>0.02 µg/g of Vinyl Chloride and 2.0 0 µg/g Naphthalene in soil</u>	Toxicity Score (1 - 35)  <u>5</u>

SECTION V. SCORE (A. + B.)		
A.  30	B.  5	TOTAL: (0 - 185)  35

Check here if Section VI has been used to amend the score for this Section of the NRS.	<input type="checkbox"/>
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**PHASE I REPORT  
 THE SHOP (COVITCH PROPERTY)  
 WHITINSVILLE, MASSACHUSETTS  
 MADEP No. 2-0112**

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- F. Geoprobe Soil Boring Logs
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## 1.0 GENERAL SITE INFORMATION

### 1.1 Introduction

CEH-Jacques Whitford (CEH-JW) has prepared a Phase I report for The Shop (Covitch Property) at One Main Street, Whitinsville (Northbridge), Massachusetts. This property is currently owned by Sidney Covitch, Trustee of Whitinsville Redevelopment Corporation and will be referred to as the subject property in this report. The Phase I Report has been prepared in accordance with the Massachusetts Department of Environmental Protection (MADEP) - Massachusetts Contingency Plan (MCP) Section 310 CMR 40.0480.

A MADEP Licensed Site Professional (LSP) has reviewed this Phase I report and prepared a numerical ranking system scoresheet in accordance with 310 CMR 40.1511. The total score for the site is 197. The scoresheet is attached to this report. It is the opinion of the LSP that the site should be classified as Tier II.

#### 1.1.1 Release Information

The subject property was listed as a confirmed MADEP hazardous waste site (MADEP Release Number 2-00112) on October 10, 1987 as a result of the identification of release(s) of cutting oil, volatile organic compounds (VOCs), and heavy metals in soil and groundwater adjacent to the Building 9/Raceway. Reportedly the release(s) were associated with leakage of spent lubricating oil from scrap metal dumpsters formerly stored in this area. A Short Term Measure (STM) under the pre-1993 MCP was conducted in 1987 to remediate these release(s). The STM consisted of groundwater removal and treatment. The groundwater removal system included an interceptor trench/recovery well system. Groundwater treatment included an oil product recovery system and an air stripping tower. This system was in operation for approximately 1 year. No free product was measured in the groundwater monitoring wells during the STM remediation. The STM is discussed further in Section 4.1.

Under the post-1993 MCP, the release area was classified as a transitional confirmed, non-priority disposal site in accordance with 310 CMR 40.0636, and required an LSP opinion submittal to MADEP as to whether further action under the MCP was required. The required date for this submittal was August 2, 1995, as defined in 310 CMR 40.0636. A letter dated January 8, 1997 from the MADEP to the property owner, indicated that MADEP had not received a status submittal and that the release site had defaulted to a Tier I status in accordance with (310 CMR 40.0636(7)). The letter requested that either a Response Action Outcome Statement, Phase I Report/Tier Classification or a Downgradient Property Status be submitted to MADEP by March 14, 1997.

### 1.1.2 Purpose of the Phase I Investigation

The purpose of the Phase I Investigation is to collect sufficient information regarding the environmental setting, potential hazardous substance or petroleum product source areas, nature and extent of known contamination and the potential migration and exposure pathways at the subject property, in order to meet the requirements of the Numerical Ranking System and Tier Classification process described in 310 CMR 40.0500. Since the release on the subject property is currently a Tier I site by default, the specific objective of this investigation is to provide supporting documentation to accurately reclassify the release as a Tier II site.

## 1.2 Site Description

The subject property is a 32-acre facility located directly west of the downtown portion of Whitinsville, a village within the town of Northbridge, Massachusetts. The property location is shown on Figure 1. The UTM coordinates for the property are North: 42° 06' 35" and East: 71° 40' 19".

The subject property extends across both the north and south sides of the Mumford River and is bounded to the east by the Town Hall, to the west by the property commonly referred to as the "Arcade Property", to the north by Main Street, and to the south by the Mumford River and further south by Douglas Road. A large dam exists about 1000 feet inside the western property boundary, and a smaller dam is at the eastern property boundary. The overall parcel is approximately 2,500 feet long on both sides of the Mumford River. The property boundaries and buildings are shown on the Site Plan, Figure 2. Photographs of the property are included in Appendix A.

The subject property is almost completely developed with a variety of large manufacturing facilities dating back to the last century. There are reportedly 22 current tenants located on the property. The types of operations at the site are discussed further in Section 2.1. The estimate of the total number of workers at the subject property is reportedly over 100. Tenant information was provided by Kroll Environmental Enterprises, Inc. (Kroll, 1996) and is contained in Appendix B. The land surrounding the site is zoned as industrial, residential and commercial. There are approximately 2,150 people living within a one-mile radius of the site. The mill is in the most densely populated portion of the village. The nearest off-site building is less than 0.1 miles away.

### **1.3 Nearby Areas of Critical Environmental Concern**

A MAGIS site scoring map is presented as Figure 3 which shows MADEP mapped areas of critical environmental concerns in proximity to the subject property. There are no known institutions as defined by MCP 310 CMR 40.0006 within 500 feet of the property. The only natural resource area within 500 feet of the subject property is the Mumford River/Whitin Pond. The river and pond are used for recreational fishing. The subject property is not located in a wellhead protection area but the boundary of a nearby wellhead protection area (Well 2216000-03G) is within a 0.5 mile radius of the subject property.

The Natural Heritage & Endangered Species Program, reported that there are no Massachusetts listed "rare wetland species of wildlife" inhabiting an area within 0.5 miles of the subject property (MSCA, 1991). The Blackstone River, however, contains the habitat of a rare species of wetland wildlife, approximately 5.0 to 5.5 miles downstream of the subject property.

### **1.4 Status of the Subject Property Under Federal Regulations**

A Site Investigation (SI) was conducted in June 1991 by EPA/RCRA. The RCRA information reviewed indicated a status of "converter" for the ATF Davidson Co., Inc. facility (MSCA, 1991). A "converter" is a former TSDF facility which changed status to that of a generator-only after November 19, 1980. Although this facility is subject to RCRA Corrective Action authorities, EPA/RCRA concluded that the completion of a Site Investigation (SI) under CERCLIS would be the best course of action for the subject property (MSCA, 1991). The CERCLIS number for the property is MAD046128559.

The SI Investigation concluded that the contamination at the subject property consisted of oil and low level VOCs in the area of the Building 9/Raceway. The SI recommended resampling of on-site wells, further characterization of the coal ash disposal area and the preparation of a Hazardous Ranking Score under CERCLA.

## 2.0 SITE HISTORY

### 2.1 Owner/Operator and Operations History

Currently the subject property is owned by the Sidney Covitch, Trustee of Whitinsville Redevelopment Corporation who purchased the property in 1984. The property is used for various purposes ranging from contract manufacturing (machine and mechanical electrical assembly) to warehousing, paint recycling, furniture distribution, and other light manufacturing. A complete list of the tenants at the subject property is provided in Appendix B. Appendix B also contains general information, hazardous materials information, and waste management information for each tenant.

The Whitin Machine Works produced textile machines at the subject property location from approximately 1837 to 1979. In 1979, the company converted to the production of graphic arts equipment. A historic site map included in Appendix B illustrates the historic building layouts and former uses. Whitin Machine Works ceased operations in 1982.

Between 1941 and 1945, 85 percent of the facility was converted to war production. After the war, production of textile machines resumed. Major foundry processes at the subject property from 1837 to 1979 included metal casting, finishing, and heat-treating.

Electrical Transformer information is contained in Appendix C and data on current and former underground storage tanks (USTs) and aboveground storage tanks (ASTs) are included in Appendix D.

### 2.2 Oil and Hazardous Material Use and Storage History

Current waste management practices are summarized in Appendix B, Tenant Information. An environmental risk management survey was conducted by WRT and Kroll Environmental Enterprises in 1996. Each tenant completed an environmental risk management questionnaire which requested information concerning usage of hazardous materials, storage of hazardous wastes, and generation of wastes (hazardous and non-hazardous).

#### 2.2.1 Underground and Above Ground Storage Tanks

The location, size, contents and status of known aboveground and underground tanks is provided in Appendix D. A letter from Knoll Environmental dated September 11, 1996 (Appendix D) provides a summary of the UST/AST status since 1985. Reportedly only a 5,000-gallon No.2 fuel oil UST and a 275-gallon diesel fuel AST are currently active on the subject property. The locations of these tanks are shown on Figure 2.

Based upon the UST/AST information provided in the Kroll letter (Drawas, 1996), CEH-JW performed an inspection in May 1996 of the AST/USTs discussed in that letter. The purpose of this inspection was to document the current conditions of the areas surrounding the former or existing UST/ASTs and to note any visual signs of surface staining. The only visible signs of staining that were noted during this inspection were at the existing 275-gallon diesel fuel AST. The stains noted at this location were found to be limited to surficial soils surrounding the concrete pad underlying the tank, and suggest incidental spillage during current fueling operations. Photographs of this AST are presented in Appendix A. To confirm the extent of impacts of the incidental spillage around the AST, CEH-JW collected soil samples on December 20, 1996 around the concrete pad of the tank. The results of this sampling are discussed in Section 4.4.

No additional information was available regarding the current condition of the 5,000-gallon UST.

### 2.2.2 Electrical Transformers

During the Phase I Investigation, CEH-JW reviewed information on existing and former electrical transformers. This review included a transformer inspection report completed by Transformer Service, Inc. (TSI) in 1984. This information is included in Appendix C. Based upon this review, CEH-JW developed a short list of transformer locations requiring inspections. This list is included in Appendix C and consists of locations where equipment contained more than 2 parts per million (ppm) of PCBs (MADEP Method 1 GW-3/S-1 risk standard for PCBs) and where potential leaks were noted by the TSI inspection in 1984.

In May, 1996, CEH-JW conducted a site inspection of the 19 transformer locations included on the short list. Of the 19 transformers, only 3 displayed visible signs of possible releases. The locations of these transformers, Transformer-3, Transformer-110 and Transformer-217, are shown on Figure 2. On December 20, 1996, CEH-JW collected PCB samples from the area where the stains were observed to determine if an actual release of PCBs had occurred. The results of this sampling are discussed in Section 4.3.

## 2.4 Waste Management History

As discussed in Section 2.1, The Whitin Machine Works produced textile machines at the Covitch location from approximately 1837 to 1979. Waste from the foundry operations included virgin oil, volatile organic solvents, and heavy metals. Former waste management activities that have been identified included:

- Untreated electroplated wastewater was discharged to the Mumford River from 1930 to 1965 (MSCA, 1991). The practice was discontinued in 1965 when a wastewater treatment plant was installed. Treated wastewater was discharged to the Mumford River (NPDES permit MA0001252, issued 9/20/74) from 1965 until September 1982 when the treatment plant ceased operations (MSCA, 1991);
- Storage of oil soaked scrap metal in dumpsters resulted in the release(s) of cutting/lubricating oil in the soils and groundwater along the southern side of Building 9 (Raceway Area);
- Disposal of foundry and coal ash along the northwestern portion of the subject property (west of Building 12). Typically the ash consisted of approximately 90 percent spent foundry sand, 5 percent coal ash and 5 percent miscellaneous plating sludges and cutting oils.
- Disposal of foundry and coal ash on Douglas Road along south bank of the Mumford River. This area was graded and vegetated following disposal activities and prior to abandonment in the 1950s. Information obtained from the property owner suggests that this material is similar in composition to the foundry/coal ash material disposed of west of Building 12.

## 2.5 Environmental Permits Compliance History

Appendix B contains information concerning permits currently held by each of the tenants. Several of the tenants have EPA identification numbers for the generation of hazardous waste. There have been no reported violations of permit conditions.

During the CEH-JW file review, the only permit noted from the former foundry operations at the subject property was the NPDES permit MA0001252, issued on 9/20/74 for discharge of treated wastewater to the Mumford River.

### 3.0 SITE HYDROGEOLOGICAL CHARACTERISTICS

#### 3.1 Site Geology

The interpretation of geology of the subject property is based on information obtained from geologic logs of shallow soil borings and monitoring wells installed on the property between 1984 and 1986. A discussion of the borings and monitoring wells is presented below. Existing monitoring wells are shown on Figure 2 and well construction logs are reproduced in Appendix E.

In 1985, 15 overburden monitoring wells (MC-1 to MC-15) were installed on the subject property. Four wells (MC-4, MC-5, MC-8 and MC-9) met refusal (CEH, 1985). Monitoring wells were constructed of 1.5-inch diameter PVC riser with a 5-foot screen length. Native till was encountered in the lower portions of MC-1, MC-2, MC-5, MC-7, MC-13, and MC-14. Washed sandy river bottom sediments were observed at the bottom of MC-11. Foundry fill was encountered in MC-15 throughout the entire boring.

Five shallow borings (AP-101 to AP-105) were drilled in the Building 9/Raceway Area. Soil samples were collected for geologic classification and/or laboratory analysis. Monitoring wells were not installed in these borings.

The surficial geology at the subject property primarily consists of borrowed fill. The fill was brown (sometimes gray below the water table) silty, fine to medium sand with occasional coarse gravel, cobbles and small boulders. This characterization also closely resembled the native till in the area, and therefore, the borrow was believed to have been locally obtained.

The extreme western end of the property, however, is comprised of foundry fill, which is a fine to coarse sand and gravel with some pumice like material, foundry bed glass and ash. This foundry material was removed from the large foundry at the western end of the property and graded out into the river. This filling operation continued for years, creating a large land mass that stretches approximately 3,200 feet beyond the present western boundary of the subject property.

Based on the well construction logs, the minimum depth to bedrock at the subject property varies between 3.5 feet at MC-8 and 4.0 feet at MC-9. In general, the depth to bedrock is at least 10 feet. Bedrock was not encountered in MC-11, MC-12, MC-14, MC-15, AP-103, AP-104, and AP-105. Bedrock beneath the site is classified as Scituate Granite Gneiss, a gneissic granite containing biotite in small clots.

Since the subject property is almost completely developed and either paved or under an existing building foundation, soils are classified as S-2 in accordance with 310 CMR 40.0933 over the majority of the property. The exception is along the western portion of the property in the vicinity of the ash disposal area. In this area, the soils are unpaved and exposed, and as such are classified as S-1.

### 3.2 Site Hydrogeology

The subject property is within the Blackstone River watershed basin. Surface topography on the property slopes towards the Mumford River and surface water runoff drains to the river.

Groundwater elevation data from the subject property, collected on December 18, 1996, are summarized on Table 1 and illustrated on the Groundwater Flow Map, Figure 4. The Mumford River acts as a discharge area for shallow groundwater flow. As shown on Figure 4, groundwater flows southward from the property to the river. The groundwater elevation data collected on December 18, 1996 are consistent with the groundwater data collected in July, 1985.

As discussed in Section 1.3, the subject property is not within a wellhead protection zone and the Mumford River is not used as a surface water drinking water supply, and as such the groundwater at the subject property is classified as GW-3 as defined by 310 CMR 40.0932. In addition, since groundwater on the property is less than 15 feet below ground surface (typically 5 to 9 feet below ground surface) the groundwater within 30 feet of occupied on-site buildings is also classified as GW-2.

In 1985, groundwater seepage velocity was calculated to be 3.5 feet/year in the site area, with the exception of the former coal-ash disposal area along the south bank of the river where a higher velocity (52 feet/year) was estimated (CEH, 1985). The groundwater elevation data collected in December 1996 indicated flow velocities consistent with the 1985 calculations. Hydraulic conductivity is approximately  $1 \times 10^{-3}$  cm/sec in areas of foundry fill (based on grain size analysis) and  $1 \times 10^{-5}$  cm/sec over most of the subject property.

## 4.0 NATURE AND EXTENT OF CONTAMINATION

Based upon the information summarized in Section 2.2 and 2.4 regarding oil and hazardous material uses and management history of the subject property, four areas have been identified for further discussion and evaluation relating to the nature and extent of possible contamination for consideration during the Tier Classification process. These areas include: Building 9/Raceway; electrical transformer locations; AST/UST locations; and the foundry ash /coal ash disposal area, west of Building 12. The coal ash area located on Douglas Road is not included in this evaluation since it is not contiguous with the area of the original oil and VOCs release reported to the MADEP in 1987.

### 4.1 Building 9/Raceway Area

The location of the Building 9/Raceway area is shown on Figure 5. In 1985, a total of 11 soil samples (S-1,S-2, S-3, S-4, S-5, S-6 from AP104 and S-1, S-2, S-3, S-4 and S-6 from AP105) were collected from two shallow borings and analyzed for barium, oil and grease, total phenols, volatile organic compounds and priority pollutant metals. The borings were completed in the Building 9/Raceway area but the exact location was not specified. Groundwater samples were also collected in 1985.

A summary of the results of the sampling is included on Table 2. One inorganic constituent, arsenic, was detected at elevated concentrations in AP-104 S-4 (98 mg/Kg), AP-104 S-5 (71 mg/Kg), and AP-104 S-6 (66 mg/Kg). Reasons for the elevated concentrations of arsenic, whether naturally occurring or having been implanted with the borrowed fill, were not known (CEH, 1985). Arsenic was not found at elevated levels in the AP-105 samples. Oil and grease were detected at concentrations ranging from less than 80 mg/Kg to 12,000 mg/Kg. The concentrations of all volatile organic compounds were less than the laboratory reporting limits. These data are summarized in Table 2. Complete laboratory reports for these analyses are presented in Appendix G.

Groundwater samples were collected from on-site monitoring wells in 1985 and analyzed for barium, total cyanide, VOCs and oil and grease. Laboratory reports are included in Appendix F. No VOCs were reported above laboratory detection limits in the samples collected. Phenols were found at 12 ug/L and 16 ug/L in MC-7 and MC-14 respectively. Oil and grease was also reported in monitoring wells MC-7 and MC-14 at 2,000 ug/L and 24,000 ug/L respectively.

Based upon the CEH 1985 soil sample data from the Building 9/Raceway area, an interceptor/recovery well system was installed in January 1986 by Nepcco International Corporation (NEPCCO, 1987), as part of a Short Term Remedial Measure (STM). The interceptor trench was approximately 150 feet long and ran parallel to Building 9. A 12-inch recovery well was installed at the eastern end of the trench. Groundwater was pumped to an oil water separator and then to a 65 foot, 18 inch diameter air stripping tower erected along the side of Building 9. The air stripping tower is still in place and is shown on a photo included in Appendix A.

The average water flow rate of the system was between 1 and 2 gallons per minute. The groundwater recovery and treatment system became operational on June 20, 1986 and was discontinued as per the verbal authorization from the MADEP (formerly the MADEQE) on June 17, 1987. The decision to shut down the system was based on the February, 1987 groundwater sampling results from the influent to the air stripper system (see sampling results on Table 3). No confirmation samples of the remaining levels of VOCs or total petroleum hydrocarbons (TPHs) in soils were collected during this time.

On December 17, 1996, eight geoprobe borings were advanced along edges of the interceptor trench located to the north of the raceway to assess the current nature and extent of soil contamination in this area. The location of these borings are shown on Figure 5. The borings were advanced to depths between 6 and 8 feet below ground surface. Geoprobe boring logs are included in Appendix F. Composite samples were collected from GP-2, GP-4, GP-6, and GP-8 and submitted for analysis of VOCs by Method 8260, semi-volatile organic compounds (Semi-VOCS) by Method 8270, TPH by Method 8100 and PPMs. Sample selection was based upon VOC field screening results and visual inspection of the samples. The chain of custody and laboratory reports for these samples are included in Appendix H. Summary of the soil sampling results are presented on Table 4.

The results of VOC analysis, Semi-VOC analysis, and PPM analysis were below the S-2 GW-3/S-1 and GW-3/S-2 MCP Method 1 risk standards. Only TPH was detected at concentrations above these standards. The maximum concentration of TPH was detected in GP-6 at 13,000 mg/Kg. This concentration exceeds the MCP upper concentration limit (UCL) of 10,000 mg/Kg (310 CMR 40.0996(5)). The definition of the UCL is a concentration which, if exceeded, indicates a potential for significant risk of harm to public welfare and the environment under future conditions. TPH was also detected at GP-2 and GP-4 at concentrations of 3,500 mg/Kg and 5,800 mg/Kg respectively, exceeding both the GW-3/S-1 and GW-3/S-2 MCP Method 1 risk standards.

Groundwater samples were collected from observation wells OW-2, OW-3, MC-14, MC-15, and recovery well RW-1 in December, 1996. The samples were analyzed for VOCs, TPH, Semi-VOCs, and PPMs. The metals were filtered in the field and preserved to a pH of less than 2.

The compounds detected in this sampling are summarized in Table 5. Tetrachloroethene (PCE) was detected below the MCP Method 1 GW-2/GW-3 risk standards of 3,000/5,000 ug/L at a concentration of 3 ug/L in OW-3. TPH was detected below the MCP standard of 50 mg/L at a concentration of 1.1 mg/L in RW-1. Except for zinc, no PPMs were detected above the laboratory detection limits. Zinc was detected in the four samples below the MCP standards. All Semi-VOCs were below the laboratory detection limits and are therefore not shown in Table 5. Complete laboratory reports for these analyses are presented in Appendix H.

## 4.2 Electrical Transformer Locations

At location Transformer-3 (located along the southern edge of Building 12) the transformer had been removed and only a concrete pad remained. Slight staining was noted along the edges of the pad and the ground surface adjacent to the pad. A 6-point composite surface soil sample (0-0.5 feet below ground surface) (Trans-3) was collected in December 1996, along the edge of the pad where the staining was observed. At location Transformer -110 (located inside Building No.10) a grab sample (Trans-110) of residual oily dirt from the concrete floor beneath the footprint of the former transformer was collected. At location Transformer-217 (located on the outside the second floor of Building No. 10) a grab sample (Trans-217) was collected from the oily dirt found within the containment of the existing set of transformers.

The transformer samples were submitted for PCB laboratory analysis. The results are summarized on Table 6. The sample results from locations Trans-3 and Trans-217 were below laboratory detection limits. The concentration of PCBs at location Trans-110 was reported to be 400,000 ug/Kg. Note that this sample was collected from the floor beneath the former transformer; sample results are, therefore, not representative of a release to the environment (e.g., soil or groundwater) outside of a building. This condition does not meet the definition of a release under the MCP (310 CMR 40.0006) but is subject to federal regulations (i.e., Federal Toxic Substance Control Act (TSCA)) and will require cleanup under TSCA.

## 4.3 Foundry Ash/Coal Ash Disposal Area (West of Building 9)

On December 20, 1996, CEH-JW collected 2 shallow soil samples (0 to 2 feet below ground surface) from the ash disposal area of the subject property. The samples were submitted for analysis of polynuclear aromatic hydrocarbons (PAHs) by Method 8270 and PPMs. The compounds that were detected in this sampling are summarized in Table 7. Complete laboratory reports for these analyses are presented in Appendix H.

PAHs were not detected above laboratory detection limits in any of the samples. Beryllium was detected in sample ASH-1 at a concentration of 1 mg/Kg which exceeds the MCP GW-3/S-1 risk standard of 0.7 mg/Kg. Chromium was detected in ash sample ASH-2 at 1,000 mg/Kg which is the MCP GW-3/S-1 risk standard for chromium. Additional sampling of this materials is required to confirm MCP exceedances and to assure sampling data is representative of the disposal area.

#### 4.4 AST/UST Areas

Soil samples were collected by CEH-JW on December 20, 1996 in the vicinity of the 275-gal AST to assess the potential impacts of stained soils observed near the AST. A total of 6 soil samples were collected from shallow soils (0 - 1 feet below ground surface) at the base of the tank. From these samples, one composite soil sample was prepared. The sample was analyzed for Volatile and Extractable Petroleum Hydrocarbons per MADEP draft guidance issued on January 17, 1997 (VPH/EPH). Results for compounds that were detected in this sampling are presented in Table 8 and included in Appendix H. All concentrations were below either the MCP risk standards and/or the draft cleanup VPH/EPH standards issued by the MADEP.

Only limited information was available for the existing 5,000-gal UST. No evidence of spill or leaks were noted during the May 1996 inspection of the grounds surrounding the UST. No information regarding the tightness of the tank and use history was available.

## 5.0 MIGRATION PATHWAYS AND EXPOSURE POTENTIAL

The following section describes the migration pathways and potential exposures points associated with the release(s) of cutting/lubricating oil within the Building 9/Raceway area.

### 5.1 Environmental Receptors

Environmental receptors identified for the subject property included groundwater, surface water and air. The principle migration pathway for contamination encountered at the subject property consists of leaching of the TPH and PPM constituents from the unsaturated soils to the shallow groundwater system and into the surface water of the Mumford River. Since shallow groundwater discharges to the river and groundwater within 0.5 miles of the property is not used as a drinking water supply, the Mumford River is identified as the environmental receptor for this soil/groundwater migration pathway. The Mumford River is not used for a surface water drinking supply but is used for recreational fishing. Currently groundwater quality data indicates that TPH and PPM levels are below the GW-3 standards (groundwater discharge to surface water standard), suggesting no significant risk to the surface water receptor.

Since the subject property is paved and developed, the migration pathway of TPH and VOC constituents from the subsurface soils to air is assumed to be limited to migration of vapors into the foundations of the on-site buildings. The release(s) area currently identified (i.e., the raceway area) is generally downgradient of the occupied buildings on the subject property, and as such the vapor migration and risk of potential exposure to the air/vapor receptor, under current land use conditions, appears to be minimum.

### 5.1 Human Receptors

Since the raceway area is paved, direct human contact with the impacted soils is considered minimum under current site conditions. In addition, groundwater is not used as a drinking water supply. As such, the potential exposure due to consumption of groundwater under current conditions is also considered minimum.

## 6.0 CONCLUSIONS

The following conclusions are made regarding the environmental conditions at the subject property:

- The only natural resource area within 500 feet of the subject property is the Mumford River/Whitin Pond. The river and pond are used for recreational fishing. No Massachusetts listed "rare wetland species of wildlife" inhabit an area within 0.5 miles of the subject property;
- Storage of oil soaked scrap metal in dumpsters along the southern side of Building 9/Raceway area has resulted in the release of cutting/lubricating oil to the soils and groundwater within this area. Sampling results to date have indicated that soils in the vicinity of the Building 9/Raceway contain TPH constituents above the Method 1 risk standards. One soil sample from this area exceeded the MCP UCL of 10,000 mg/Kg. These results suggest that further action under the MCP (310 CMR 40.0000) will be required;
- Historic disposal of foundry and coal ash along the northwestern portion of the subject property has occurred. Samples collected from the ash disposal area indicated that beryllium in one sample (ASH-1) exceeded the GW-3/S-1 standard. Chromium was detected in one ash sample (ASH-2) at the GW-3/S-1 standard. Based upon this information, additional sampling within the ash disposal area is required to better define the PPM levels in this material and to determine whether exceedances in the MCP standards constitutes a release under the MCP. Disposal of foundry and coal ash also occurred on Douglas Road, along the south bank of the Mumford River. Information obtained from the property owner suggests that this material is similar in composition to the foundry/coal ash material disposed of west of Building 12. The foundry/coal ash located on Douglas Road was not included in the Tier Classification evaluation since it is not contiguous with the area of the original oil and VOCs release reported to the MADEP in 1987;
- Subsurface soils consist of sandy fill material and are classified as S-2 except along the western portion of the property in the vicinity of the ash disposal area. In this area the soils are unpaved and exposed, and as such are classified as S-1;

- Groundwater is encountered between 6 and 9 feet below ground surface and flows towards the Mumford River. The subject property is not within a wellhead protection zone and the Mumford River is not used as a surface water drinking water supply, and as such the groundwater at the subject property is classified as GW-3. In addition, since groundwater on the property is less than 15 feet below ground surface, the groundwater within 30 feet of occupied on-site buildings is also classified as GW-2. During the December 1996 sampling event, tetrachloroethene (PCE) was detected below the MCP Method 1 GW-2/GW-3 risk standards of 3,000/5,000 ug/L at a concentration of 3 ug/L in OW-3. TPH was detected below the MCP standard of 50 mg/L at a concentration of 1.1 mg/L in RW-1. Except for zinc, no PPMs were detected above the laboratory detection limits. Zinc was detected in the four samples below the MCP standards. Current levels of contamination in groundwater are below MCP GW-3 standards, suggesting no significant risks to the identified downgradient receptors;
- Soil sampling results of soils surrounding the 275-gallon diesel fuel AST indicated that TPH constituents were below MADEP risk based standards. Based upon this data no further action is required for the AST location. Only limited information was available for the existing 5,000-gal UST. No evidence of spill or leaks were noted during the May, 1996 inspection of the grounds surrounding the UST. Additional information is required regarding the tightness of the tank and use history prior to concluding that no further action is required for this UST. Also information detailing the closure of former USTs should be obtained to assure no outstanding environmental issues remain from these tanks;
- The concentration of PCBs detected on the concrete floor at former transformer location Trans-110 was 400,000 ug/Kg. This sample was collected from the floor beneath the location of the former transformer, the sample result therefore is not representative of a release to the environment (e.g., soil or groundwater) outside of a building. This condition does not meet the definition of a release under the MCP (310 CMR 40.0006) but is subject to federal regulations (i.e., Federal Toxic Substance Control Act (TSCA)) and will cleanup under TSCA; and
- The Numerical Ranking System scoresheet was completed in accordance with 310 CMR 40.1511. The total score for the site is 197. Based upon this score, the release site is classified as Tier II.

## 8.0 SELECTED REFERENCES

Caswell, Eichler & Hill, Inc. 1985. Monitoring Well Installation and Soil and Groundwater Quality Analyses, Sidney Covitch Properties, Whitinsville, Massachusetts, September, 1985.

Drawas, N. 1996. Letter to C. Gendron (CEH), RE: Whitinsville, MA. Letter from N. Drawas, Kroll Environmental Enterprises, Inc., September 11, 1996.

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MSCA. 1991. MSCA Site Inspection (SI) Report, ATF Davidson Co., Inc., Main Street Northbridge (Whitinsville), Massachusetts 01588.

NEPCCO, Inc./I.T. Corporation. (date unknown). Remedial Action Summary Report, 300 Phillipi Road, Whitinsville, Massachusetts.

TABLES

FIGURES

Table 2 Soil Sampling Results (1985)  
 The Shop (Covitch Property)  
 Whitinsville, Massachusetts

Concentrations Reported in mg/Kg (ppm)

Analyte	AP104 S-1	AP104 S-2	AP104 S-3	AP104 S-4	AP104 S-5	AP104 S-6
Arsenic	8.4	8.5	11	98	71	66
Barium	51	77	65	93	560	550
Beryllium	0.11	0.23	0.27	0.28	1.5	2.4
Cadmium	0.69	0.59	0.56	0.75	<0.4	<0.4
Chromium	4.8	5.1	7.8	5.9	1.3	<0.5
Copper	8.2	6.5	8.6	8.5	1.9	2.1
Nickel	3.9	3.6	3.9	3.9	19	19
Lead	4.2	<3	4.2	4.9	7.5	<3
Zinc	53	64	58	73	230	180
Oil&Grease	10,000	12,000	180	470	<80	1,000

Analyte	AP105 S-1	AP105 S-2	AP105 S-3	AP105 S-4	AP105 S-5
Arsenic	13	12	8.9	11	15
Barium	74	93	83	120	110
Beryllium	0.27	0.28	0.19	0.51	0.31
Cadmium	0.48	0.6	0.65	<0.4	0.43
Chromium	9.8	9.1	4.8	8.9	16
Copper	7	5.1	6.9	21	22
Nickel	4.4	3.3	3	8.9	9
Lead	5.7	<3	8	<3	36
Zinc	64	61	56	68	150
Oil&Grease	<80	1,800	<15	<15	1,200

Notes:

<3 Below laboratory practical quantification limit (PQL).

Results from CEH (1985).

Table 1 Water Level Data  
 The Shop (Covitch Property)  
 Whitinsville, Massachusetts  
 December 18, 1996

Well Identification	TOC Elevation (ft msl)	Depth to Water (feet below TOC)	Water Level Elevation (ft msl)
MC-7	297.34	8.29	289.05
MC-10	313.97	7.55	306.42
MC-14	337.71	6.27	331.44
MC-13	320.11	4.42	315.69
MC-12	313.89	7.02	306.87
MC-15	313.09	5.61	307.48
OW-3	311.24	6.70	304.54
OW-2	311.42	6.77	304.65
RW-1	303.51	7.05	296.46

**Notes:**

ft msl                      Feet above mean sea level.  
 TOC                         Top of PVC casing.

Table 4 Summary of Soil Samples Collected in Building 9/Raceway Area  
The Shop (Covitch Property)  
Whitinsville, Massachusetts  
December 17, 1996

VOCs	GP-2	GP-4	GP-6	GP-8	MCP Standard {1}	
	ug/Kg	ug/Kg	ug/Kg	ug/Kg	GW-3/S-1	GW-3/S-2
sec-Butylbenzene	<10	<10	20	<10	NS	NS
1,1-Dichloroethane	<10	10	150	<10	100,000	500,000
cis-1,2-Dichloroethene	<10	100	20	<10	100,000	500,000
trans-1,2-Dichloroethene	<10	30	<10	<10	500,000	1,000,000
p-Isopropyltoluene	<10	<10	40	<10	NS	NS
Methylene chloride	20	30	10	20	100,000	200,000
Naphthalene	<10	<10	70	<10	100,000	1,000,000
Toluene	10	<10	<10	210	500,000	1,000
Trichloroethene	<10	20	<10	10	70,000	100,000
1,2,4-Trimethylbenzene	<10	<10	300	<10	400,000	NS
1,3,5-Trimethylbenzene	<10	<10	190	<10	400,000	NS
Vinyl Chloride	<20	20	<20	<20	300	500
m,p-Xylene	<10	<10	10	<10	500,000	1,000,000
o-Xylene	<10	<10	20	<10	500,000	1,000,000
<b>SEMI-VOCs</b>	<b>ug/Kg</b>	<b>ug/Kg</b>	<b>ug/Kg</b>	<b>ug/Kg</b>	<b>ug/Kg</b>	<b>ug/Kg</b>
Naphthalene	<700	<1000	2,000	<700	100,000	100,000
2-Methylnaphthalene	<700	2,000	4,000	2,000	7,000	7,000
<b>TPH</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>
	<b>3,500</b>	<b>5,800</b>	<b>13,000</b>	1,900	500	2,500
<b>Total Metals</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>	<b>mg/Kg</b>
Arsenic	NA	5	6	NA	30	30
Barium	NA	47	43	NA	1,000	2,500
Cadmium	NA	1	0.92	NA	30	80
Chromium	NA	14	10	NA	1,000	2,500
Lead	NA	60	54	NA	300	600
Mercury	NA	<0.2	<0.2	NA	20	60
Selenium	NA	<2	<2	NA	400	2,500
Silver	NA	<0.2	<0.2	NA	100	200

**Notes:**

mg/Kg Milligrams per kilogram, equivalent to parts per million.  
 NA Not analyzed.  
 NS No MCP Standard.  
 TPH Total Petroleum Hydrocarbons.  
 ug/Kg Micrograms per kilogram, equivalent to parts per billion.  
 <10 Below laboratory practical quantification limit (PQL).

Results indicated in bold were above MADEP standard.

{1} MCP Method I Risk Standard 310 CMR 40.0975(6)(a)

Table 3 Groundwater Quality at Air Stripper Influent (1987)  
The Shop (Covitch Property)  
Whitinsville, Massachusetts

Concentrations in ug/L (ppb)

Sample Date	Total VOCs
6/13/86	102
6/24/86	748
7/8/86	117
7/18/86	130
7/23/86	112
8/6/86	187
11/5/86	113
12/16/86	39
1/5/87	54
2/11/87	41

**Notes:**

Results from Neppco (1987).  
EPA Method 601/602

Table 6 Summary of PCB Sampling at Three Transformer Locations  
 The Shop (Covitch Property)  
 Whitinsville, Massachusetts  
 December 20, 1996

Analyte	Trans-3	Trans-110	Trans 217-221	TSCA Stanard
PCBs	<100	400,000	<500	25,000

**Notes:**

Concentrations reported in ug/Kg.

Compound detected in sample Trans-110 was PCB-1260.

<100 Below laboratory quantification limit (PQL).

TSCA Standard EPA Code of Federal Regs., Title 40, Subchapter R - TSCA Part 761

Table 5 Summary of Groundwater Samples  
 The Shop (Covitch Property)  
 Whitinsville, Massachusetts  
 December 20, 1996

	OW-2	OW-3	MC-14	MC-15	RW-1	MCP Standard {1}	
						GW-2	GW-3
VOCs (ug/L)							
Tetrachloroethene	<2	3	<2	<2	<2	3,000 ug/L	5,000 ug/L
Dissolved Metals (ug/L)							
Zinc	75	83	NA	28	49	NS	900 ug/L
TPH (mg/L)	<500	<500	<500	<500	1.1	NS	50 mg/L

**Notes:**

- mg/L milligrams per liter, equivalent to parts per million.
- NA Not analyzed.
- NS No MCP standard.
- TPH Total Petroleum Hydrocarbons analyzed by Method 8100 (mod).
- < Below laboratory practical quantification limit (PQL).
- Results indicated in **bold** were above MADEP standard.
- {1} MCP Method I Risk Standard 310 CMR 40.0975(6)(a)

Table 8 Summary of Soil Sampling Results Surrounding the 275-Gallon AST  
 The Shop (Covitch Property)  
 Whitinsville, Massachusetts  
 December 20, 1996

Analyte	Concentration (mg/Kg)	MCP Standard (1)	MCP Standard (2)
		GW-3/S-1 (mg/Kg)	GW-3/S-1 (mg/Kg)
C9-C18 Aliphatics	20	2,000	NS
C19-C36 Aliphatics	40	2,500	NS
C10-C22 Aromatics	14	800	NS
Total TPH	74	NS	500
Target PAH Analytes			
Phenanthrene	0.4	NS	100
Flouranthene	0.6	1,000	600
Pyrene	0.6	700	500
Benzo[a]anthracene	0.2	NS	0.7
Chrysene	0.3	NS	7
Benzo[b]fluoranthene	0.2	NS	0.7
Benzo[a]pyrene	0.2	NS	0.7

**Notes:**

Sample analyzed for Extactable Petroleum Hydrocarbons and targeted Volatile Petroleum Hydrocarbons by MADEP draft Methods.  
 Results for VPH were all less than detection limit.

NS No draft standard per MADEP Draft document, January 17, 1997.

Results indicated in **bold** were above MADEP standard.

(1) Draft standards based from MADEP Draft document, January 17, 1997.

(2) MCP Method 1 risk standard 310 CMR 40.0975(6)(a)

FIGURES

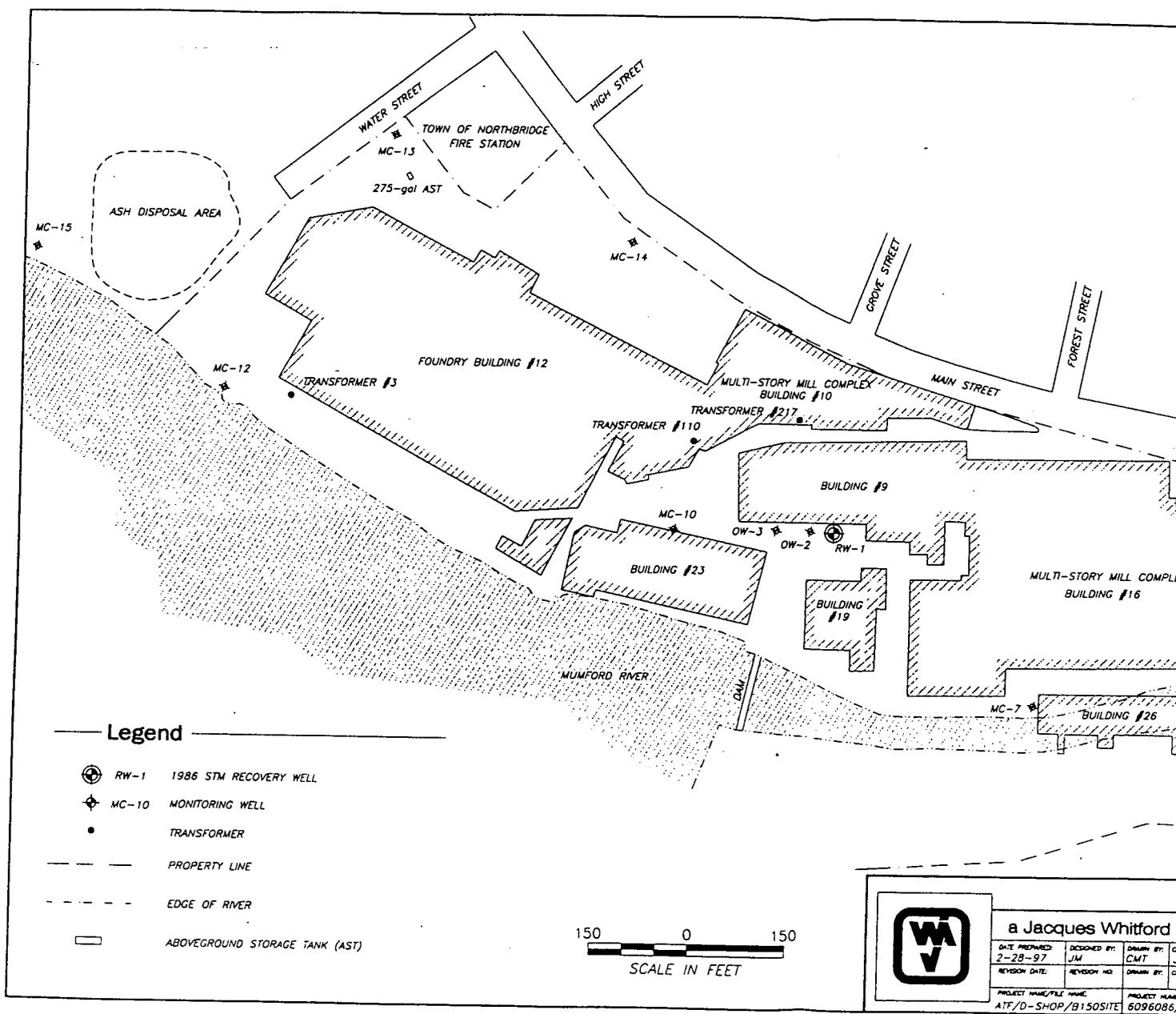
Table 7 Summary of Foundry/Coal Ash Sampling Results  
 The Shop (Covitch Property)  
 Whitinsville, Massachusetts  
 December 20, 1996

Concentrations in mg/Kg (ppm)

	ASH-1	ASH-2	MCP Standard {1}
			GW-3/S-1
Arsenic	3	<2	30
Beryllium	<b>1</b>	0.6	0.7
Cadmium	0.6	0.7	30
Chromium	8.3	1,000	1,000
Copper	28	120	NS
Lead	8	88	300
Mercury	0.2	<0.2	20
Zinc	74	88	2,500
Nickel	63	48	300

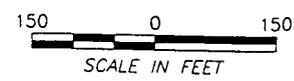
**Notes:**

- mg/Kg            Milligrams per kilogram, equivalent to parts per million.
  - NS                No MCP Standard
  - <2                Below laboratory practical quantification limits.
  - {1}                MCP Method 1 risk standard 310 CMR 40.0975(6)(a)
- PAHs were analyzed for but were not detected at concentrations above reporting limits.  
 Results indicated in **bold** were above MADEP standard.



**Legend**

-  RW-1 1986 STM RECOVERY WELL
-  MC-10 MONITORING WELL
-  TRANSFORMER
-  PROPERTY LINE
-  EDGE OF RIVER
-  ABOVEGROUND STORAGE TANK (AST)



**a Jacques Whitford**

DATE PREPARED: 2-29-97	DESIGNED BY: JM	DRAWN BY: CMT	CHECKED BY:
REVISION DATE:	REVISION NO:	DRAWN BY:	CHECKED BY:
PROJECT NAME/FILE NAME: ATF/D-SHOP/B150SITE		PROJECT NO: 6096086	

**SITE NAME:**

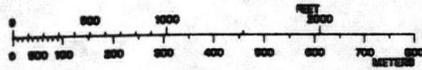
ATF/COVITCH  
 MAIN STREET  
 WHITINSVILLE (NORTHBRIDGE), MA  
 42 06 35n 71 40 19w

**MA DEP - Bureau of Waste Site Cleanup**

**Site Scoring Map: 500 feet & 0.5 Mile Radii**



May 14, 1996

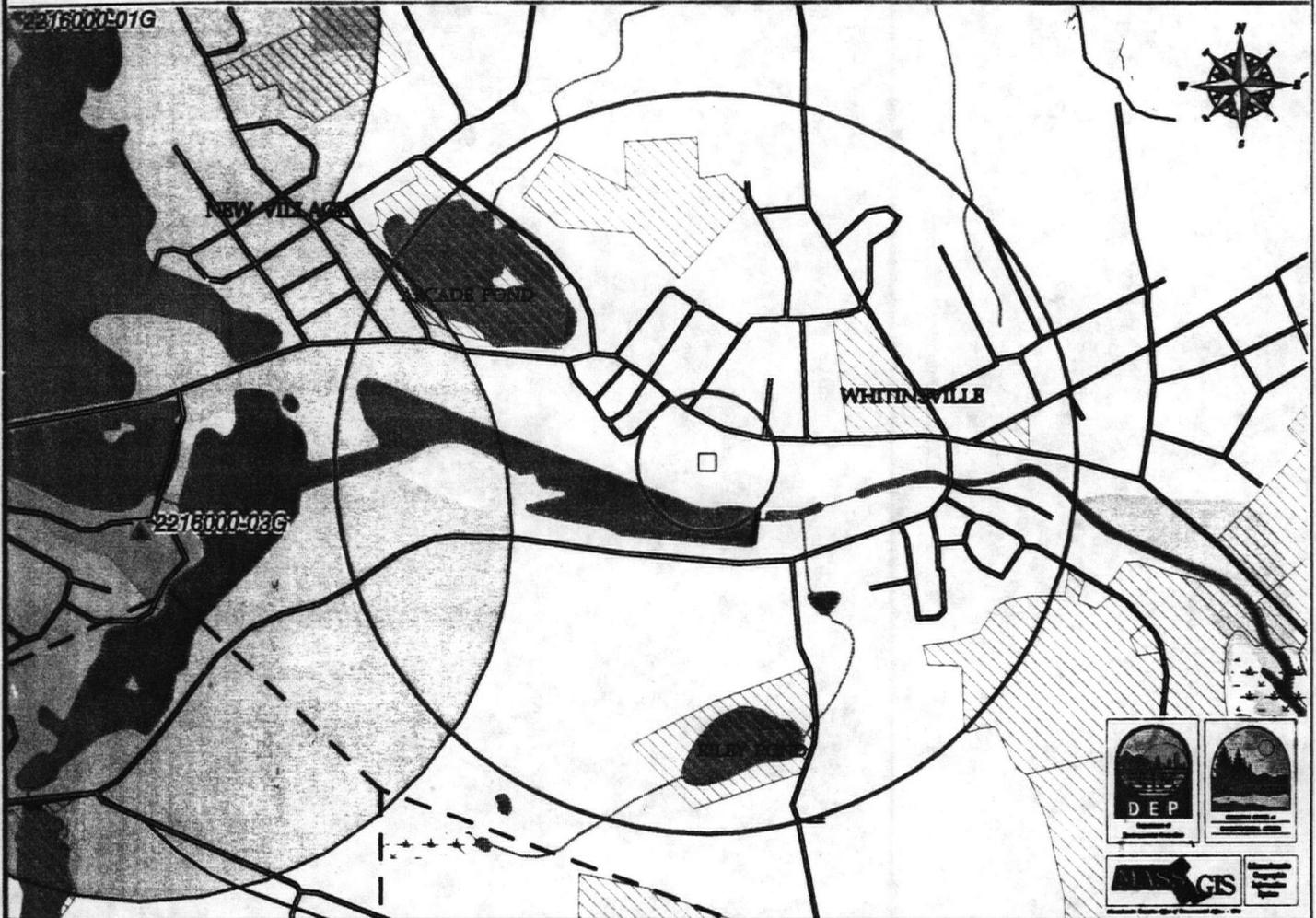


**SCALE 1:15000**

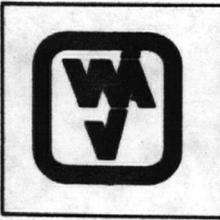
The information shown on this map is the best available at the date of printing. Please refer to the data source descriptions document.

- Potentially Productive Medium Yield Aquifer
- Potentially Productive High Yield Aquifer
- NOT Potentially Productive Medium Yield Aquifer
- NOT Potentially Productive High Yield Aquifer
- EPA Designated Sole Source Aquifers
- DEP Approved Wellhead Protection Area - ZONE 2
- Interim Wellhead Protection Area
- Public Surface Water Supply
- Lakes, Ponds, Other Fresh Water Features
- Bays, Estuaries, Other Salt Water Features
- Fresh Water Non-Forested Wetlands
- Salt Water Wetlands
- State, Federal, Municipal, Nonprofit and Private Open Space and Recreational Facilities
- Areas of Critical Environmental Concern
- DEP Permitted Solid Waste Facilities
- NHEHP Estimated Habitats of Rare Wetlands Wildlife 1986 - for use with Wetlands Protection Act ONLY

- State, U.S., Interstate Route markers
- Interstate Highway
- U.S. Highway
- State Highway
- Other Roads
- Municipal Boundary
- County Boundary
- Train
- Powerline
- Pipeline
- Aqueduct
- Major Drainage Basin
- Sub Drainage Basin
- Zone of Contribution
- Public Water Supply - Groundwater
- Public Water Supply - Surface Water
- Non Community Public Water Supply
- Certified Vernal Pools



**Caswell, Eichler & Hill, Inc.**



**a Jacques Whitford Company**

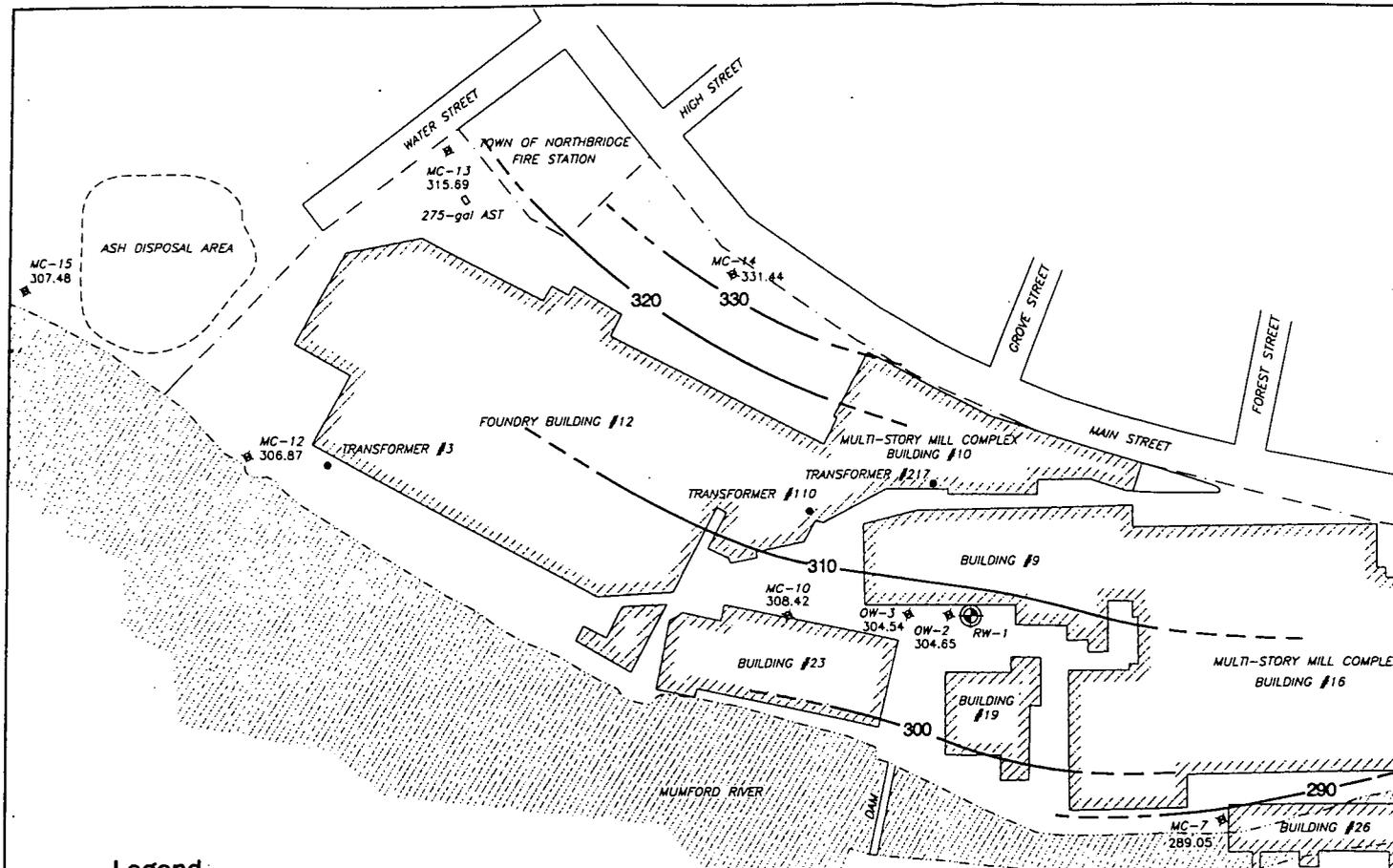
DATE PREPARED: 2-28-97	DESIGNED BY:	DRAWN BY: CMT	CHECKED BY: SBF	REVIEWED BY: JM
REVISION DATE:	REVISION NO.:	DRAWN BY:	CHECKED BY:	REVIEWED BY:
PROJECT NAME/FILE NAME: ATF/D-SHOP/ALOCUS		PROJECT NUMBER/PHASE: 6096086/1200		SCALE: 1:15000

**SITE SCORING MAP**  
 THE SHOP (COVITCH PROPERTY)  
 WHITINSVILLE, MASSACHUSETTS

DRAWING TITLE:

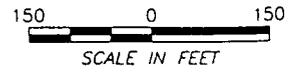
PREPARED FOR:  
WHITE CONSOLIDATED INDUSTRIES

FIGURE NO. **3**



**Legend**

- RW-1 1986 STM RECOVERY WELL  
(Water level not included in groundwater contours)
- MC-12 MONITORING WELL  
306.87 GROUNDWATER ELEVATION - DECEMBER 18, 1996
- TRANSFORMER
- PROPERTY LINE
- EDGE OF RIVER
- ABOVEGROUND STORAGE TANK (AST)
- 320 LINES OF EQUAL POTENTIOMETRIC HEAD  
(DASHED WHERE INFERRED)





**a Jacques Whitford**

DATE PREPARED 2-28-97	DESIGNED BY SBF	DRAWN BY CMT
REVISION DATE	REVISION NO.	DRAWN BY
PROJECT NAME/FILE NAME AT/70-SHOP/01M 1296		PROJECT NUMBER 609601M



MULTI-STORY MILL COMPLEX  
BUILDING #10

TRANSFORMER #217

TRANSFORMER #110

BUILDING #9

INTERCEPTOR TRENCH

MC-10

OW-3

GP-2

GP-3

OW-2

RW-1

GP-8

GP-1

GP-4

GP-7

GP-6

GP-5

RACEWAY

BUILDING #23

BUILDING  
#19

### Legend

RW-1 1986 STM RECOVERY WELL

MONITORING WELL

TRANSFORMER

GEOPROBE BORING

50 0 50

SCALE IN FEET

## Caswell, Elchler & Hill, Inc.

a Jacques Whitford Company

DRAWING TITLE:

DATE PREPARED: 2-25-97

DESIGNED BY: SBF

DRAWN BY: CMT

CHECKED BY: SBF

REVIEWED BY: JM

REVISION DATE:

REVISION NO:

DRAWN BY:

CHECKED BY:

REVIEWED BY:

### LOCATION OF GEOPROBE BORINGS

THE SHOP (COVITCH PROPERTY)  
WHITINSVILLE, MASSACHUSETTS

PROJECT NAME/FILE NAME:

ATF/D-SHOP/A50GEO

PROJECT NUMBER/PHASE:

6096086/1200

SCALE:

1"=50'

PREPARED FOR:

WHITE CONSOLIDATED INDUSTRIES

FIGURE NO.

5





Department of  
Environmental Protection  
627 Main Street  
Worcester, MA 01608



U.S. P

11 METER 51

New Council Info  
Clean Copy for Site File

Roy F. Weston, Inc.  
217 Middlesex Turnpike  
Burlington, MA 01803

Attn: Mike Jennings