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ENVIRONMENTAL CONSULTING & MANAGEMENT
ROUX ASSOCIATES INC

ROUX

25 CORPORATE DRIVE
SUITE 230
BURLINGTON, MASSACHUSETTS 01803 TEL: 781-270-6600 FAX: 781-270-9066

October 31, 2001

Mr. D. Michael Light
Industri-Plex Site Remedial Trust
c/o Solutia Inc.
575 Maryville Centre Drive
St. Louis, Missouri 63141

Re: Source Area Investigation
Industri-Plex Site
Woburn, Massachusetts

Dear Mr. Light:

This interim letter report has been prepared by Roux Associates, Inc. (Roux) to present the results of the first two tasks of the Source Area Investigation being conducted at the Industri-Plex Superfund Site in Woburn, Massachusetts. In accordance with the Source Area Investigation Work Plan, dated September 15, 1999 and amended May 25, 2000, two separate areas of the Industri-Plex Superfund Site are being investigated to further evaluate the potential for residual sources of benzene and/or toluene to be present in these areas. The study areas, shown in Figure 1, include an approximately 200-foot by 300-foot area comprising the eastern half of the West Hide Pile and an irregularly shaped, approximately 250,000-square foot area on the south side of Atlantic Avenue, comprising the Vining (former C. Bain) and Graphique de France properties, and a portion of the Pacer property. To date, soil gas and geophysical surveys have been conducted at both study areas.

Soil gas surveys were conducted at both study areas by Pine & Swallow Associates, Inc. (PSA), of Groton, Massachusetts, with oversight provided by Roux. Tabulated results of the soil gas surveys are provided in Attachment 1. Benzene concentrations detected in soil gas at the two study areas are depicted in Figures 2 and 3. In these figures, a grid of squares was drawn overlaying the sampling grid, with the sampling point in the center of each square, and each square was assigned a color to indicate the range of the benzene concentration detected at the corresponding sampling point. The concentration range represented by the various colors is shown in each figure.

Geophysical surveys were performed by Geophysics GPR International, Inc., of Westford, Massachusetts, with oversight by Roux. The geophysical surveys included magnetic (gradiometer), metal detecting (EM-61), and ground penetrating radar (GPR) surveys. The geophysical data are plotted in the Geophysics GPR International report

provided in Attachment 2. (Note: Roux Associates added colored labels to the EM-61 and GPR plots included in Attachment 2 to indicate soil gas sampling locations.) The degree of correspondence between the soil gas and geophysical anomalies is shown in Figures 4 and 5, which were created by superimposing the EM-61 plots provided by Geophysics GPR International onto the soil gas grids from Figures 2 and 3. As shown in Figure 4, there is little correspondences between the soil gas and geophysical anomalies at the West Hide Pile study area. Figure 5 shows some correspondence between soil gas and geophysical anomalies at the former C. Bain study area, most notably in the area between the Vining and Graphique de France buildings.

If you have any questions, or require further information, please contact Bruce Yare or Mike Light at Solutia.

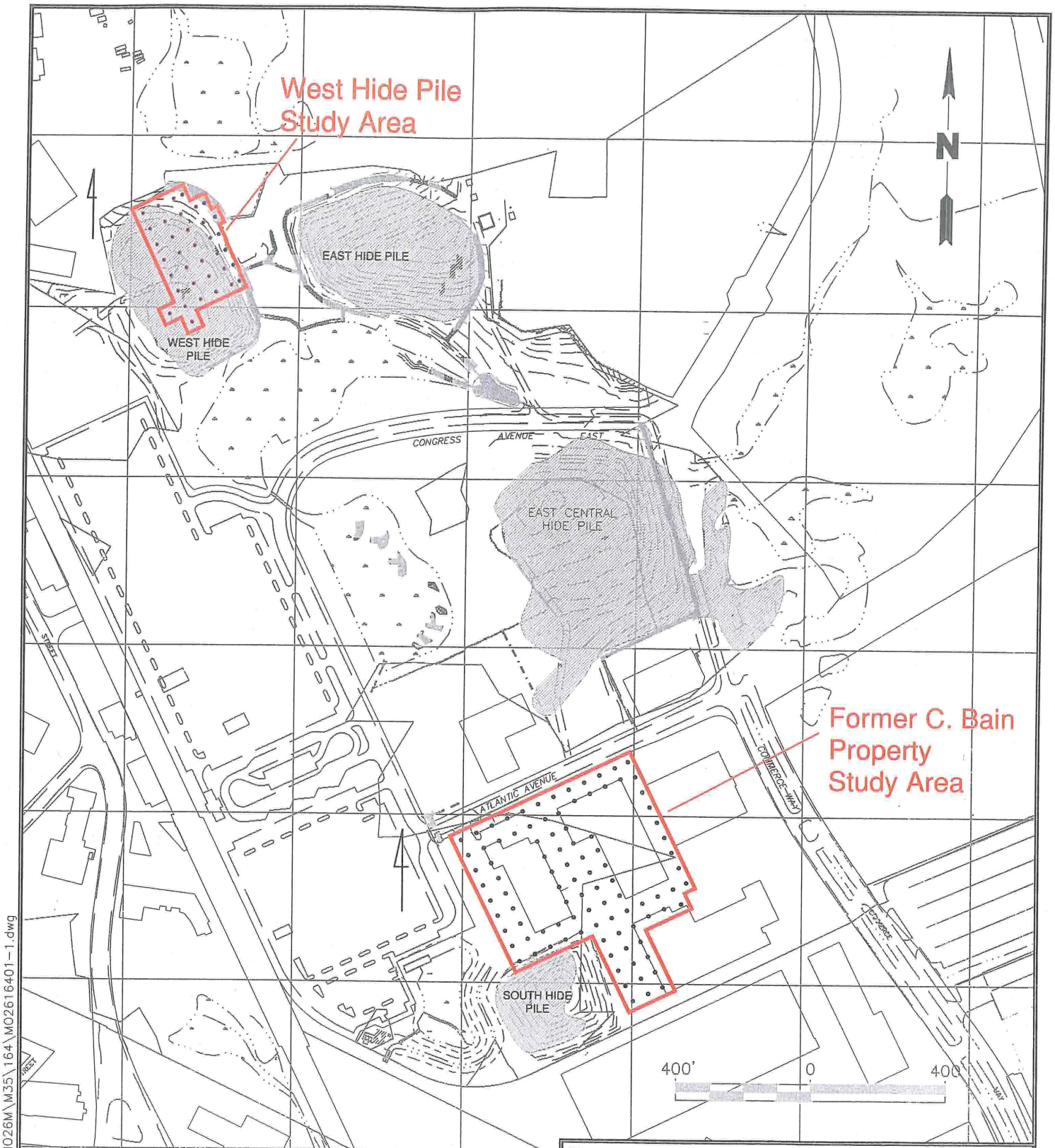
Respectfully Submitted,

ROUX ASSOCIATES, INC.

Donna Decareaux for
Heather A. Trent
Staff Assistant Scientist

Lawrence McTiernan
Principal Hydrogeologist/Project Manager

Attachments



Title:

SOURCE AREA INVESTIGATION STUDY AREAS

INDUSTRI-PLEX SUPERFUND SITE
WOBURN, MASSACHUSETTS

Prepared For:

INDUSTRI-PLEX SITE REMEDIAL TRUST

ROUX
ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: LM	Date: 30OCT2001	FIGURE
Prepared by: RF	Scale: AS SHOWN	
Project Mgr: LM	Office: MA	1
File No: MO2616401-1	Project: 06626M35	

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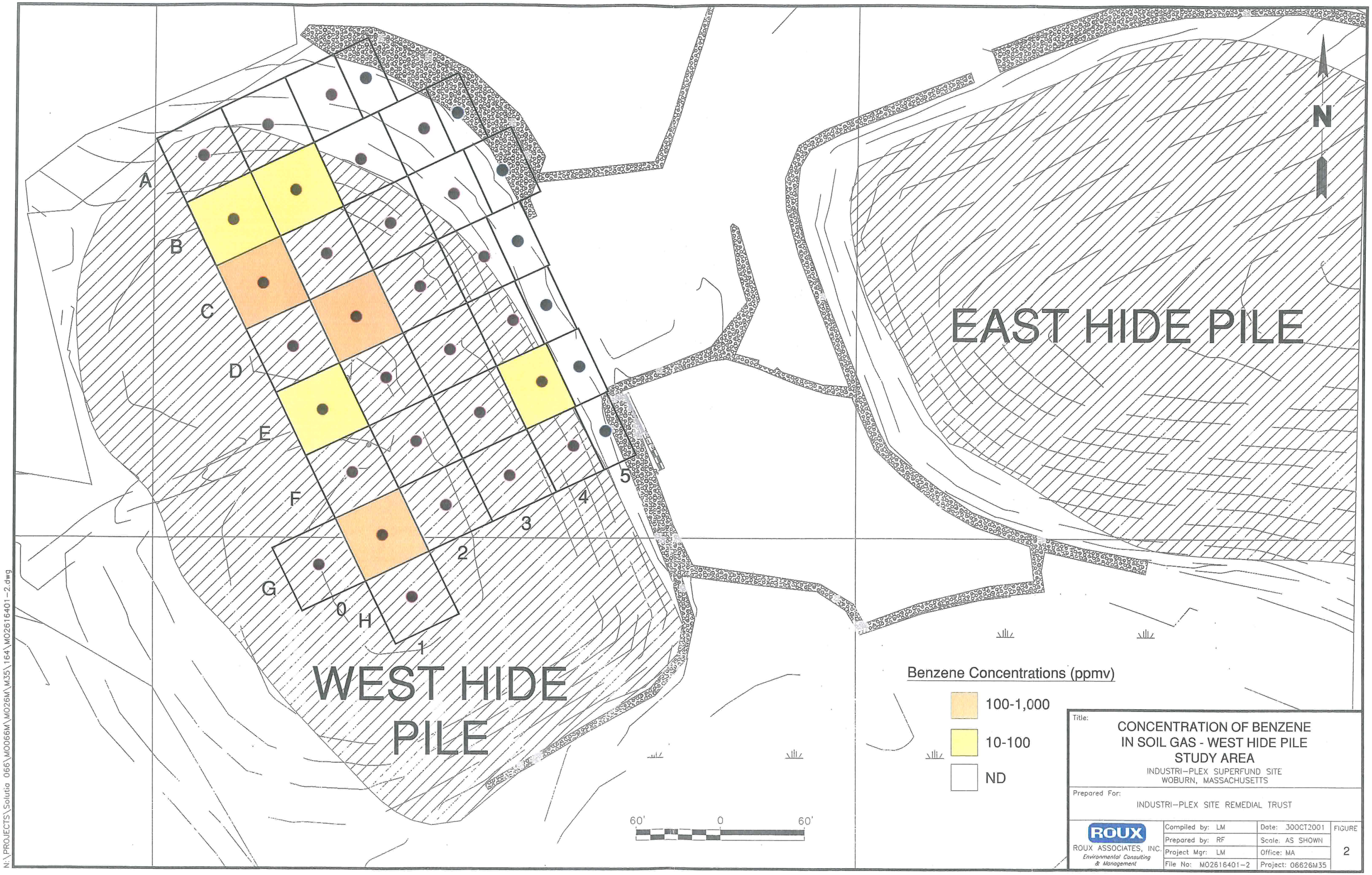
N
EAST HIDE PILE
WEST HIDE PILE
A
B
C
D
E
F
G
H
0
1
2
3
4
5
60'
0
60'
Benzene Concentrations (ppmv)
100-1,000
10-100
ND
Title:
CONCENTRATION OF BENZENE IN SOIL GAS - WEST HIDE PILE STUDY AREA
INDUSTRI-PLEX SUPERFUND SITE
WOBURN, MASSACHUSETTS
Prepared For:
INDUSTRI-PLEX SITE REMEDIAL TRUST
ROUX
ROUX ASSOCIATES, INC.
Environmental Consulting & Management
Compiled by: LM
Prepared by: RF
Project Mgr: LM
File No: M02616401-2
Date: 30OCT2001
Scale: AS SHOWN
Office: MA
Project: 06626M35
FIGURE
2
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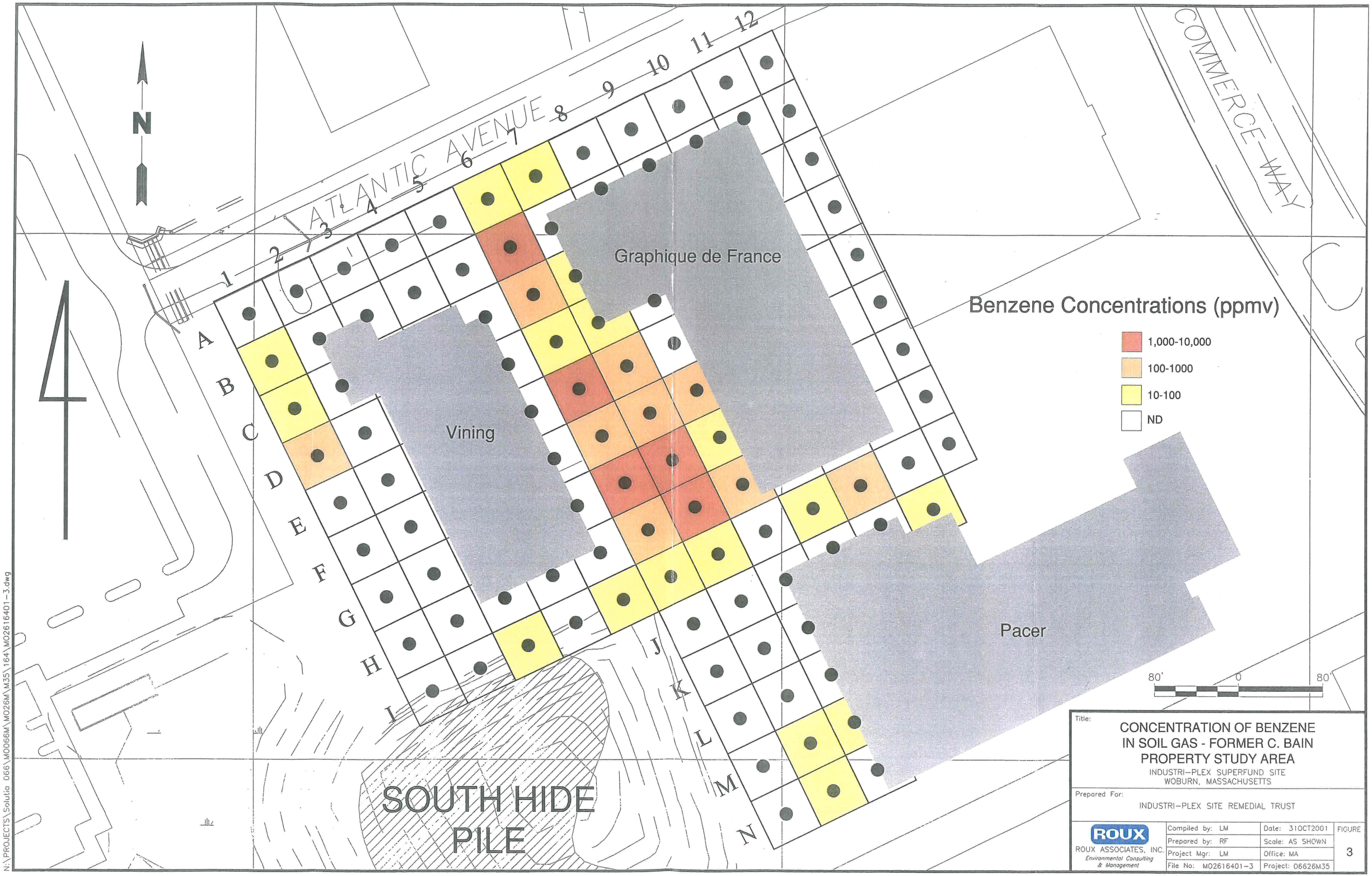
N
ATLANTIC AVENUE
COMMERCE WAY
1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
F
G
H
I
J
K
L
M
N
Graphique de France
Vining
Pacer
SOUTH HIDE PILE
Benzene Concentrations (ppmv)
1,000-10,000
100-1000
10-100
ND
80'
0
80'
Title:
CONCENTRATION OF BENZENE IN SOIL GAS - FORMER C. BAIN PROPERTY STUDY AREA
INDUSTRI-PLEX SUPERFUND SITE
WOBURN, MASSACHUSETTS
Prepared For:
INDUSTRI-PLEX SITE REMEDIAL TRUST
ROUX
ROUX ASSOCIATES, INC.
Environmental Consulting & Management
Compiled by: LM
Date: 31OCT2001
Prepared by: RF
Scale: AS SHOWN
Project Mgr: LM
Office: MA
File No: M02616401-3
Project: 06626M35
FIGURE
3
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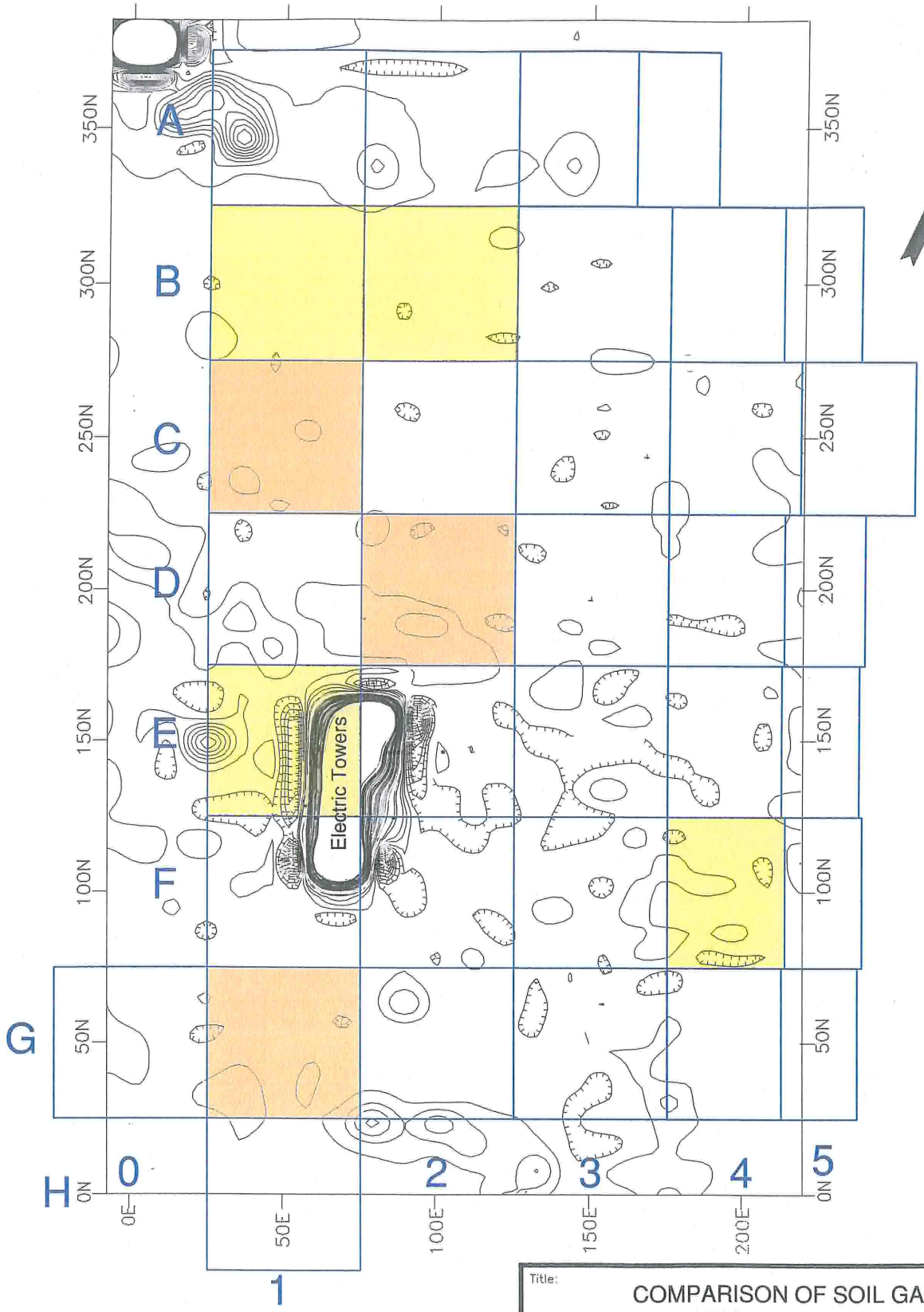

50' 0 50'

Benzene Concentrations (ppmv)

- 100-1,000
- 10-100
- ND

Title:

COMPARISON OF SOIL GAS AND GEOPHYSICAL ANOMALIES - WEST HIDE PILE STUDY AREA

INDUSTRI-PLEX SUPERFUND SITE
WOBURN, MASSACHUSETTS

Prepared For:

INDUSTRI-PLEX SITE REMEDIAL TRUST

ROUX
ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: LM	Date: 31OCT2001	FIGURE
Prepared by: RF	Scale: AS SHOWN	4
Project Mgr: LM	Office: MA	
File No: M02616402-4	Project: 06626M35	

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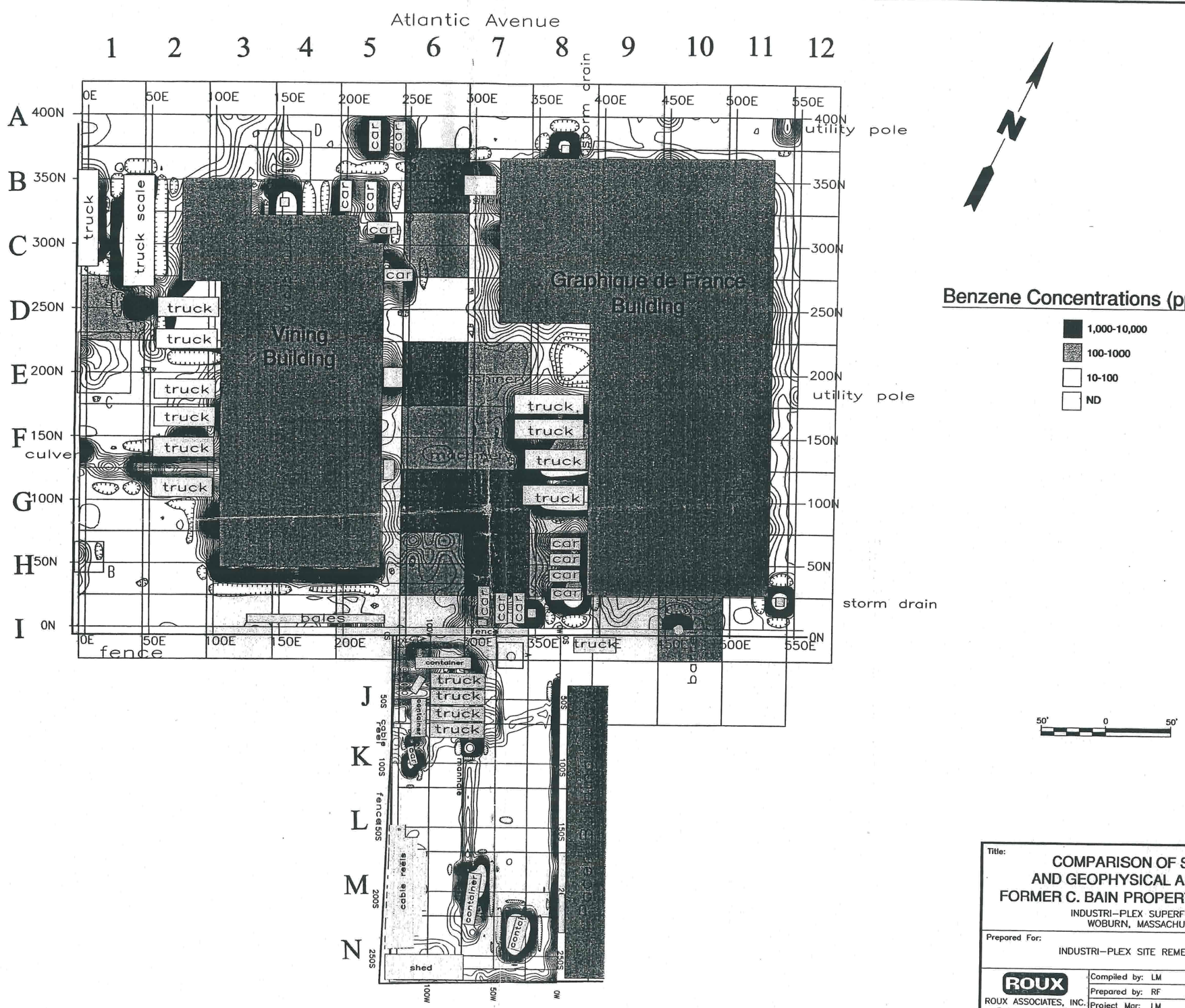

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Title:

COMPARISON OF SOIL GAS AND GEOPHYSICAL ANOMALIES - FORMER C. BAIN PROPERTY STUDY AREA

INDUSTRI-PLEX SUPERFUND SITE
WOBURN, MASSACHUSETTS

Prepared For:

INDUSTRI-PLEX SITE REMEDIAL TRUST

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: LM	Date: 31OCT2001	FIGURE
Prepared by: RF	Scale: AS SHOWN	5
Project Mgr: LM	Office: MA	
File No: M02616402-5	Project: 06626M35	

ATTACHMENT 1

Soil Gas Data

Mobile Laboratory Analysis
Soil Gas Results, Woburn Site
(ppbv)

Sample	Depth	Date	Benzen	Toluene	Notes
Hide Pile					
A-1	2'-3'	8/6/01	BDL	BDL	
A-2	2'-3'	8/6/01	BDL	BDL	
A-3	2'-3'	8/6/01	BDL	BDL	
A-4	1'-1.5'	8/7/01	BDL	BDL	
B-1	2'-3'	8/6/01	66	48	
B-2	2'-3'	8/6/01	22	BDL	
B-3	2'-2.5'	8/7/01	BDL	13	
B-4	2.75'-3'	8/7/01	BDL	BDL	
B-5	1'-1.5'	8/7/01	BDL	BDL	
C-1	2'-3'	8/6/01	130	BDL	
C-2	2'-3'	8/6/01	BDL	BDL	
C-3	2'-2.5'	8/7/01	BDL	11	
C-4	2.75'-3'	8/7/01	BDL	BDL	
C-5	1'-1.5'	8/7/01	BDL	BDL	
D-1	2'-3'	8/6/01	BDL	BDL	
D-2	2'-3'	8/6/01	120	46	
D-3	2'-2.5'	8/7/01	BDL	13	
D-4	2.75'-3'	8/7/01	BDL	BDL	
D-5	2'-2.5'	8/7/01	BDL	BDL	
E-1	2'-3'	8/6/01	34	30	
E-2	2'-3'	8/6/01	BDL	13	
E-3	2'-2.5'	8/7/01	BDL	BDL	
E-4	2.75'-3'	8/7/01	BDL	BDL	
E-5	2'-2.5'	8/7/01	BDL	BDL	
EB	0	8/6/01	BDL	BDL	
F-1	2'-3'	8/6/01	BDL	IN	Matrix interference at toluene retention time
F-2	2'-3'	8/6/01	BDL	BDL	
F-3	2'-2.5'	8/7/01	BDL	BDL	
F-4	2'-3'	8/7/01	11	BDL	
F-5	2'-2.5'	8/7/01	BDL	11	
G-0	2'-3'	8/8/01	BDL	BDL	
G-1	2'-3'	8/6/01	590	BDL	
G-2	2'-3'	8/6/01	BDL	50	
G-3	2.75'-3'	8/7/01	BDL	BDL	
G-4	2.75'-3'	8/7/01	BDL	BDL	
G-5	2.75'-3'	8/7/01	BDL	BDL	
H-1	2'-3'	8/8/01	BDL	BDL	
Transfer Station					
J-6	2'-3'	8/8/01	BDL	BDL	

Mobile Laboratory Analysis
Soil Gas Results, Woburn Site
(ppbv)

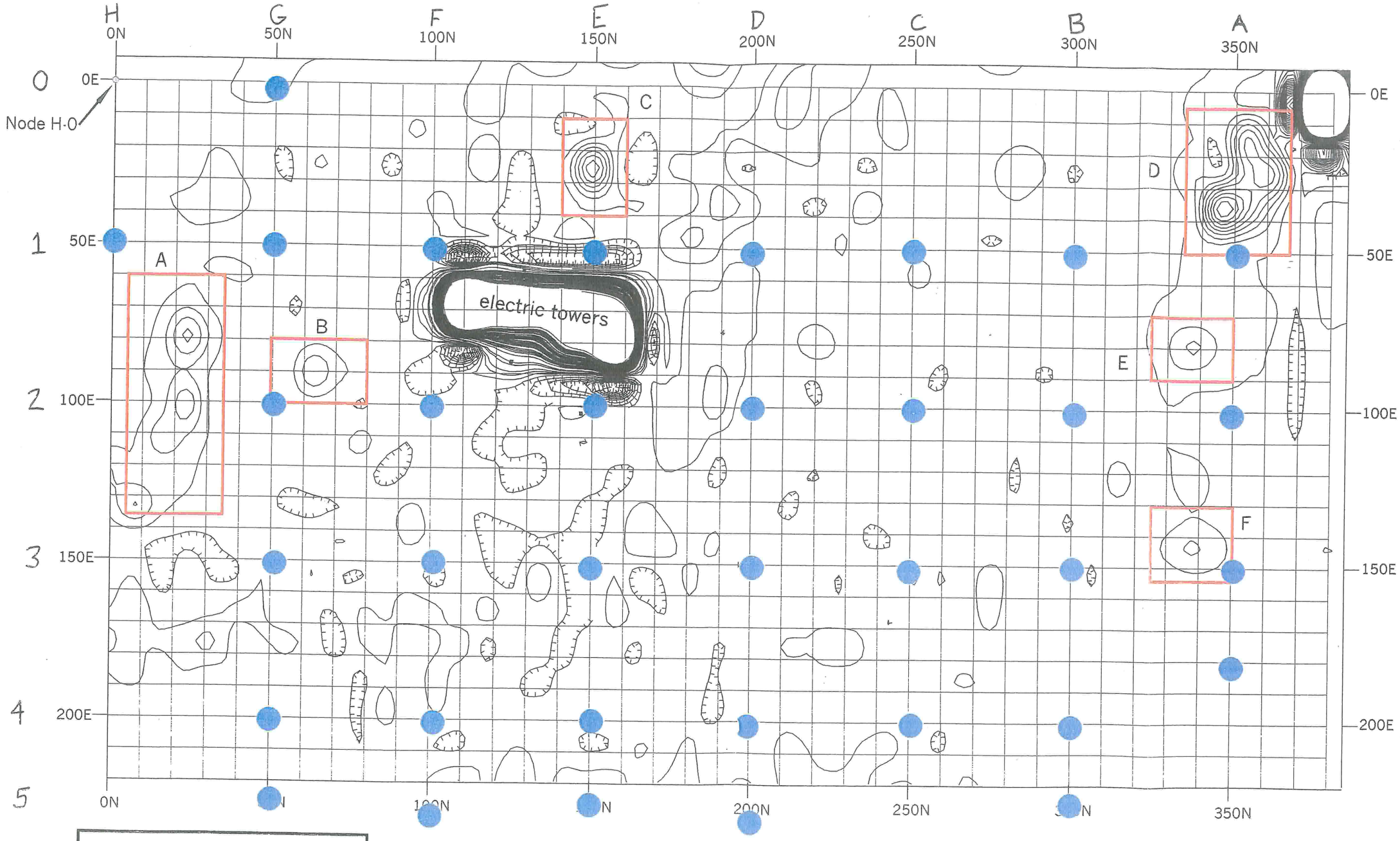
J-7	2'-3'	8/8/01	BDL	14	
J-8	2'-3'	8/8/01	BDL	BDL	
K-6	2'-3'	8/8/01	BDL	BDL	
K-7	2'-3'	8/8/01	BDL	BDL	
K-8	2'-3'	8/8/01	BDL	BDL	
L-6	2'-3'	8/8/01	BDL	BDL	
L-7	2'-3'	8/8/01	BDL	16	
L-8	2'-3'	8/8/01	BDL	BDL	
M-6	2'-3'	8/8/01	BDL	BDL	
M-7	2'-3'	8/8/01	11	BDL	
M-8	2'-3'	8/8/01	10	IN	Matrix interference at toluene retention time
N-6	2'-3'	8/8/01	BDL	BDL	
N-7*	2'-3'	8/8/01	11	IN	Matrix interference at toluene retention time
N-8	2'-3'	8/8/01	BDL	BDL	
A-1	2'-3'	8/10/01	BDL	BDL	
A-10	2'-3'	8/9/01	BDL	BDL	
A-11	2'-3'	8/9/01	BDL	BDL	
A-12	2'-3'	8/9/01	BDL	BDL	
A-2	2'-3'	8/10/01	BDL	BDL	
A-3	2'-3'	8/10/01	BDL	BDL	
A-4	2'-3'	8/10/01	BDL	BDL	
A-5	2'-3'	8/10/01	BDL	IN	Matrix interference at toluene retention time
A-6	2'-3'	8/9/01	86	120	
A-7	2'-3'	8/9/01	11	55	
A-8	2'-3'	8/9/01	BDL	27	
A-9	2'-3'	8/9/01	BDL	BDL	
B-1	2'-3'	8/10/01	24	BDL	
B-2	2'-3'	8/10/01	BDL	BDL	
B-10	2'-3'	8/9/01	BDL	BDL	
B-11	2'-3'	8/9/01	BDL	BDL	
B-12	2'-3'	8/9/01	BDL	BDL	
B-3	2'-3'	8/10/01	BDL	BDL	
B-4	2'-3'	8/10/01	BDL	BDL	
B-5	2'-3'	8/10/01	BDL	BDL	
B-6	2'-3'	8/9/01	1100	430	
B-7	2'-3'	8/9/01	BDL	43	
B-8	2'-3'	8/9/01	BDL	BDL	
B-9	2'-3'	8/9/01	BDL	140	
C-12	2'-3'	8/9/01	BDL	BDL	
C-1	2'-3'	8/10/01	26	15	
C-2	2'-3'	8/17/01	BDL	27	

Mobile Laboratory Analysis
Soil Gas Results, Woburn Site
(ppbv)

C-5	2'-3'	8/17/01	BDL	BDL	
C-6	2'-3'	8/9/01	180	680	
C-7	2'-3'	8/10/01	22	BDL	
D-12	2'-3'	8/9/01	BDL	BDL	
D-1	2'-3'	8/17/01	250	270	
D-2	2'-3'	8/17/01	BDL	BDL	
D-5	2'-3'	8/17/01	BDL	BDL	
D-6	2'-3'	8/9/01	38	180	
D-7	2'-3'	8/10/01	60	53	
E-12	2'-3'	8/9/01	BDL	BDL	
E-1	2'-3'	8/17/01	BDL	BDL	
E-2	2'-3'	8/10/01	BDL	BDL	
E-5	2'-3'	8/17/01	BDL	BDL	
E-6	2'-3'	8/9/01	2100	600	
E-7	2'-3'	8/10/01	240	170	
E-8	2'-3'	8/10/01	BDL	BDL	
F-12	2'-3'	8/9/01	BDL	48	
F-1	2'-3'	8/17/01	BDL	BDL	
F-2	2'-3'	8/17/01	BDL	BDL	
F-5	2'-3'	8/17/01	BDL	BDL	
F-6	2'-3'	8/9/01	910	400	
F-7	2'-3'	8/10/01	230	40	
F-8	2'-3'	8/10/01	280	12	
G-12	2'-3'	8/9/01	BDL	54	
G-1	2'-3'	8/17/01	BDL	BDL	
G-2	2'-3'	8/17/01	BDL	BDL	
G-5	2'-3'	8/17/01	BDL	BDL	
G-6	2'-3'	8/9/01	1600	370	
G-7	2'-3'	8/10/01	5400	24	
G-8	2'-3'	8/10/01	72	BDL	
H-1	2'-2.5'	8/17/01	BDL	BDL	
H-12	2'-3'	8/9/01	BDL	66	
H-2	2'-3'	8/9/01	BDL	BDL	
H-3	2'-3'	8/9/01	BDL	BDL	
H-4	2'-3'	8/9/01	BDL	BDL	
H-5	2'-3'	8/9/01	BDL	BDL	
H-6	2'-3'	8/9/01	320	41	
H-7	2'-3'	8/10/01	1600	20	
H-8	2'-3'	8/10/01	950	10	
I-1	2'-3'	8/9/01	BDL	BDL	
I-10	2'-3'	8/9/01	230	45	

Mobile Laboratory Analysis
Soil Gas Results, Woburn Site
(ppbv)

I-11	2'-3'	8/9/01	BDL	64	
I-12	2'-3'	8/9/01	BDL	BDL	
I-2	2'-3'	8/9/01	BDL	BDL	
I-3	2'-3'	8/9/01	15	15	
I-4	2'-3'	8/9/01	BDL	BDL	
I-5	2'-3'	8/9/01	16	31	
I-6	2'-3'	8/9/01	17	24	
I-7	2'-3'	8/9/01	86	390	
I-8	2'-3'	8/9/01	BDL	16	
I-9	2'-3'	8/9/01	45	36	
J-10	2'-3'	8/17/01	BDL	BDL	
J-11	2'-3'	8/17/01	76	BDL	
J-9	2'-3'	8/17/01	BDL	BDL	
TB		8/9/01	BDL	BDL	
Note:					
BDL= Below detection limit					
*=spiked with know concentration of standard, found Toluene to be BDL					
TB=trip blank					



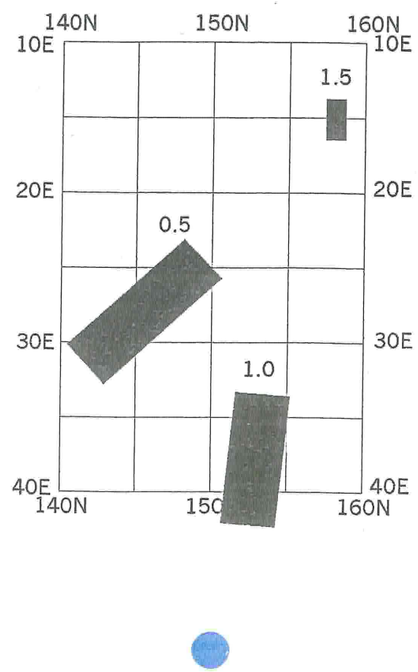
0 30 60
feet

1 inch = 30 feet.
Contour interval: 20 mV.
Locations are approximate.

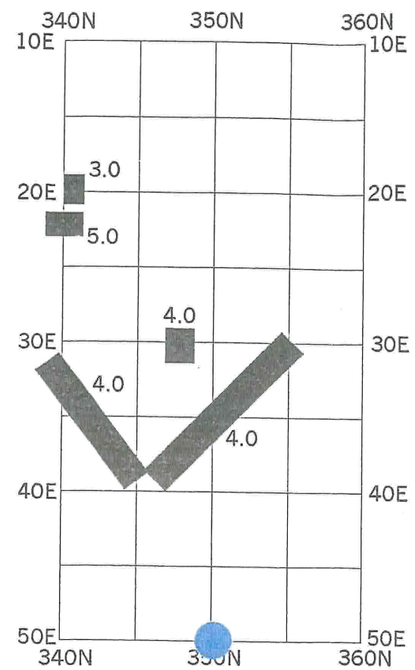
Figure 1
Contour Map of EM Response
West Hide Pile - Industri-Plex Site
Woburn, Massachusetts

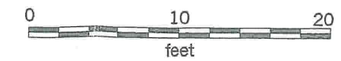
Geophysics GPR International, Inc.
File B01347 August 2001

West Hide Pile
Area C



West Hide Pile
Area D





1 inch = 10 feet..

Surface objects shown in gray.

Subsurface objects shown in black.

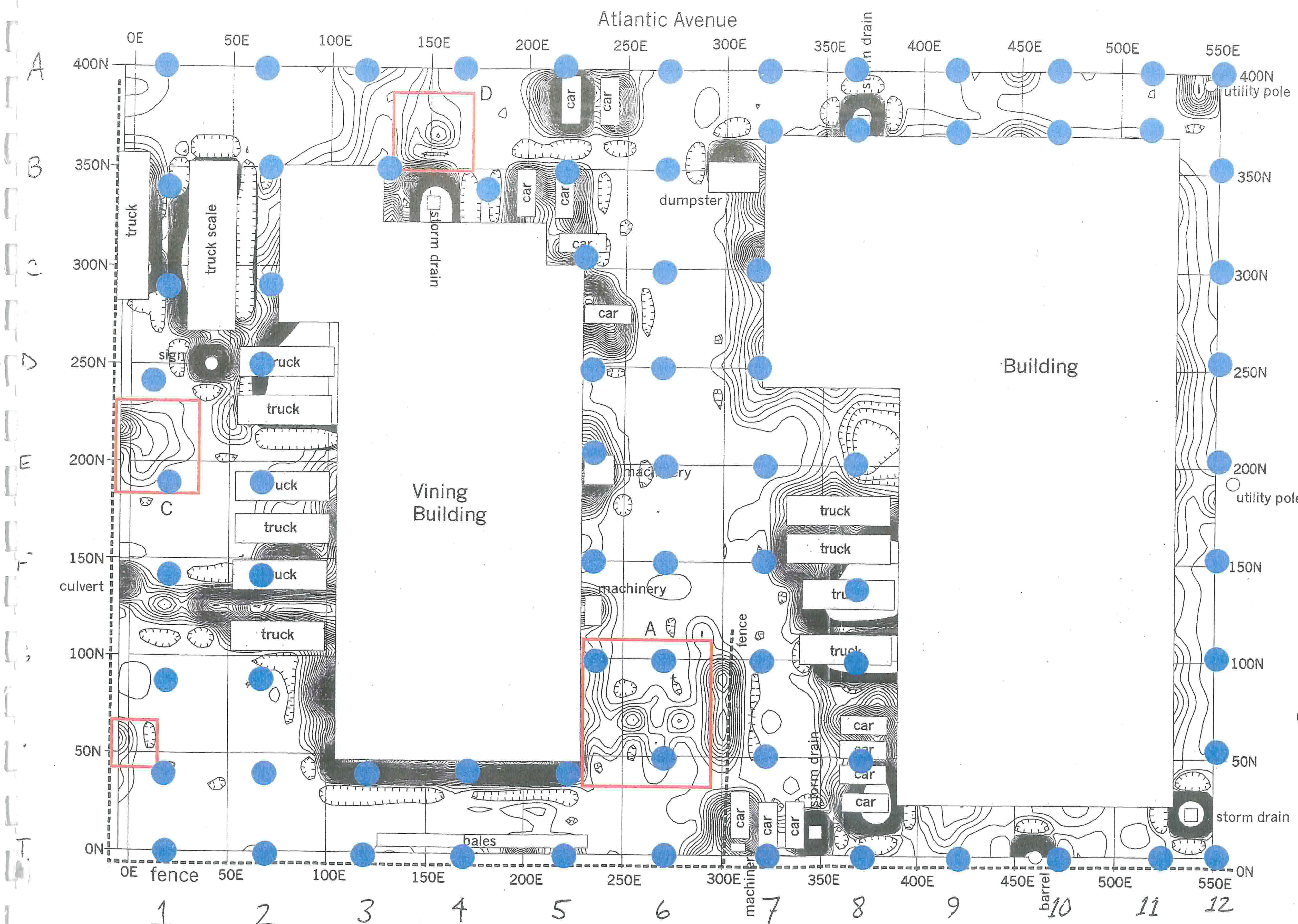
Estimated depths given in feet below ground surface..

Locations are approximate.

Figure 1A
Locations of Subsurface Objects
Detected By GPR

Areas C and D
West Hide Pile
Industri-Plex Site
Woburn, Massachusetts

Geophysics GPR International, Inc.
File B01347 August 2001



0 50 100
feet

1 inch = 50 feet.

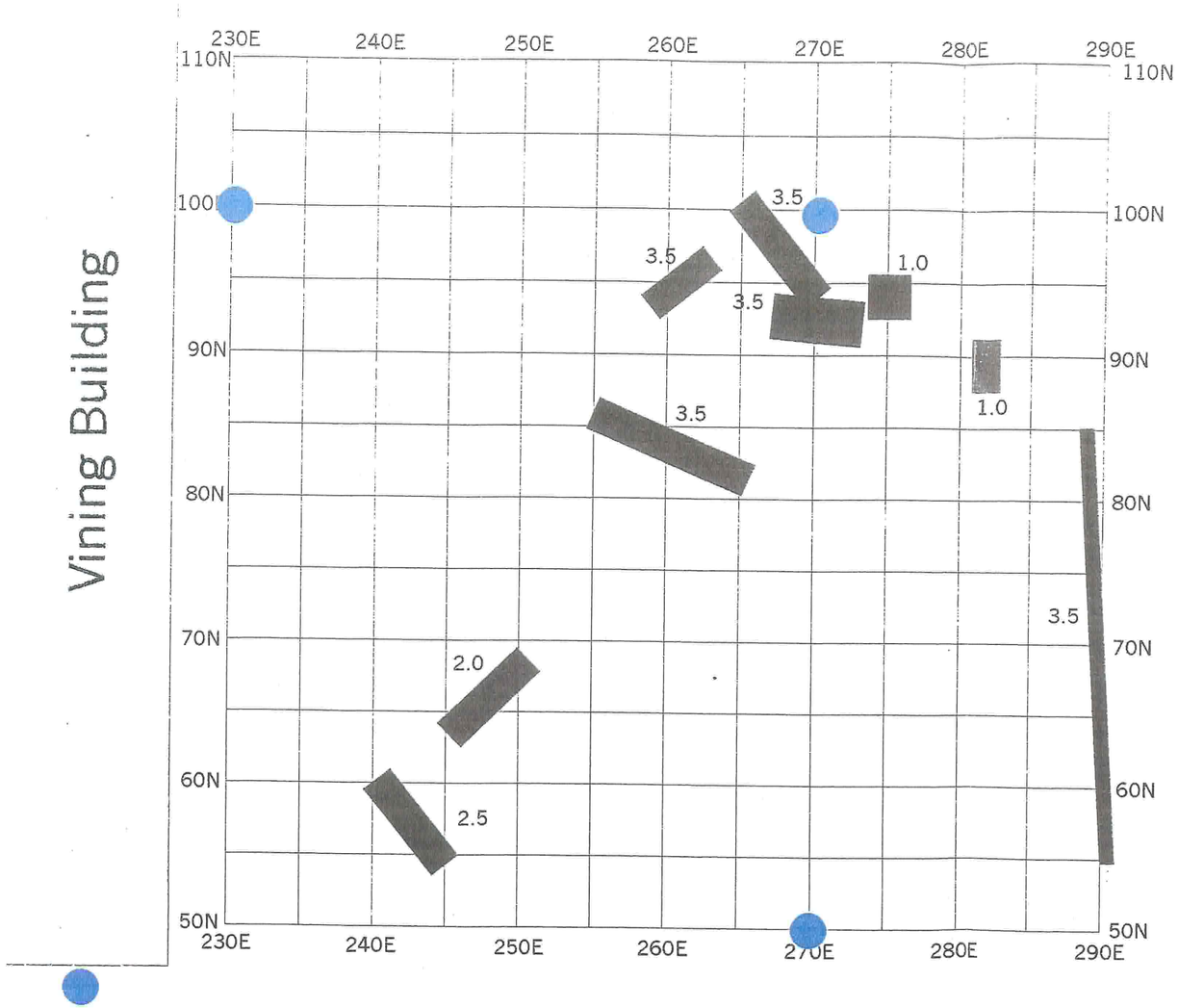
Contour Interval: 20 mV.

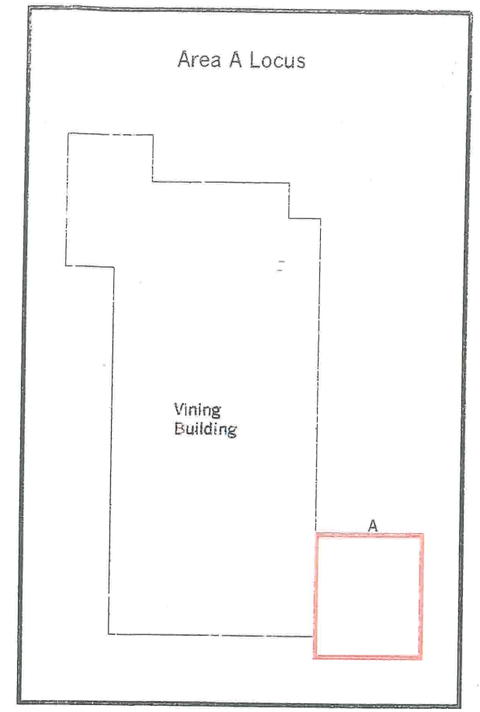
Surface objects shown in gray.

Locations are approximate.

Figure 2
Contour Map of EM Response
Former C. Bain Property
Industri-Plex Site
Woburn, Massachusetts

Geophysics GPR International, Inc.
File B01347 August 2001





0 10 20
feet

1 inch = 10 feet.

Surface objects shown in gray.

Subsurface objects shown in black.

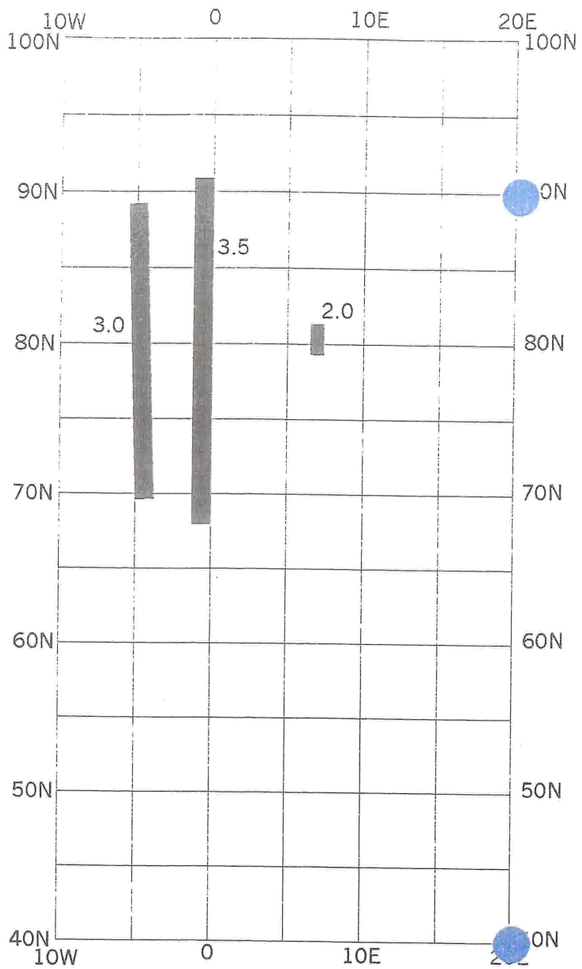
Estimated depths given in feet below ground surface..

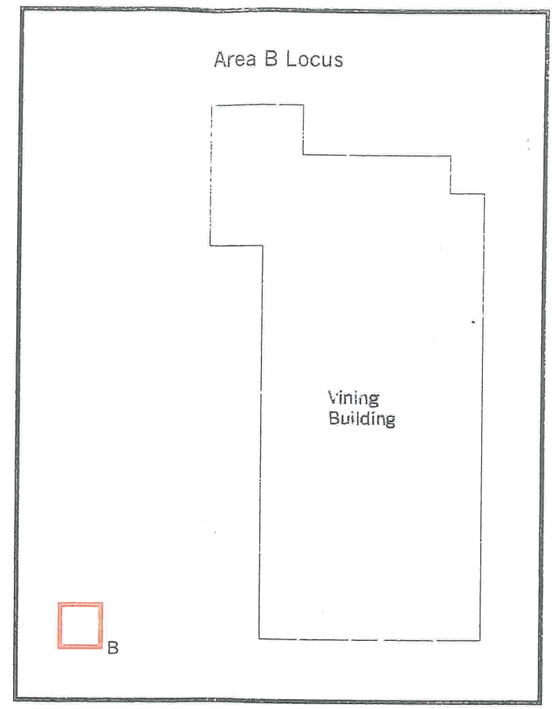
Locations are approximate.

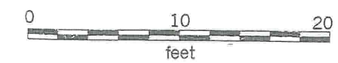
Figure 2A
Locations of Subsurface Objects Detected By GPR

Area A
Former C. Bain Property
Industri-Plex Site
Woburn, Massachusetts

Geophysics GPR International, Inc.
File B01347 August 2001







1 inch = 10 feet.

Surface objects shown in gray.

Subsurface objects shown in black.

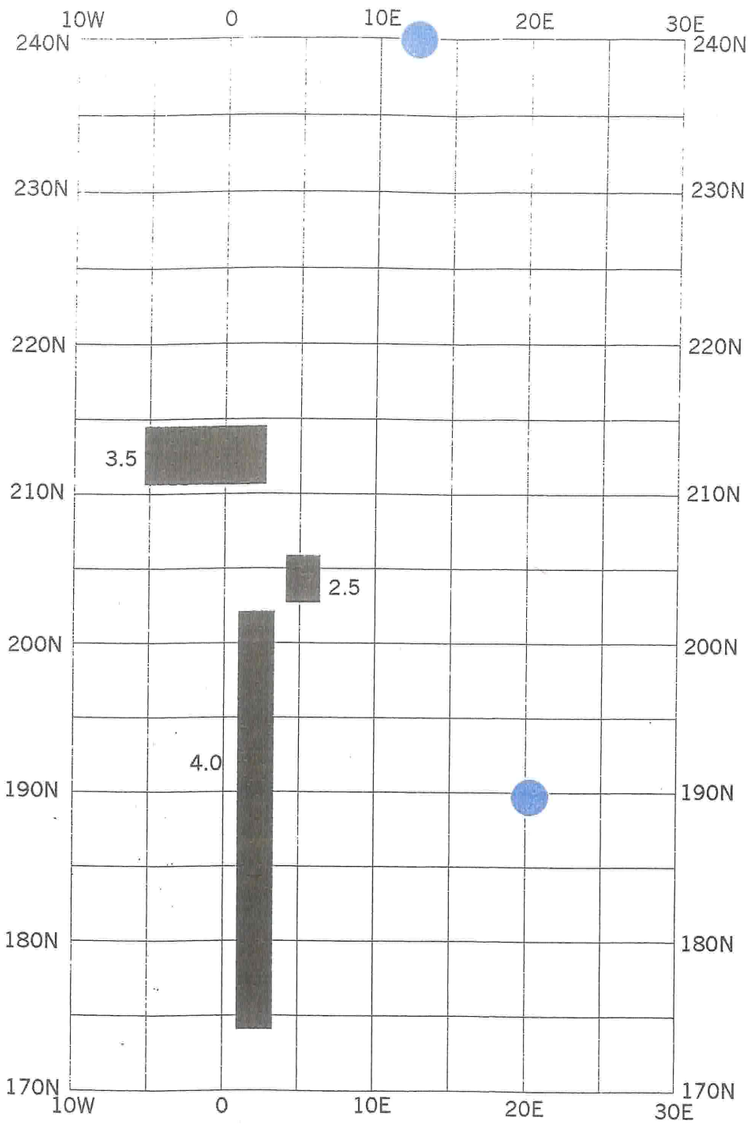
Estimated depths given in feet below ground surface..

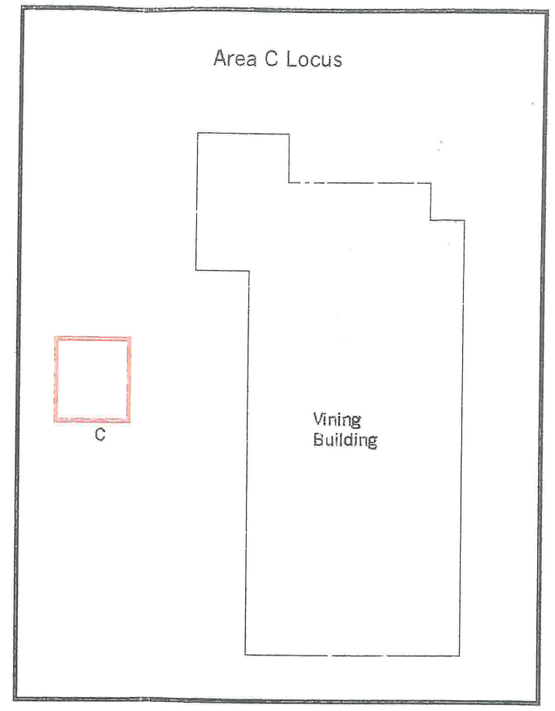
Locations are approximate.

Figure 2B
Locations of Subsurface Objects
Detected By GPR

Area B
Former C. Bain Property
Industri-Plex Site
Woburn, Massachusetts

Geophysics GPR International, Inc.
File B01347 August 2001





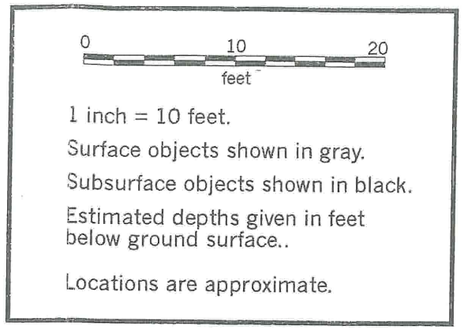
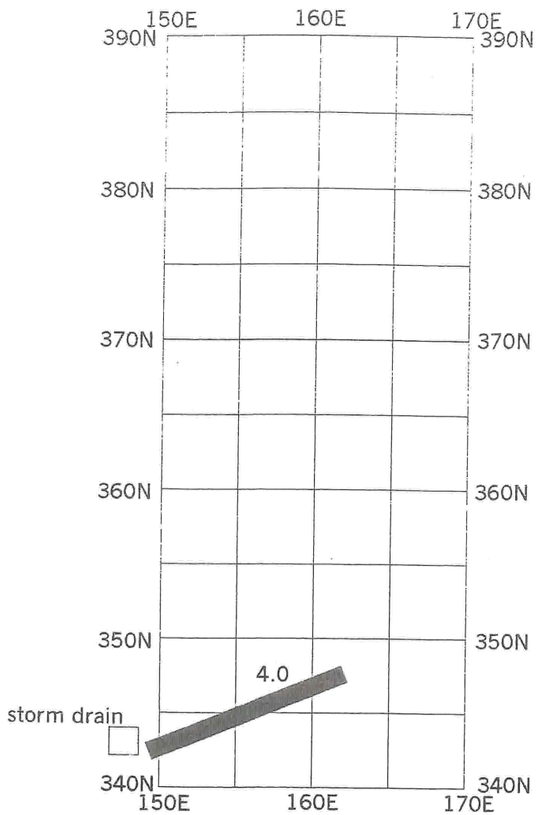
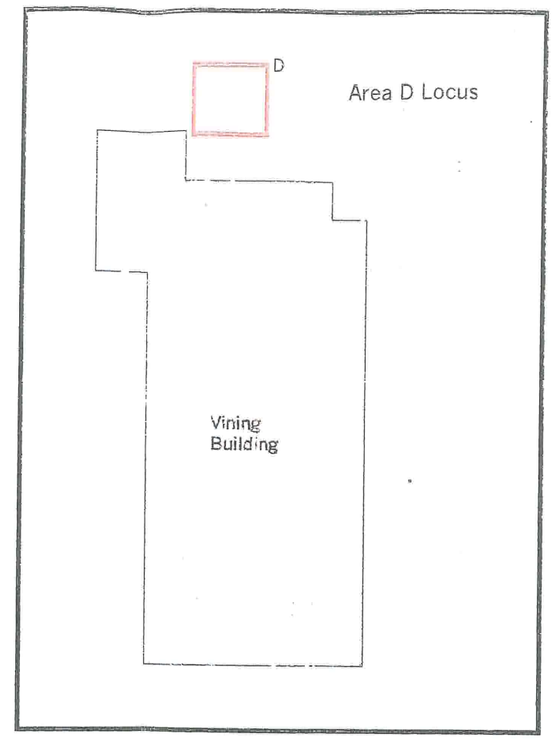


Figure 2C
Locations of Subsurface Objects
Detected By GPR

Area C
Former C. Bain Property
Industri-Plex Site
Woburn, Massachusetts

Geophysics GPR International, Inc.
File B01347 August 2001





1 inch = 10 feet.

Surface objects shown in gray.

Subsurface objects shown in black.

Estimated depths given in feet below ground surface..

Locations are approximate.

Figure 2D
Locations of Subsurface Objects
Detected By GPR

Area D
Former C. Bain Property
Industri-Plex Site
Woburn, Massachusetts

Geophysics GPR International, Inc.
File B01347 August 2001